DOCUMENT RESUME

ED 046 363 24 HE 001 984

AUTHOR Milner, Murray
TITLE Effects of Federal Aid to Higher Education on Social and Educational Inequality.
INSTITUTION Center for Policy Research, New York, N.Y.
SPONS AGENCY Office of Education (DHEW), Washington, D.C. Bureau of Research.
BUREAU NO BR-8-0700
PUB DATE Jun 70
CONTRACT OEC-0-9-180700000-0765 (010)
NOTE 210p.

EDRS PRICE EDRS Price MF-$0.65 HC-$9.87
DESCRIPTORS *Disadvantaged Youth, *Economically Disadvantaged, Educationally Disadvantaged, *Educational Opportunities, *Federal Aid, Financial Support, *Higher Education, Negro Students

ABSTRACT

This report examines the effects of federal aid to higher education on (1) class inequality, (2) racial inequality, (3) inequality of opportunity, (4) social mobility, and (5) the distribution of degrees. Chapter 1 defines the terms used and presents a preliminary sketch of the argument. Chapter 2 focuses on the effects of socioeconomic background on an individual's college career. Chapter 3 discusses the effects of federal aid on social mobility and college attendance. Chapter 4 examines historical trends in educational attainment and opportunity and compares these to historical trends in social mobility and equality in the societal structure. Chapter 5 examines whether the gap is closing between white and black levels of income, occupation, and education, with special reference to higher education. Chapter 6 examines the relationship between education and income and concludes that expansion of federal aid to higher education is likely to help reduce racial inequality but probably not class inequality. Chapter 7 discusses the effect of student aid on black educational attainment. Chapters 8 and 9 deal with "educational inflation" and the prospects and problems of expanding the availability of educational credentials. (AF)

ED046363

BR-8-0700
PA-24
OE/BR

FEB 8 1971

Effects of Federal Aid to Higher Education on Social and Educational Inequality

by

Murray Milner

Research Associate
Center for Policy Research

Assistant Professor of Sociology
New York University

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

1991 984

CENTER FOR POLICY RESEARCH
New York City and Washington, D.C.

ED046363

This study was conducted under contract with the U.S. Office of Education, # 0-9-18070000-0765(010). The first part of the study was carried out while the author was in Washington, D.C. at the Bureau of Social Science Research. The second part was completed upon his return to New York City, under the auspices of the Center for Policy Research.

A second report to result from this same grant is a work by Dr. Amitai Etzioni, a Senior Research Associate of the Center for Policy Research. His work is entitled "Toward Higher Education in an Active Society: Three Policy Guidelines."

During the whole project, Murray Milner and Amitai Etzioni freely exchanged ideas, and this mutual indebtedness is acknowledged here. Opinions expressed are those of the author and do not necessarily represent the views of the U.S Office of Education.

ACKNOWLEDGMENTS

Since the study was carried out, partially under the auspices of the Bureau of Social Science Research, we are grateful to its Associates, staff, and, in particular, the Director, Robert T. Bower, for the facilities provided and for the supportive atmosphere. Richard Jones assisted in some of the computer work. Richard Remp, Roberto Kleinfeld, Astrida Butners, and Ella Lasky served as Research Assistants for various periods of time. The American Council on Education provided us with some of the data on which this project is based.

TABLE OF CONTENTS

I. THE EFFECTS OF FEDERAL AID TO HIGHER EDUCATION ON CLASS INEQUALITY, RACIAL INEQUALITY, INEQUALITY OF OPPORTUNITY, SOCIAL MOBILITY AND THE DISTRIBUTION OF DEGREES

The initial purpose of this study was to estimate which forms of federal aid to higher education--student aid, grants to institutions, tax relief to parents, etc.--would contribute most to equality of opportunity. As the research progressed through its initial stages, doubts began to rise about the value of such a research focus. Gradually, more and more attention was devoted to examining some of the basic assumptions which are commonly made about the relationship between student aid, educational attainment and social stratification. This is the central concern of the first part of this report.

