RURAL POVERTY IN THE UNITED STATES

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Education and the Occupational Achievement Process

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Introduction

People from several disciplines have been involved in the search for a simple yet valid explanation for variations in educational and occupational achievement. Perhaps no group has been more concerned than psychologists and sociologists. Vocational psychologists have brought to the problem their knowledge of the psychological causes of individual differences in behavior (9, pp. 305-410). Other psychologists have brought hypotheses concerning the motives impelling achievement (23, esp. pp. 86-92). Sociologists have brought a knowledge of the wider environmental influences on behavior, as well as their conception of chosen behavior as the selection of a limited number of alternatives from among the variety presented to the person by the social system in which he participates (5, p. 16; 17, pp. 7-17). Yet we have not achieved complete agreement. In part this may be due to isolation among disciplines, but the larger part is doubtless due to the practical difficulties involved in testing the theories proposed by the various schools. Only recently have techniques become available which permit behavioral researchers to analyze simultaneously the effects of influence among several variables (2, 9, 40). And even the best of such research (20) is handicapped by the lack of systematic and comparable data taken on appropriate variables over the whole course of occupational and educational selection processes. Researchers are often ingenious and sometimes brilliant in their attempts to overcome the limitations imposed by small, carefully selected samples, by inadequate longitudinal assessments of changes in the process of educational and occupational development, by a less-than-ideal measurement of variables, and by the practical difficulties in conducting scientific experiments on the subjects involved. Nevertheless, when we examine the best of the research from the point of view of what ought to be done, we must conclude that there are still many gaps in our knowledge of the educational and occupational achievement process. What one writer (28) has said while reviewing the research outstanding work of Coleman and others (6) on the effects of education on minority group performance is not of the best work in this area: "... this is not a good study ... it is just the best ever done."

The main objective of this paper is to summarize present research and theory about the process of occupational attainment. In addition we shall indicate some of the main lines along which future research should be conducted, and shall draw implications regarding ways to change levels of educational and occupational achievement. Some of the information presented is indisputable, being based upon census data. But the data are less definitive when we come to specifying the causal systems that account for such facts. Unfortunately these aspects are both more interesting to the social scientist and more important to the layman. This is because when we identify the variables in determining a system of repetitive behavior, such as the occupational achievement process, we also know at which points we can intervene in the system in order to change the behavior. As we shall see, in contemporary American the central and best understood element in the occupational achievement process is the educational achievement process. For this reason, much attention will be concentrated on the latter in this paper. Moreover, during recent years, rapid gains tending toward equalization of educational achievement have been made. This is especially true outside the rural South and among the white population, both rural and urban. The paper attempts to document the major inequalities, and to show the connection between educational and occupational achievement.

Prospects for Occupations and Education

Achievement and the Occupational Prestige Hierarchy

The occupational structure and its changes are the starting point for social psychological explanations of the occupational achievement process, specifically the prestige structure of occupations. Most of the time when sociologists refer to occupational achievement, they mean achievement along the prestige dimension of the occupational structure. This dimension is not identical to money income. Research on the social standing or prestige of occupations has shown that variations in what the
population, believes so. The quality of occupations is for some people related to income, and the correlation is positive, as would be expected (15, p. 134; 28, table 7-3, p. 159). It is often said that income is only one of the rewards provided by an occupation. Factor scores for obtaining and assessing information with which to determine goals and to select means for achieving them. Rankings of occupations have produced many revelations concerning the relationship between occupational prestige and desirability.

There is no necessary occupations are viewed as so degrading that they may be considered changes in kind

The earnings of occupations are less than have been studied to date—capitalists and communists, developed and underdeveloped—the correlations among traditional methods of assessing information to which scores were assigned (21). These methods have long been used in terms of the prestige of occupations in the social structure. In the 1930s, the Two, reported by Hodge, et al., two sets of research projects in the economic history of the United States, it seems to be absorbing more and more decision-making. This may well lie behind the success of large government and large business. At the same time it should not be forgotten that while the great increase in efficiency brought on by the two processes of automation and modernization make it possible to consider solving social problems or engaging in explorations we would like to have in the earlier conditions: "the poor have always been with us" but only during the last three decades have we decided to try to erase poverty; and the moon too has always been with us, but only recently did we begin to try to visit it. For the occupational structure the overall recent results of these processes are not clear. Agricultural production has more than doubled since the end of World War II. Between 1947 and 1961 output per worker rose by more than 50 percent. Taking a longer view, most national product per capita, which has increased about threefold since 1900 (5, p. 378; 42). Another way of putting it is to note with Zeisel and Tolle (47, p. 250) that "the proportion of all workers employed in goods-producing industries declined from 48 percent in 1907 to 46 percent in 1920" (47, p. 250). Meanwhile the average workweek has been dropping steadily for at least one century. In 1850 it was 64 hours, in 1905 to 37.5 hours per week in 1960 (47, p. 258-259; 42). A decrease in work hours has been going on since 1947, followed by about 4 million government jobs were added. This may be observed with the following figures noted by Zeisel and Tolle (47, p. 259): "In 1960, local government (cities, counties, schools, and other districts) employed over 6 million workers; about 55 percent of the public employment total. State government, with over 1/2 million workers, 20 percent.
rather than degree. The space and missile industries have provided many of these. Increasing specializations and the growth of cross-disciplinary fields in science provide others.

