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Are private schools better than public schools?: A critique of the Coleman Report

by Michael Olneck

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On April 12 of this year, the *New York Times* carried an article with the understated headline, "Remarks by Sociologist Stir Debate over Schools." The *Washington Post* was more blunt: "Private High Schools Are Better Than Public, Study Concludes." The object of their attention was a newly released draft report prepared for the National Center for Education Statistics (NCES) by University of Chicago sociologist James Coleman and two collaborators, Thomas Hoffer and Sally Kilgore. The report, "Public and Private Schools," analyzed 1980 data from a large-scale National Opinion Research Center survey, *High School and Beyond*, and after comparing students in public, Catholic, and other private schools, concluded that nonpublic schools provided more orderly and demanding learning environments, taught students

more, did not aggravate racial segregation, and, in the case of Catholic schools, reduced the strength of the link between family background and academic achievement.

Adding to the controversial nature of "Public and Private Schools" were analyses that the authors said demonstrated that policies facilitating the use of nonpublic schools (e.g., tuition tax credits, vouchers) would favor minorities and the disadvantaged rather than well-to-do whites. Indeed, the authors introduced and concluded their report by assessing the implications of their study for the validity of arguments supporting or opposing the increased use of nonpublic schooling. Their judgment was that it "is hard . . . to avoid the overall conclusion that the factual premises underlying policies that would facilitate use of private schools are much better supported on the whole than those underlying policies that would constrain their use."

In addition to the press attention given to "Public and Private Schools," the National Institute of Education and the National Academy of Sciences recently convened

conferences of experts to assess the merits and validity of the report. The verdicts of scholars are mixed. They range from an eminent econometrician's assessment that "the quality of documentation, analysis, and interpretation is so defective that it is hard to avoid the overall conclusion that the report reeks with incompetence and irresponsibility,"¹¹ to the observation by a member of the National Academy of Education that "Coleman, who enjoys an international reputation as a meticulous scholar," had "dramatically" reversed the conclusion imputed to his 1966 study of school effects that "schools don't make a difference" and demonstrated that "schools *do* make a difference, regardless of the family background of students."¹²

My own judgment is that the report's data and analyses are inadequate to answer the question of whether nonpublic schools are more successful as educational institutions than are public schools. Coleman and his coauthors tend to exaggerate and place too much confidence in their results, and they did not carry out a number of potentially instructive analyses. Nevertheless, their methods for analyzing achievement outcomes are reasonable, some of their results are plausible even if unconvincing, and the flaws and inadequacies in the report constitute insufficient reason to dismiss its findings out of hand. The report's conclusions concerning the effects of private schools on segregation, on the other hand, are entirely unwarranted, and rest on questionable empirical findings used for polemical purposes.

Technical limitations in the report

Drawbacks of the sample

The 1980 High School and Beyond Survey collected data on over 58,000 high school sophomores and seniors. But because schools, not individuals, were the primary unit sampled, data were gathered in only 27 private non-Catholic schools and in only 84 Catholic schools. The number of public schools was 894. This means that estimates of the characteristics of students in each of the sampled schools are likely to be reliable, but that because of the small number of Catholic and other private schools, generalizing the results to the wider universe of nonpublic schools is suspect. Moreover, comparisons of school sectors taken as wholes may not reflect, even on average, comparison of public and private schools in the same communities. Samples of pairs of locally situated private and public schools would be preferable in future studies tailored specifically to facilitate comparative assessments.

Problems in comparing students in different schools

The principal problem plaguing the comparison of outcomes in private and public secondary schools is that the students in each sector differ initially from one another, and such differences, rather than more efficacious teach-

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ing or other school characteristics, may explain any apparent academic advantage of the nonpublic schools. The most obvious difference is that some parents or students have made a choice to abandon the public schools. Coleman and his coauthors attempt to cope with this problem by statistically holding constant an array of social background measures which are likely to affect both choice of school sector and academic achievement. The trouble is that even when these measures are controlled, it is easy to imagine some characteristic which varies appreciably among students from very similar background, and which can affect both the likelihood of attending a nonpublic school and achievement. Scholastic ability or aptitude at the start of Grade 9 is one obvious characteristic.