Because an attempt is made to raise questions about matters which are widely taken for granted, the study is necessarily exploratory. In turn the conclusions are quite tentative. Nonetheless we are convinced that the issues raised need to be considered in a more questioning manner than has frequently been the case.

The analysis which follows depends almost entirely on secondary analysis, that is, on the presentation or reanalysis of previously collected information. In most cases the data are from published sources. The majority of it is quantitative though some are qualitative in the extreme. Because the data have been drawn from a large number of sources their precision and reliability vary considerably. A full discussion of the methodology used in the collection of each piece of data is obviously impractical

and unnecessary, but where limitations of methodology seem especially relevant to our substantive concerns an attempt has been made to note this. Where the data are reanalyzed for this study the techniques have been described in greater detail.

Section A analyzes the probable effects of expanded student aid--very broadly conceived--on class inequality and mobility. Section B focuses upon the probable effects of such aid on racial inequality. In Section C we consider two levels of "educational inflation"* and the implications of these processes for race and class inequality.

*A full explanation of this concept will have to wait until later, but in essence it involves an expansion of the number of individuals who attain any specified level of educational certification, e.g., a B.A. degree, and a consequent decrease in the amount of social value or status attributed to that degree. One means of inflation is to lower the academic requirements for the given degree.

A. Class Inequality: The Effects of Socioeconomic Background on Achievement and the Consequences of Student Aid and Increased Levels of Education

1. Preliminary Considerations

a. Introduction.--Equality of opportunity is clearly a primary concern in the current debate over what form future federal aid to higher education should take. It was explicitly set forth as a primary goal in the recommendations of two blue-ribbon committees concerned with the issue of federal aid to higher education.

The Carnegie Commission on Higher Education, headed by Clark Kerr, entitled their report Quality and Equality, and stated on the first page:

> What the American nation needs and expects from higher education in the critical years just ahead can be summed up in two phrases: quality of result and equality of access. . . . The nation's campuses must

> act energetically and even aggressively to open up new channels to equality of educational opportunity (see Carnegie Commission on Higher Education, 1968:1).

In response to President Johnson's Education Message of February, 1968, the Department of Health, Education and Welfare created an advisory panel chaired by Alice Rivlin which produced a report entitled Toward A Long-Range Plan for Federal Financial Support for Higher Education (Washington: U. S. Government Printing Office, 1969). To quote former HEW Secretary Wilbur Cohen's cover letter:

> The report concludes that Federal aid to higher education in the future should emphasize two major national commitments: It should promote equality of opportunity by ensuring that all able students can afford to go on past secondary education, and that institutions are able to accommodate them. It should strengthen graduate education and research. . . .

In terms of social science, "equality of opportunity" may be viewed as referring to certain patterns of social mobility. Social mobility may--but does not necessarily--influence the degree of inequality and inequality of opportunity* present in the societal stratification structure. Therefore

*The term "inequality" is commonly used in sociological discussions of stratification. On the other hand the phrase "equality of opportunity" is more common when the discussion focuses on the differences in people's life chances to achieve various levels of status. We are interested in the effects that federal aid might have on both of these variables and consequently frequently mention them together. Yet it seems awkward to talk about the effects of some factor on "inequality and equality of opportunity." Consequently, when these two concepts are discussed together we will generally refer to "inequality and inequality of opportunity." This terminology not only has the advantage of making the two terms phonetically parallel, but it suggests that the realistic policy goal is some reduction in inequality and inequality of opportunity rather than the attainment of complete equality. In some cases we will use the terms "equality and "equality of opportunity" because of stylistic considerations.

the question we are asking is how federal aid to higher education will affect social mobility and whether such influences will in turn have consequences for inequality and inequality of opportunity. It is our thesis

that while some forms of aid will have greater effects than others, none of the currently conceived types of assistance is likely to produce significant change in the stability of either the mobility rates or patterns of inequality--a stability that has been maintained over the last twenty-five years. Section A attempts to review the social theory and empirical evidence that leads to this conclusion.

b. Stratification, inequality, mobility and inequality of opportunity.--Social stratification refers to those forms of social differentiation within a social unit in which the distinctions are ranked in a hierarchy along some socially significant dimension. Some category of individuals* is considered in some sense better or higher than some other

*Collectivities and organizations are also stratified. For a discussion of the relationship between stratification categories, collectivities, and organizations, see Etzioni, 1968: 97f.

category. The dimension may refer to either relatively "objective" factors such as wealth, or more subjective matters such as the esteem of other members of the social unit. There is a vast literature discussing how such differentiations should be conceptualized and measured.*

*For a survey of these discussions, see Reissman, 1957, and Barber, 1957.