New Duties for Old Occupations.—Like the above, documentation is difficult to provide here. But the phenomenon is real. Perhaps one of the more outstanding examples is to be found in the field of education, where the turn of the century. Self-powered equipment was practically nonexistent. Because the market economy was not as labor intensive as today there was little demand for production records. Nor was there much demand for literary skills. Today the farmer devices made possible by such machinery, while he in the century.

The farmer with a few weeks on the job. Not almost laterial basis. Thus the net effect is that the lives in remunerative work (42). The revolution in mechanization of activity has done increase in the number of occupations requiring the by machines, many of the routine housekeeping duties which be partly, in the upgrading of old occupations. The material presented in the preceding paragraph merely illustrates this. The main evidence that the net effort of the basic transformations on individual occupations is to raise the entire prestige hierarchy is presented in Hodge, Siegel, and Russ (20). These writers present data on the changes in the prestige of examinations from data taken in about 1885, 1905, 1947, and 1963. Almost all the changes, particularly in the more recent data, are in a positive direction. Data on the social psychological reasons for this do not exist, but one would suppose something like the following is happening. Prestige is assigned to occupations as a reward for applying scarce skills to activities people believe to be important. Occupational upgrading is a process which, by improving the worker's skills, makes his contribution more unusual, and therefore scarce and more important.

The general rise in the occupational prestige hierarchy

With a few individual exceptions, there is a long-term upward drift in the occupational structure. On the whole, the evidence does not substantiate the view that the levels of prestige are stable during their lives. Others are continuously employed on a regular basis. Thus the net effect is that the average age of American working women was recently estimated at about 38 years. Girls in high school are expected to remain about 22 years of their adult lives in remunerative work (42).

Occupational Prestige, Income, and Education

The interpretation just presented, in which changes in the occupational prestige hierarchy are related to educational upgrading, strongly suggests that changes in education are tied up with the changes in the occupational structure. We shall present data on this later, and will follow that presentation with data on education and income. But first let us review the relations between occupational levels and age during their school years.

OCCUPATIONAL Prestige and Income

It is well known that the average real income of American families has been rising almost steadily for many years. In his recent work on the subject, Miller calculated a data series in 1900 and 1962 the average real personal income per family, calculated in 1962 dollars-equivalents after income, tax, rose from $4,200 to $6,400 per year, or to about 150 percent of the earlier value (25, table 1, p. 9). Moreover, all levels of income distribution have been rising all the year to be rising at about the same rate, especially since 1944. During this period there is practically no change in the proportion of total personal income received by the top, second, middle, fourth, and lowest fifths of the income distribution (25, p. 2). Similarly, there is almost no change in the properties received by the top 5 percent from 1947 to 1963.

More to the point, there is a substantial, though imperfect, relationship between annual income and occupational prestige, as measured by the occupational prestige scores of the major occupational categories. Presenting data for full-time, year-round male workers only, for example, in median or 25 percent of salary income of farm operators, officials, and proprietors is $7,541. That of clerical and kindred workers was $4,547, of operators and kindred workers (roughly, skilled workers) $4,571, that of laborers (except farm and farm) $5,872, that of farm laborers and forest $1,731. As an important exception, professional, technical, and kindred workers tend on the whole to outrank farm managers, officials, and proprietors in prestige, though their ranks for median salaries are reversed; the former received $6,948. This is probably due in part to the fact, to which we referred earlier, that prestige includes nonremunerative returns. The trend data, of course, are approximately consistent with the above. From 1900 to 1960 the increase in median income for male workers was 25 percent. For farm managers, officials, and proprietors it was 33 percent. For clerical and kindred workers, and operators and kindred workers it was 25 percent. It was 28 percent for laborers (other than farm and mine). For farm laborers and forest it was 18 percent.

(Notice that operators, etc., experienced a disproportionately high increase, while farm wage-earners suffered a disproportionately low increase). The figure for professional, technical, and kindred workers is 52 percent (pp. 65, 69).