In the absence of an ability measure, there do exist some additional analytic strategies which if employed would give us greater confidence in the result than does merely controlling measured family background characteristics. One would be to hold constant the curricular program in which a student was enrolled on the assumption that a student's track reflects prior differences in ability and learning rather than produces new differences. Two-thirds of the private school students were enrolled in college preparatory programs, while only one-third of the public school students were. College preparatory students in the public schools scored no lower on achievement tests

than did students as a whole in the nonpublic schools. In a *New York Times* interview on April 26, Coleman rejected the idea of comparing only students in the same tracks. He argued that curricular program “is not a ‘background’ characteristic for which you should control statistically. It has a lot to do with school policies.” His argument is unpersuasive because there is no convincing evidence that curricular track exercises an appreciable effect on achievement growth. Instead, the best evidence is that secondary school curricular placement reflects prior achievement levels rather than determines current achievement.³ Comparisons among students should take these prior differences into account.

A second strategy would be to use the achievement levels of the sophomores in each of the sampled schools as a measure of a school’s selectivity, and to attempt to explain with this measure any average achievement advantage among seniors not attributable to the background composition of the senior class.

A third alternative for controlling initial differences between private school and public school students would be to apply econometric techniques for eliminating selectivity biases when estimating structural equation models.⁴ These techniques rely on a variety of untestable assumptions, and if the data do not conform to these assumptions, inferences based on them can be erroneous. Still, greater confidence could be placed in the report’s conclusions had the authors demonstrated that their results persisted in the face of such tests.

The controversy over whether or not private school students score higher on achievement tests because they know more to begin with or because they learn more will be closer to resolution in 1982, after the 1980 sophomores are retested. Even then, a skeptic could object that private school sophomores with the same test scores as public school sophomores were already learning more or at a faster pace, and that any differences in achievement growth over time reflect only the extrapolation of prior learning patterns. It would be useful if future studies would provide for periodic retesting at the start as well as at the end of school years, so that patterns of learning during the summer might be measured in an effort to compare public and private school students when school influences are presumably less salient and certainly less immediate.⁵

Coleman, Hoffer, and Kilgore bolster their conclusion that initial selectivity does not explain achievement differentials, by showing that measures of student behavior and academic demands can explain achievement differences both *among* schools *within* the same sector *and* across sectors. It is this finding which Coleman has stressed in his public discussion of the report’s implications. But the finding contains a chicken-and-egg dilemma: It raises the question of whether the factors Coleman attributes to

school policies are not, in fact, outcomes of unmeasured individual background characteristics or student body composition. Is it reasonable to believe that the relatively low incidence of classes being cut and the greater amount of homework completed in nonpublic schools would be maintained if private schools encountered the same student bodies as are encountered by the public schools? The answer may well be yes, but the data in “Public and Private Schools” cannot demonstrate that this would be true.

Problems in measuring achievement

Like the ill-defined concept “intelligence,” “achievement” exists as no fixed entity nor in natural units. Consequently measuring achievement and its growth is problematic.⁶ Tests may not adequately represent objects of interest, and what counts as high levels of or large gains in achievement is not readily obvious. Comparative differences implied by the results of one test can be larger or smaller than those implied by others. On these grounds, some critics have expressed doubt that the tests employed in the High School and Beyond Survey are adequate indices of the differences in achievement among students in public and nonpublic schools.

NCES administered short tests in the areas of reading, vocabulary, and mathematics to both seniors and sophomores. (Tests in other areas, e.g., civics, were given to either seniors or sophomores, but not to both.) Eight items each in the reading and vocabulary tests were common to the senior and sophomore tests, and 18 math items occurred in common. Coleman and his colleagues relied upon these subtests for most of their analyses, and one must wonder how valid and reliable a measure of differences between students in each of the school sectors these few items can provide.