Occupational Prestige and education

Evidence on changes in median years of school completed shows this to have been occurring. Between October 1948 and March 1964 the median educational levels for all civilian workers 15 or more years old rose from 10.8 to 12.3 years. For males the change was from 11.7 to 12.1 years (44, p. 123). A study of the detail of these data shows that from 1948 to 1962 the median number of years of school completed increased among males from 10.0 to 11.6 years and from 1948 to 1962 the median number of years of school completed for both males and females. Interestingly, rough calculations show that occupational classes such as professional, managers, clerical workers, and sales workers advanced but little (about 1.3 years) during the years people are finishing school. On the other hand, blue-collar occupations such as craftsmen, operatives, laborers, and farmers advanced substantially (about 2.7 years) during the same period. The relations between education and income are strongly depending on the occupation. Some of the most interesting studies are those by Hodge, Siegel, and Russ (20), and by Portes and Haller (25). These studies show that the more years of schooling people have, the higher their income is. For example, in 1948 those who had completed 4 years of school had a median income of $3,625, while those who had completed 12 years of school had a median income of $7,250. Similarly, those who had completed 4 years of school had a median income of $4,571, while those who had completed 12 years of school had a median income of $9,571. These studies show that the more years of schooling people have, the higher their income is. For example, in 1948 those who had completed 4 years of school had a median income of $3,625, while those who had completed 12 years of school had a median income of $7,250. Similarly, those who had completed 4 years of school had a median income of $4,571, while those who had completed 12 years of school had a median income of $9,571.
...money. But there are important differences related to race. Though off the immediate topic, it is noteworthy that women discriminate between occupations because they are involved in the whole area of variations in occupational achievement. For Miller's data, the 1959 earnings of nonwhites men have been calculated as a percentage of those of white men (26, pp. 139-150). The average, American white men between 25 and 64 years of age earned $6,112 per year more in 1959 than comparable nonwhites. The nonwhite men earned $3,260 for differences in number of years of education make more money. But there are positive, on the average, the higher the prestige of occupation the higher the income. Next, we would expect, occupational prestige and education are positively, though imperfectly, related; the higher the education the higher the occupation. So, we would have assumed, as many have, that if one is paid for his work contribution, and derives much of his work ability from education, then differences in earnings derived from education would result in differences in income. Data were added to show that this occurs. But in the process we discovered that the income derived from increasing the number of years of school completed is substantially greater for whites then for nonwhites. The question was raised as to whether this might be due to variations in the quality of education received by whites and nonwhites. Suggestions for answering this question were presented later in connection with a more systematic analysis of the factors influencing educational achievement.

Rural-Urban Variations in Educational Achievement

Clearly, school-going comprises the most important class of variables needed to account for variations in occupational achievement, and most research efforts have been directed in this end. Certainly, we shall proceed to review some of the evidence on the subject and subsequently attempt to provide the origins of a social psychological explanation for these variations. But before doing so we shall use evidence that shows the relation of region and race to occupational achievement. It is clear from the evidence presented earlier in this chapter that the regional and racial differences in earnings are due to variations in the quality of education received by whites and nonwhites. We shall assume that the regional and racial differences in earnings would have occurred during the school years and would have been first manifested as poor education.

Summary

The sociologist measures occupational achievement by assessing the prestige of the person's occupation. Money income is not the only reward for high achievement, and occasionally it is used to attract workers to undesirable jobs. Thus the correlation between education and occupational achievement (prestige) is far less than perfect. But, though imperfect, such a correlation exists and it is positive: on the average, the higher the prestige of the occupation the higher the income. Next, we shall expect, occupational achievement and education are positively, though imperfectly, related; the higher the education the higher the occupation. So, we would have assumed, as many have, that if one is paid for his work contribution, and derives much of his work ability from education, then differences in earnings derived from education would result in differences in income. Data were added to show that this occurs. But in the process we discovered that the income derived from increasing the number of years of school completed is substantially greater for whites then for nonwhites. The question was raised as to whether this might be due to variations in the quality of education received by whites and nonwhites. Suggestions for answering this question were presented later in connection with a more systematic analysis of the factors influencing educational achievement.

Rural-Urban Differences in Educational Achievement

We have seen that we need to understand the way education influences people in order to understand occupational achievement. To understand rural-urban variations in occupational achievement we must therefore examine the school performance of rural and urban people. This will be accomplished by regional and racial data to complement them. Clearly, education comprises the most important class of variables needed to account for variations in occupational achievement, and most research efforts have been directed in this end. Certainly, we shall proceed to review some of the evidence on the subject and subsequently attempt to provide the origins of a social psychological explanation for these variations. But before doing so we shall use evidence that shows the relation of region and race to occupational achievement. It is clear from the evidence presented earlier in this chapter that the regional and racial differences in earnings are due to variations in the quality of education received by whites and nonwhites. We shall assume that the regional and racial differences in earnings would have occurred during the school years and would have been first manifested as poor education.
increased a little. The overall pattern for 1960 was as follows: urbanites had completed the highest number of years of school, rural nonfarm people the next, and farm people the least. There were, too, fairly substantial differences among regions. On the whole, however, the eastern part of the country had the fewest years of school. Those of the North Central region were completing the highest number and those of the South, however, second to the West in proportion of whites who had attended college. As our history leads us to expect, nonwhites had completed fewer years of school than whites. Because of the existing effects of residence, region, and race, we would expect that urban white westerners would show the largest proportions completing college and the smallest completing no more than eight grades. This holds, with the respective percentages being 24.5 (1 year or more of college) and 26.4 (8% years of school). The combined effects of these variables also suggest that nonwhite southern farmers would show the smallest proportions completing college and the largest proportions completing no more than eight grades. This, too, holds, with the respective percentages being 2.1 (1 year or more of college) and 8.5 (1 year or more of college). It should be added that college attendance rates during that year were less than 10 percent for all categories of nonwhites except urban westerners (17, table 1, p. 120).

College enrollment in 1960 of American students who were high school seniors in October 1959 has been reported by Nam and Cowling (46). They found that urban residents were more likely to enroll in college than were rural residents, but there was a sizable drop in rate of college enrollment of high school graduates. No data on regional differences were presented.

In summary, though the overall figures were higher in 1960 than in 1930, there were substantial differences in educational achievement among residence groups in 1960, urbanites first; rural nonfarm, second; and farm people last. Nonwhites were generally low, but were lowest in rural areas. Except for the percentages of whites attending college, southerners in each category had the smallest percentage who had attended college and the highest who had not gone beyond the eighth grade. Roughly the same residence trends were observed for college enrollment of 1950 high school graduates. No important race differences were noted, however, and regional variations were not reported.

Dropout behavior

It is easier to talk about dropout behavior than to analyze and present this kind of information. The phenomenon bears a sense of finality that existing data do not plum. However, the term reflects a common occurrence. Not quite half of the 12-year-olds who entered school in 1960 never completed 8th grade. No important race differences were noted, however, and regional variations were not reported.

10, 11, and 12 except that for grade 6 the South was as low as the South. Whites systematically outscored Negroes, and in grade 6 and the Puerto Rican, Mexican, and Indian groups are again low.

(3) Reading comprehension—Again, there is not much, if any, effect of metropolitan-nonmetropolitan residence on reading comprehension for grades 1, 3, and 6. First graders did not take the test. But among 6th, 9th, and 12th graders, the metropolitan advantage was manifest. In grade 9, however, the metropolitan slab was so much higher that the metropolitan-nonmetropolitan figure was not significant. In grade 12, however, the metropolitan-southwest figure was significant.

The Southeast includes Arizona, New Mexico, Oklahoma, and Texas; the Mountain States include Idaho and Montana; the Far West includes the North Central regions.

The North Central region includes the five states of Minnesota, Wisconsin, Iowa, Illinois, and Indiana; the Mountain States include Idaho and Montana; the Far West includes the North Central regions.
tend to outperform those of other regions, while those from the South (and in the case of grade 12, the Southwest) tend to perform at a lower level than those from the North. Again, whites systematically outperform but as on previous years, there is little difference among 3rd graders. There is a slight improvement on the scores of Puerto Ricans, Mexican, and Indians which persist through grades 3, 9, and 9 and are no longer evident in grade 12.

There is one unusual fact about the mathematics achievement data. The distribution for Mexicans, Puerto Ricans, Indians, and all categories of Negros is sharply skewed to the right. This skewing results from a large proportion having exceedingly low scores which are about equal to each other; the high scroes are more variable. The same phenomenon is observed in the 12th-grade metropolitan western and nonmetropolitan southern groups. The 6th-grade southern and southwestern children make lower scores, with whites systematically outperforming the others. Again, whites systematically outperform but as on previous years, there is little difference among 3rd graders. There is a slight improvement on the scores of Puerto Ricans, Mexican, and Indians which persist through grades 3, 9, and 9 and are no longer evident in grade 12.

In the 3rd grade, students perform lower than average, especially negroes, from the 3rd through the 9th grade on all four tests. There is little if any effect of region among 3rd graders on any of these tests or among 1st graders on the two tests they took.

Thus, racial differences exist at all levels and for all tests. But, on the whole, residence and regional effects begin to show after the 2nd grade. In all cases it is the categories that are presently or historically the most rural—the Negroes, the southwesterners, and the nonmetropolitans—which show the poorest test performance.

Summary

The first section explained the sociologist's contention that occupational prestige is the key variable by which to approach the measurement of occupational achievement levels. Secondary data were then presented to show, among other things, large differences in prestige levels of various groups. Differences on this variable are less pronounced than on race. But they exist among 9th and 12th graders for mathematics and nonverbal ability, and among 3rd graders for mathematics and reading. The major issue in the next major section.