Nor is it obvious that these test items, however adequately they tap what students know or can do, provide a good test of what private and public secondary schools do (or do not do) for their students. The tests may not faithfully reflect what is taught or learned during the secondary school period. Rather, they may reflect learning or nonlearning associated principally, if not exclusively, with the grades prior to high school entrance. Suspicion on this score is prompted by the only description the authors offer of any of the tests: “The mathematics items are all rather elementary, involving basic arithmetic operations, fractions, and only a few hints of algebra and geometry” (p. 159). The “growth” measured by these tests may not correspond well to the growth measured by tests better designed for the task of assessing high school achievement.

To regard the difference between senior and sophomore scores on these particular tests as “two years of achievement,” as the report does, may lead to exaggerated claims about the differences between public and private school

students. For example, the report's results suggest that in the country as a whole, between their sophomore and senior years students gain 0.40 items on the math subtest.⁷ The report also shows that Catholic school sophomores scored 0.60 items more than public school sophomores with similar family backgrounds, and by my calculations, Catholic school seniors may get one more item right than similar public school seniors.⁸ Using Coleman's interpretation, these results would mean that Catholic school sophomores are three years ahead of similar public school sophomores, and that the gap rises to five years among seniors! This would mean that in every year, Catholic school students gain a full year *more* in math achievement than their public school counterparts. But if the same results are expressed as standard deviations, we find that in two years, Catholic school students gain only 0.10 standard deviations more than public school students.⁹ In more conventional achievement tests, 0.10 standard deviations represents less than half of one year of achievement.¹⁰

The authors report their results as "rates of learning" as well as item differences of fractions of the gain from sophomore to senior year and conclude that "the evidence is rather strong that average achievement growth is considerably greater in the private sector than it is in the public sector" (p. 185). This conclusion rests on a strange definition of learning rate, namely the proportion of items learned in a given year from among those items not known at the time of initial assessment. This definition favors groups with higher initial scores, because even if they acquire new items answered correctly at the same pace or at even a lower pace than others, they will reduce their remaining total incorrect by a larger proportion. For example, on a 10-item test, on which Group A got 7 items correct and Group B got 3 items correct to begin with, and then Group A got 9 items correct and Group B got 7 items correct at a second testing, we are to conclude that Group A learned at a faster rate than Group B because it learned 67 percent of the items it had initially missed, while Group B learned only 57 percent of the items it had initially gotten wrong. Thus, nonpublic schools have an easier time showing high rates of learning under Coleman's definition than under more intuitively appealing definitions which emphasize proportionate increases in items correct rather than reduction in items incorrect. Application of such definitions indicates markedly smaller differences in rates of learning than those reported in "Public and Private Schools."

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The report's implications for educational inequality

Who benefits from private schools?

Because the student bodies of public and private schools are different, the average differences in achievement among different kinds of schools do not pertain to any particular groups of students. The extent of achievement differences between public and private schools will vary among different kinds of students. To facilitate their discussion, Coleman, Hoffer, and Kilgore pick as their basic point of comparison students with the background characteristics of the average public school sophomore. If we want to predict the benefit an average public school student might realize by transferring to a private school, this is a sensible choice. However, because students in the private schools are disproportionately drawn from advantaged backgrounds, it is difficult to place confidence in this prediction.

Since the vast majority of students from the full spectrum of social backgrounds are in public schools, we are in a better position to ask what a typical private school student would lose by transferring into the public schools than we are in asking Professor Coleman's question. The answer is "not very much." Public school students who are similar to the average private school student are predicted from the report's results to do about as well or better than their private school counterparts. The average private school student appears to gain little or nothing from opting out of the public schools.