Variations in Educational Achievement

Clearly, if we are to understand the occupational achievement process, we must formulate a valid explanation of the educational achievement process. Not by the 6th grade, but by the 3rd grade, the student begins to show tendencies toward occupational achievement. On the contrary, there are several. The current ones are by Burke (3). Among the most influential of these are Glazer et al., Roe, and Super. Glazer et al. stress occupational achievement levels but ignore the differences in which each later stage is more reality-oriented than the former. These differences begin during the elementary school years and continue until the person is established (14). Roe cross-classifies occupations according to level and function, and then attempts to match personality needs (developed early in life) with job characteristics (41). Super has stressed the key role of the self-concept in determining the individual's occupational behavior (41). The need for objective evaluation of recent large-scale educational programs has probably lessened the emphasis on important research and theory regarding psychological development, one which should begin to bear fruit within a few years. No definitive publication has yet come from the newer lines of thinking.

In any case, there are at least three related aspects of most such psychological models which are useful for purposes that were already disheartened with school by the 6th grade, the metropolitan West quite noticeably. There are widespread differences in occupational achievement levels of students of different races and ethnic groups. Psychology, it is the equivalent to the physical's experiment in a vacuum, or to the chemist's experiment conducted under standard conditions. As a methodological ideal for studying certain kinds of behavior, it is highly appropriate. Unfortunately, it pervades much psychological thinking where it is not appropriate, including occupational choice. The occupational achievement process is enabled in a whole new way of looking at work and in which some influence wanes while others wax. A useful theory must be able to identify and specify the changing effective factors contributing to occupational achievement. Social-Psychological perspective—The present position attempt to allow enough individual plas- ticity to the model of relating to his environment, while at the same time avoiding the assumption of infinite plasticity. Three assumptions are made about the great
majority of youths whose school behavior is the concern of this section: (1) That most of those who do well or do poorly in school are caused in large part by the social and educational environments in which they are placed. The largest part of this section stresses that most of the teaching that goes on in schools is not particularly directed toward social factors rather than biological factors such as brain damage or poor heredity to explain student accomplishment. (2) That the behavior of people is determined by the ways they perceive of themselves and their environment. The role of available information and the perceptions created thereby is critical in the whole of the intellectual ability that a person has. For the most part, we can assume that environmental factors such as poor teaching and inadequate guidance are not particularly significant in variations among them in achievement. (3) That intellectual and social conceptions and goals, and self-conceptions information are learned in and sustained by interaction with others. We shall elaborate each of these points.

(1) One of the major learning tasks in the life of any person is largely finished even before he sees the world. It is a task of huge proportions, yet practically all 5- to 8-year-olds have, for the most part, completed it. Children in all societies, even the so-called primitive groups, perform it well. Most of the best and the poorest students differ little in this respect from other youngsters: they have learned a language.

What does it mean for a child to learn a language? It means that he has learned an enormous number of details and general rules. He has learned a vocabulary of words and how to put them together into a well-structured order. He has learned a grammar. It is true that, ordinarily he makes more mistakes with his grammar than do adults, but his mistakes are so few that he can understand his parents, his friends, and others—even strangers. He can usually respond to invitees or to them so that they understand the meanings he attempts to convey. To the child, a language is as natural as exploring his environment, and he has learned the whole of his first experiences in learning our native language, but we remember when we tried to learn a foreign tongue and studied it from 2 or 3 years in high school or college. We remember the great effort we had to make in learning the words, conjugating the verbs, and above all to place subjects, predicates, etc., in their proper places in sentences. But for all our hard work, we know very well that our understanding of the language is still superficial. If we do not repeat it while we are in school we soon forget what we were taught by those around him so thoroughly that, despite a few idiosyncrasies in grammar and pronunciation, he is a master of it. He speaks and listens almost effortlessly; certainly he does not usually struggle to remember what a certain word means, as most of us do when we try to repeat some strange word for the first time.

Most students have few if any major physical imperfections to see, hearing, speaking, understanding, getting around. They know a language; they have already known that they can learn exceedingly difficult material because they have learned the language. And they strive to prove that their fundamental intellectual capability has not eroded because they continue to communicate with a directness and facility that would astonish us if we ourselves were not so accustomed to it.

Surely, when poor students have already mastered their technique of learning, we must look for social factors rather than biological factors such as brain damage or poor heredity to explain their student accomplishments. These individualistic positions hold, in effect, that little is or can be done about a student's poor school performance. The social-psychological position on the other hand, holds that a person's knowledge, goals, and self-conceptions determine how well he does, and that in turn these various are almost entirely due to factors in the social environment. Parents, for example, influence the situation of their child, not primarily through his genes, but because they may or may not stimulate him, may or may not help provide appropriate goals and self-concepts for him, may or may not provide effective help in teaching him. Other people influence him in the same way.

This is not to say that mental ability is unimportant. Of course, intelligence scores are correlated with performance in school at all levels. But intelligence is not a simple phenomenon. To be sure, there is evidence of genetic effects on it, but there are important, and perhaps omissions, of environmental influences on it as well (13, pp. 191-207; 39, pp. 364-385).

Environmental Influences

If we want to understand and to affect educational achievement, we must understand the system under which the person's achievements is condition as something as determining the variable aspects of his environment that influence his behavior as he progresses through school. We are only beginning to learn how to analyze these factors systematically. Obviously, we must have general concepts for describing the environment. One main distinction we draw here is between the general environment and the effective environment.

The general environment

By the term "general environment" we mean to indicate all variables describing the amount and kind of information which, objectively, is readily accessible to all or most persons in a geographical area. For the topic of education and occupational achievement, the term refers to all such information indicating what a person might do in order to be successful in school or at work. Geographically, for a given topic like science in school or at work, the area might be limited to the home or to a school or to a country. In the United States, the area might be the nation, or the world. General environment is the actual or potential exposure to information or knowledge of all persons, including that of the population. The effective environment is the set of meaningful objects that are available to all persons, including that of the population. The effective environment is the set of meaningful objects that are available to all persons, including that of the population.

All variables included in the effective environment must be responded to by that person in order to become educated. Therefore, in order to get a job, they must learn about the work-a-day world and acquire the information necessary to do so. The amount and quality of information which, objectively, is available to all persons, including that of the population, varies among different areas. Areas differ among different areas, and among different times. These differences vary among different areas, and among different times. These differences vary among different areas, and among different times. These differences are due to the fact that people have and share with him a rich knowledge of the world. This will provide him with many goal alternatives from which to choose, and a wealth of information to make his choices rational. The other hand, if those around him do not have or do not share with him a very adequate knowledge of the world, his alternatives are limited and the information available to him is inadequate. It should be stressed that a social psychological point of view is somewhat different from the individualistic position, to which we have referred, that is, to dominate much of contemporary psychological thought. One variety of the individualistic position, in the extreme, holds that the performance of students depends largely on inherited abilities. In turn, these abilities are due primarily to genetic defects in his parents. Another variety of the individualistic position holds that behavior orientations—ability for one's environment, are not particularly significant in variations among them in achievement. The largest part of this section stresses that most of the teaching that goes on in schools is not particularly directed toward social factors rather than biological factors such as brain damage or poor heredity to explain student accomplishments. These individualistic positions hold, in effect, that little is or can be done about a student's poor school performance. The social-psychological position on the other hand, holds that a person's knowledge, goals, and self-conceptions determine how well he does, and that in turn these various are almost entirely due to factors in the social environment. Parents, for example, influence the situation of their child, not primarily through his genes, but because they may or may not stimulate him, may or may not help provide appropriate goals and self-concepts for him, may or may not provide effective help in teaching him. Other people influence him in the same way.

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We have dwelt upon the general environment at length for a reason. Large-scale general environments have important effects on the behavior of individuals because they limit or provide the information available to everyone. Everyone has a share of everyone else. But they have been seen in isolation among persons within such an environment. Factors in the effective environment of the child are most obvious. Despite much speculation about their effects, small-scale general environments have little effect on the people within them.

The effective environment

By the "effective" environment we mean those parts of the person's social environments which vary substantially from individual to individual and which account for individual differences in behavior. The elements of a person's effective environment consist of the information presented to him and emphasized as important for him by other people whose judgment he respects. These people are the "significant others." The people who perform this function vary to some degree from individual to individual and from one type of behavior to another. The evidence that parents, peers, and school personnel frequently become significant others is overwhelming. In this chapter we consider the concept of significant others as it has developed historically, the evidence that parents, peers, and school personnel frequently become significant others especially in terms of significant others. The concept of significant others has not yet received the attention needed to make it most useful for understanding individual differences. The elements of the individual's conception of the concept of significant others, a concept that is explained later, refers to the level of educational achievement process and level of occupational achievement. Knowledgeable students connect college grades and the occupational aspiration. There is reason to believe that level of occupational aspiration is one of the most important variables influencing both level of educational achievement and level of occupational achievement. By the later years of high school, one's aspirations of his ability to learn, his college plans, and his occupational aspirations are all probably functioning to some extent as independent variables. Influencing grade points and dropping behavior (and, later, college grade-point average or GPA) are probably independent variables rather than components of occupational aspiration of urban children in the different grades, from the 5th to the 12th (307). It was found that 6th graders had already developed fairly consistent prestige levels of occupational aspiration. That is, on the average, the children selected occupations that were fairly close together in prestige. A boy, for example, who was interested in a high-prestige occupation was also interested in other high-prestige occupations, while a boy who was interested in a medium-prestige occupation was also interested in other occupations at roughly the same low level. Those in later grades were still more consistent. In fact, children's levels of occupational aspiration seemed to become more and more consistent at least until they finish the 12th grade. At all grade levels, children whose measured intelligence, social status, or school marks were higher, were more what more consistent in levels of occupational aspiration than were students whose measured intelligence, social status, or school marks were lower. Also, in a consistent, the average levels of occupational aspiration of 5th and 6th graders was found to be higher than those of 8th through 10th grade students. There is a marked rise in levels of occupational aspiration among 11th and 12th graders, probably because of the loss of low-aspiring high school dropouts.