If private schools do little to enhance the achievement of advantaged students, how credible is the report's conclusion that less advantaged students may be the principal beneficiaries of Catholic schooling? Noting that among Catholic school students achievement differences between those with college-educated parents and those whose parents only finished high school, between blacks and whites, and between Hispanics and Anglos are smaller than in the public schools, the authors conclude that "the Catholic schools come closer to the American ideal of the 'common school,' educating all alike, than do the public schools" (p. 177). This result also implies that the achievement differences between public and Catholic schools are greatest among students whose parents are less well-educated, and among blacks and Hispanics.

It is tempting to dismiss these findings as the entirely predictable artifacts of a high degree of selectivity governing the entrance of nonwhite or lower socioeconomic students into the Catholic schools. Such students, we might expect, would be atypically successful in their schooling even before entering the Catholic schools. Since half the black students in Catholic schools are Protestants and are therefore more likely to be making a purely educational

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Coleman Report

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choice when entering the Catholic schools, the results obtained by Coleman and his colleagues would be more persuasive if they were shown to hold even among students of the same religion. But no such difference associated with religion can easily explain the relative success of Hispanics in the Catholic schools. Still, the larger effect of parental educational differences among students in the non-Catholic private schools, where there is a greater heterogeneity of background associated with diversity among schools, argues for the role of selection in explaining the apparent success of private schools with minority and lower socioeconomic students. The possibility remains that curricula and pedagogy in the Catholic schools are actually less stratified and more inclusive in their objectives and direction than they are in other schools, but this possibility should be held in abeyance until Coleman or another researcher demonstrates that the effects of family background are actually smaller *within* individual Catholic schools than within individual public schools. Coleman's method of analysis, which compares students to the average for all students in each school sector rather than to the average for a student's own school, leaves open the possibility that some atypical schools, whose achievement levels exceed the levels expected on the basis of the schools' socioeconomic or racial composition, account for the findings. If this is the case, the results imply no unusual efficacy in general by Catholic schools for reducing the link between social background and achievement.

Do private schools increase segregation?

One argument against using public monies to subsidize attendance at private schools is that private schools directly or indirectly restrict minority enrollment, and that the movement of whites into nonpublic schools would aggravate racial segregation. Coleman, Hoffer, and Kilgore reject this argument by attempting to show that segregation within the private school sector is substantially lower than that within the public sector. If attendance at private schools were assisted, they suggest, minority enrollments would rise more than white enrollments, for a net reduction in segregation nationwide. I consider the report's analyses and interpretations on this point so flawed as to be seriously misleading.

To begin with, Coleman and his coauthors treat the United States as if it were a single school district. This means that the "segregation" of whites in Salt Lake City from blacks in Philadelphia counts as much as segregation of whites from blacks within Washington, D.C., or of Montgomery County whites from District of Columbia blacks. The relative scarcity of nonpublic schools in certain of the overwhelmingly white Mountain and Pacific states contributes to the overall differences between levels of segregation in the public and nonpublic sectors. When narrower units are considered, public schools appear considerably less segregated than the report's figures imply,

and when levels of segregation in parochial and public school systems have been compared within the same large cities, the parochial systems have been found in some cities to be the more segregated.¹¹

To measure segregation, the authors employ an index Coleman introduced in earlier work. The index expresses the difference between the total percentage black in a population of students and the percentage of black schoolmates characteristic of the average white student in this population as a proportion of the total percentage black.¹² Coleman claims that this measure is "standardized" and that it reflects only the distributions of students to schools by race. This claim is mistaken. Even when the patterns of distribution of students to schools by race is identical in two settings, the Coleman index can differ if the relative proportions of blacks and whites differ between the two settings.¹³ The differences between the proportion of students in private schools who are black and the proportion in the public schools who are black in fact explains *half* the apparent difference in the degree of segregation in the private and public school sectors. Measures of segregation which are not sensitive to this complication show much greater comparability across private and public schools.¹⁴

Even more disturbing than Coleman's approach to the measurement of segregation is his assumption that even if there were an appreciable shift of students to the private schools, the internal distribution of students by race among schools would remain unchanged. This is hardly credible. For the country as a whole, it would take the addition of just *two* all-black high schools of 2500 students each to the private sector to raise from 13 to 28 the percentage of black students in private schools which are 80 to 100 percent black, a figure 5 percent higher than in the public schools.