Data on the Educational Achievement Process

Some of the details of the educational achievement process will now be suggested. They are based on scattered evidence from secondary sources as well as on a certain amount of systematically correlated evidence obtained in the course of the researches of this book. Some of this evidence shows the importance of the educational achievement process as well as its contribution to the process of occupational achievement.

Sources of data

The correlational data, presented in table 1, are taken from a number of sources, some of which are unpublished. For a number of years a small group of researchers at the University of Wisconsin and Michigan State University have been conducting projects relating to a small number of comparable variables to the educational achievement variables relevant for various stages of the educational achievement process. These, plus closely related work of others, are presented. Pink measured a series of variables on 355 eighth and ninth graders. In the studies, two years later, after the age at which they could legally leave school, 72 per cent of the boys and 49 per cent of the girls reported seeking work, a percentage which has dropped (22). The data also provide information on grades during junior high school, a time when school marks were beginning to be more significant. Some of the data was collected for a group of early junior high school. Haller and Millard studied 427 11-year-old boys in Beaver County, Mich., in 1967, obtaining data on grade point average.
The interpretation now presented is based on the correlation coefficients in table 1, together with other data. All data are interpreted in the frame of reference already stated. Naturally, the value of each correlation coefficient is not exact; each is an estimate of the degree of relationship between a pair of variables.

During the first few years of school, a child goes to school because no one around him questions whether he should. His view of the world is certainly irrelevant to his education. He knows nothing of the connections between school and work. He learns what is coming up in school-speaking English: we do it because everyone around us does so, and everyone expects us to do so, too. When there is complete unquestioned consensus about going to school, the child simply goes.

When he begins school he has already completed the major part of his biggest learning task: he knows a language. To this point he has no conception of his learning ability; he just learns. But after he is in school he will interact with teachers, parents, and other students in situations where the focus is deliberately on learning. He will be praised when teachers and others think he is learning, and he will be blamed when they think he is not. The teacher will respond more to some children than to others. If, over a period of time, a child tends to do the things that win the approval of the teacher, he will learn that the teacher thinks he is a good student. If his grades and his conversations about school win the approval of his parents and others, he will learn that they, too, think he is a good student. Since he learns what he is told and what others tell him about himself, in this case he will learn to think of himself as a capable student. On the other hand, if teachers, parents, and others think of the child as a poor student, he will think the same of himself. Note that in column A of the table there is a high correlation (+.48) of grades with intelligence.
is perhaps the most immediate important effect of being over age in grades (r = -.30) and of low grades (r = -.33). And, of course, once the child has dropped out, it is almost impossible, practically speaking, to reenter. Dropping out of school is but slight, with large gaps between college and socioeconomic status (r = .10), and with having parents who are not near college (r = .10). The same is true, to a slight degree, of being over age in grades (r = .25; data not presented in Table 1). No one of these factors is as high as the productive of dropping out of school. It is our interpretation that all of them function in one of these ways: (1) If a youth has a certain level of school performance, it is a source of embarrassment for him, making him feel compelled to leave to avoid being behind. This is probably why twice, lower class status, low grades, and especially those being over age in grades are correlated with dropping out. (2) The other factors, low expectations of parents or low levels of occupational aspiration, may signify that school need not be meaningful to the younger who is not doing well and to their parents also. In short, some youngsters probably tend to believe they have little to gain by staying in school, and that they have much to lose—namely self-respect and the esteem of others.

As children grow older they usually begin to grapple, even if dimly, some of the connections between school and later life. Some see these connections earlier and more clearly than others. As a consequence, each tends to develop a level of educational aspiration and a plan regarding college. The data in Column C of the table (17 years in school or later) show that among Michigan 17-year-olds (column D), those with high occupational aspiration and high school plans—r = +.50)—are probably those who have an especially high correlation (r = +.69). If we continue to function, the whole process can slow. The beat of the whole process can be dropped if we drop out of school and later life. Assuming we can learn to identify "significant others," we will need to learn how to utilize them to influence the individual. If they can be provided with relevant information and can be encouraged to try to influence the youth, it might well be possible to raise the performance levels of many more people than we could by depending entirely on the traditional direct contact of teacher with student. One possibility would be for cooperation among the school personnel who knows what needs to be imparted to the student, and the State extension personnel who are experts in mobilizing local groups to solve problems. This would be especially useful in rural areas. (2) Conquering the shame of being over age in grades appears to be more difficult. Perhaps special classes geared to reasonably bright people who have failed reducing this factor may help to do this long way toward equalizing the educational and occupational chances of these students. (3) To understand the whole process one might consider the interest of the educational and occupational achievement of these people. The trend toward upgrading the whole of the educational structure is getting tossed off. The best evidence is that the trend will continue and that it will become more important for occupational achievement than it is today. Obviously, the sector of the society that is167