The depiction of the private school sector as internally less segregated than the public, and the extrapolation of that picture into the future is far less warranted than the authors of "Public and Private Schools" would suggest.

Who would benefit most from tuition subsidies?

One of the unanswered questions concerning tuition tax credits and educational vouchers is what their effect would be on private school enrollments. Critics fear that disproportionate numbers of middle-class whites would take advantage of the opportunity to leave the public schools. Coleman and his colleagues decline to speculate on the enrollment consequences of current proposals because they are uncertain of the price and supply responses these proposals would prompt. Nevertheless, they attempt to allay concern by determining the enrollment responses which would be produced by an additional \$1000 of income for every family with secondary school children.

Coleman, Hoffer, and Kilgore relate the proportion of students attending private schools to student-reported pa-

rental income. They find that private school enrollments increase most rapidly as income increases among Hispanics, and more rapidly for whites with low incomes than for similar blacks, but more rapidly for blacks than for whites among those with high incomes. On the basis of these calculations, the report predicts that the preponderance of white or high-income students among shifters would be smaller than their preponderance among current private school students. From this the authors conclude that such students would not enjoy differential benefits from governmental assistance for private school attendance. The empirical findings are not at all convincing and the interpretive logic is deceptive.

Secondary school students' reports of their parents' incomes are not wholly accurate. Accurate measurement of parental income would most likely increase the estimate of the extent to which private school enrollment rises with additional family income. Taking into account other factors which influence choice of schools would also increase the apparent impact of income increases, and probably more so among whites than blacks. For example, wealthier communities have better public schools and are likely to have lower attendance at private schools than would otherwise be expected.¹⁵ Communities with more minority students are likely to have lower family incomes but greater attendance at private schools than would otherwise be expected, at least among whites.¹⁶ If blacks are limited in their residential choices by discrimination, black neighborhoods will be more economically heterogeneous than would otherwise be the case and family income and local public school characteristics will be more highly associated among whites than blacks. Holding constant public school characteristics is therefore likely to raise the effect of income on private school choice more for whites than for blacks. Finally, close inspection of the relationship between income and private school choice in these data shows that income gains tend to produce larger increases in private school enrollment among families whose incomes are already high than among families with initially low incomes.¹⁷ Taken together, all these factors suggest that white middle-class families would be the group most likely to avail themselves of financial subsidies to attend nonpublic schools.

Even if this were not the case and the report's projections were credible, the authors' logic for assessing who would benefit most from government tuition assistance is specious. By their accounting, if the proportion of white middle-class students among shifters were smaller than the proportion of white middle-class students now in private schools, we are to conclude that minority and low-income students are the chief beneficiaries of the policy! What, of course, should be of interest is whose chances of entering the private schools are raised most and, combining new entrants with current private school students, whose chances of utilizing the assistance are greatest. By these criteria, I have little doubt that the benefits of tax-supported assistance for private school tuition would dispro-

portionately benefit middle- and high-income whites rather than black or low-income families, and would very likely aggravate racial and socioeconomic segregation.¹⁸

Conclusion

In sum, Coleman, Hoffer, and Kilgore's conclusions regarding the unusual effectiveness of nonpublic schools for enhancing scholastic achievement are unconvincing. The representativeness of the nonpublic schools and the appropriateness of the tests are in doubt. Not all strategies available to reduce biases due to initial selectivity were attempted, and more appropriate measures of achievement growth and alternative points of comparison suggest appreciably smaller benefits from attendance at private schools than those reported in "Public and Private Schools." Nevertheless, the argument that more demanding and more orderly schools would show educational benefits appeals to common sense, and the hints in the Coleman report that this may be true should be pursued.

The risks in crediting the report's conclusions about the effect of private schools on segregation are far more serious than entertaining its conclusions about achievement. Coleman and his coauthors have exaggerated the differences in internal segregation between public and private schools, they have most likely underestimated the segregative impact tuition subsidies would have, and they omit the very simple fact that one important reason segregation appears modest in the private sector is that so few minority students are within its embrace. To support tuition subsidies in the expectation, based on this report's "finding," that segregation would not be increased would be myopic.

In a *New York Times* Op-Ed column, June 20, 1981, Coleman asked "Should social research directly address divisive issues of social policy?" I believe that the answer is yes, but that we should do so with James Q. Wilson's recent admonishment in mind: "There is little wrong with intellectuals taking part, along with everyone else, in the process by which issues are defined, assumptions altered, and language supplied. But some of them—university scholars—are supposed to participate under a special obligation—namely, to make clear what they know as opposed to what they wish."¹⁹ ■

¹A. S. Goldberger, "Coleman Goes Private (in Public)," unpublished paper, Center for Advanced Study in the Behavioral Sciences, Stanford, Calif., May 1981, p. 1.

²Diane Ravitch, "The Meaning of the New Coleman Report," *Phi Delta Kappan* (June 1981), p. 718.

³This is unambiguously so in the Project Talent data for 91 high schools analyzed by C. S. Jencks and M. D. Brown ("Effects of High Schools on Their Students," *Harvard Educational Review*, 45 [1975], 273-324). K. L. Alexander, M. Cook, and E. L. McDill ("Curriculum Tracking and Educational Stratification: Some Further Evidence," *American Sociological Review*, 43 [1978], 47-66) analyzed data from 8 high schools, and, controlling for prior ability, prior achievement, and back-

ground, found a modest effect of curriculum placement on eleventh grade achievement (Sequential Tests of Educational Progress) and on twelfth grade Math Preliminary Scholastic Aptitude Tests. They found no significant effect on the Verbal PSAT scores. Alexander et al. do not analyze data available from 19 other schools because of the absence of information on race. They nowhere establish that the data they do utilize is representative, so skepticism of their results is warranted.

⁴See B. S. Barnow, G. G. Cain, and A. S. Goldberger, "Issues in the Analysis of Selectivity Bias," Institute for Research on Poverty Discussion Paper no. 600-80.

⁵The use of summer learning as a control for student differences is a relatively recent innovation in research on school effects. See especially Barbara Heyns, *Summer Learning and the Effects of Schooling* (New York: Academic Press, 1978).

⁶See Barbara Heyns, "Models and Measurement for the Study of Cognitive Growth," pp. 13-52, in *The Analysis of Educational Productivity, Volume I: Issues in Microanalysis*, ed. Robert Dreeben and J. A. Thomas (Cambridge, Mass.: Ballinger Press, 1980).

⁷Calculated on the basis of Table 6.2.5 in the report, assuming 90 percent of all students are in public schools, 6.7 percent in Catholic schools, and 3.3 percent in other private schools.

⁸Table 6.2.5 shows that, adopting Coleman's corrections for missing dropouts, Catholic school seniors get 2 more items correct than public school seniors. I adjusted this for background differences between Catholic school and public school seniors, basing my adjustment on Coleman's reported results of biases due to background calculated without corrections for dropping out.

⁹The authors do not report standard deviations for the subtests which they analyzed. They report them only for the full tests. To approximate standard deviations for the subtests, I assumed the coefficient of variation (i.e., the ratio of the mean to the standard deviation) was the same for each subtest as it was for the corresponding full test.

¹⁰See, for example, Jencks and Brown.

¹¹J. S. Coleman, S. D. Kelly, and J. H. Moore (*Trends in School Segregation, 1968-1973* [Washington, D.C.: Urban Institute, 1975]) report an average within-district segregation index for public secondary schools of 0.27. This compares with 0.49 reported in "Public and Private Schools" for the United States as a whole. Robert L. Crain of the Rand Corporation cites evidence of segregation in big city parochial schools in his unpublished April 1981 review of "Public and Private Schools."