variables for introducing change

There can be no doubt that present programs to address the obvious inequities—improving facilities such as libraries, making school attendance compulsory, upgrading teachers, providing trained counselors—should proceed more rapidly in the areas now threatened. But the rise of change of the whole process can vary likely be stepped up if we draw upon the major interrelationships presented here.

(1) We need to learn how to identify the persons who are new "significant others" in each individual's educational and occupational decision-making. At the University of Wisconsin, research is now under way to determine the educational and occupational plans that are now actually made as a result of the contact. When this is done we can compare the effects of utilizing these people and of the educational opportunities in school and his self-acceptance as a learner, and to raise levels of occupational aspirations and college plans of those who can meet the intellectual requirements.

(2) We need to find ways to reduce or eliminate the costs of change that come to those with being an over age students. Some older youngsters are not very intelligent, but being over age is evidently influenced by a number of factors not directly connected with ability. There is reason to believe minority group members, whose performance is quite low, frequently leave because they are over age 16 and are not forced to drop out. The work already done can be improved by using multiple analysis techniques with data already available. It is hoped that this can be done soon.

Improving Occupational and Educational Prospects for Rural People

Education for Tomorrow's Occupational Structure

As we have seen here, educational achievement appears to be the main factor influencing occupational achievement. There are no reasons to believe that the trend toward upgrading the whole of the educational structure is going to taper off. The best evidence is that it will continue and that it will become more important for occupational achievement than it is today. Obviously, the sector of the society that is influenced will have to improve. On a gross basis, these are the largely people of the rural South and Southwest—especially the Negroes, Indians, and Mexicans—as well as the Puerto Ricans, who are mostly in the metropolitan North.

Variables for Introducing Change

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Although the data presented in Table I were taken from several highly well-conducted projects, we shall have to raise our research sights considerably in order to obtain the most useful data. Consider these facts. With one exception each of these studies takes a sample from but one area rather than from the country as a whole. Also, in every case, the part of the life span covered is short; the longest is 7 years. By means of the variables used can be validly and reliably measured, but there are great variations in the validity and reliability of the ones presented. The educational achievement variables, some of which may develop during the course of the student's time in school, which should be measured. Finally, while the development scheme here presented is probably useful, it is not perfect. What is needed is a more systematic specification of the educational achievement variables operating at any one stage—perhaps even breaking down to year-to-year intervals rather than, or in addition to, gross stages. At least three educational achievement variables should be measured at all levels: grades, standardized achievement test scores, and school completion. Ideally, all these facets should be built into at least one extensive, wide longitudinal research project beginning with the preschool child and ending with the adult.

Even better would be a series of such projects, each a few years apart. The aim of these would be to provide a constant flow of dependable information about the changing nature of the educational and occupational achievement process. In effect, this work would help us to understand the educational process and the flow of qualified manpower into the various levels of the occupational structure.

Summary

Occupational achievement is the process by which persons are selected into various levels of the occupational prestige hierarchy. The main mechanisms providing the selection are to be found in educational achievement. There are large differences among racial, regional, and residential categories in educational achievement. To some extent these are due to differences in the quality of educational facilities; but the greatest single factor is the gap between the rural South and Southwest and the Midwest and the rest of the population on the other hand. It is clear that most of the variability among persons is not accounted for by educational variables. A possible factor other than a set of social and psychological concepts was specified and was brought into a relation with one another in a hypothetical scheme of stages of the educational achievement process. The data presented were reasonably consistent with the scheme. The key independent variables are ability, socioeconomic status, and the influence of others, especially certain "significant others." Certain variables developed in the earlier process are thought to become independent variables later. One of the most important in concept's core is the development of his ability to learn. Unfortunately, this variable was identified after all the research presented here was underway. Others are level of occupational aspiration, parental encouragement for college, and college plans. This concept, the schema of stages, and the data lend themselves quite readily to inference regarding many other aspects of educational achievement, and a few such suggestions were made. It is to be emphasized that definitive research on the occupational achievement process must be conceived and executed on a much larger scale than has ever been done to date. When progress has been made on this problem these educational data might be linked, through measurements on particular persons, to occupational achievement data. An appropriate general conceptual scheme, perhaps expanding on the one presented here, might provide a more comprehensive, yet detailed, view of the whole occupational achievement process than has yet been possible.

References


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