¹²See Coleman, Kelly, and Moore, and B. S. Zoloth, "Alternative Measures of School Segregation," *Land Economics*, 52 (1976), 278-298, for a discussion of Coleman's segregation index.

¹³David James, "Measures of Segregation," unpublished paper, Center for Demography and Ecology, University of Wisconsin, Madison, July 1981.

¹⁴David James, unpublished reanalyses of the High School and Beyond data. James calculated a segregation index of 0.498 for public schools and 0.285 for private schools. But when he assumed the private schools had the same proportion of black students as the public schools did, the segregation index for private schools rose to 0.391 even though the calculation assumed no change in how students were distributed to schools according to race. In contrast to the large differences between the Coleman segregation indices for private and public schools, James found the Gini index (*G*) and the index of dissimilarity (*D*) to be more comparable: *G* for the public schools was 0.703 compared with 0.627 for the private schools, and *D* was 0.871 for public schools and 0.812 for private schools. See Zoloth for descriptions of these measures.

¹⁵Glen Cain suggests this possibility in an unpublished memorandum to Arthur Goldberger, Madison, Wisconsin, July 1981.

¹⁶See Coleman, Kelly, and Moore for evidence of "white flight."

¹⁷See Goldberger.

¹⁸Hispanics might realize a proportionate benefit because their enrollment in nonpublic schools is close to their percentage among all high school students, and Coleman's results predict a higher responsiveness among Hispanics to income increases than among white Anglos. The higher dropout rate among Hispanics would reduce the benefit families actually received.

¹⁹See J. Q. Wilson, "Policy Intellectuals and Public Policy," *The Public Interest*, 64 (1981), 31-46.

Dynamics of poverty

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Lee Rainwater, who employs a relative definition of those who are income poor rather than earnings poor, also emphasizes more persistence of poverty. His data source is the Michigan Panel Study. Over the ten years that he analyzes, real per capita income rose and yet the poverty threshold was increased only for price changes, so that it remained fixed in real terms. He therefore sets a relative poverty line at one-half the median "well-being ratio" (the ratio of family income to needs). He classifies as "near poor" those with 51 to 70 percent of the median, and for purposes of analysis he puts both groups together as "of low income." Rainwater finds that over the ten years 1967-1976, 40.6 percent of the population was "ever poor." This category he breaks down as follows: poor all ten years, 5.2 percent; near poor when not poor, 6.4 percent; spent at least seven years below the low-income level, 10 percent; one to six years below low income, 19 percent. When Rainwater averaged incomes over three periods within the decade in order to even out year-to-year fluctuations, he found that in the entire sample, 9.4 percent were always poor and 7.1 percent were near poor when not poor.

Having found a large number of persistently poor people in the sample, Rainwater next posed the basic question, "Who is poor?"—what groups have a higher probability of lower well-being. "Minorities" (blacks and Hispanics) were much more likely to be low-income over the years: among those 18 to 24 years old, the likelihood of being poor or near poor was eight times greater for minority than for majority youth, and between the ages of 25 to 54, the odds were seven times greater for minority people. Marital status again played a large role: Those not married for all ten years of the study made up more than half of the persistently poor, whereas those married to the same spouse all ten years made up less than a tenth. Among women heading their own households, 43 percent were in the persistently poor group. So also were 34 percent of the men who were single heads of households all ten years. Among men who were sometimes married and sometimes not, 10 percent were persistently poor; the comparable figure for women was 15 percent.

"Income packaging" is another concept that Rainwater explores. Total household income may be drawn from a variety of sources—Rainwater used four categories: head's earnings plus asset income; wife's earned income; husband's and wife's other income (referring primarily to transfers and pensions); and income of other family members. Which source is most effective in removing people of preretirement age from poverty or near poverty? Averaging over three periods for household members aged 18 to 54 in 1968, Rainwater concludes that the traditional source of income, head's earnings and assets, kept about two-thirds of the families above the poverty line in all three periods. Wife's income kept another 8 percent of