In this study stratification will be conceptualized and operationalized in terms of the "objective" indicators of socioeconomic status (SES): education, occupation, and income (as a proxy for wealth). In part, this conceptual emphasis is used for methodological convenience. We are

interested in the impact of federal aid to higher education* on the national

*Since the dependent variable of this study is inequality and inequality of opportunity, we are interested only in those forms of federal aid to higher education which are likely to have an effect on these variables. Consequently when we refer to "federal aid" (and similar phrases) we mean (1) federal support for student aid very broadly conceived: scholarships, loans, grants to institutions to reduce tuition, subsidized student housing and services, tax relief, etc., and (2) various kinds of recruitment and counseling programs aimed at assisting and encouraging lower class and minority group members to obtain a college education. Unless specifically indicated, "federal aid" will not mean other possible kinds of federal support to higher education, e.g., research funds, library grants, etc. For stylistic reasons we will use "federal aid" and "student aid" more or less interchangeable, but their specific meaning in the context should be kept in mind. These matters will be discussed again in greater detail in Chapter 3.

stratification structure (as contrasted to local community structure), and the overwhelming majority of studies and data relevant to this question are based on such indicators. Moreover, we are interested in patterns of social mobility, and mobility studies rely almost exclusively on objective indicators.

But in addition to methodological convenience there is also a theoretical reason why objective indicators are appropriate to our needs: the focus of this research is primarily on the problem of distributive justice rather than social segmentation. That is, we are focusing on the stratification system primarily as an opportunity and reward structure rather than as a system of hierarchically-ranked interacting collectivities. Consequently, the interest is primarily in the objective goods, services and status positions that individuals receive rather than their subjective sense of identity with or alienation from particular societal subgroups, or the extent to which such subgroups have developed class consciousness and become organized collectivities. This focus is not to deny either the

existence or importance of such social segmentation in our society nor to assign causal priority to objective factors. Rather it is a matter of analytical emphasis which is in turn related to the policy issues raised by attempts to reduce inequality of opportunity.

Now it is necessary to discuss the relationship between the concepts of inequality, inequality of opportunity and social mobility. Inequality can be measured on either an absolute or relative scale, e.g., percentage of the population making more and less than $10,000 or the percentage of the national income going to the top quarter of the population. In either case, various degrees of inequality are probably best conceptualized in terms of a frequency distribution of some indicator of rank, e.g., years of schooling, and, more specifically, a Lorenz curve.* When this is done the degree of inequality refers to the range and the shape of the distribution. Since conceptualizing inequality in this manner is a standard procedure in most social sciences, no greater elaboration is required here.

*For a discussion of Lorenz curves, see Samuelson, 1967: 109-111. A Lorenz curve is most commonly used in discussing income distribution, but it is appropriate for analyzing the distribution along any continuous variable.

Inequality of opportunity can be conceptualized as a correlation between an individual's ascriptive status and his achieved status. To the extent that there is not perfect equality of opportunity,* an individual's

*That is, where there is no correlation between ascribed and achieved statuses or, to put it another way, when an individual's life chances are not influenced by his socioeconomic background.

achieved statuses are in some degree influenced or determined by his ascribed statuses. In this context the ascriptive attributes are the socioeconomic characteristics or statuses (SES) of one's parents, primarily their education, occupation and income, or an index combining these types of indicators.

It is important to make clear that no necessary relationship exists between the degree of inequality and the degree of inequality of opportunity.* Complete equality of opportunity is logicaliy possible within a

*Except in the limiting case of perfect equality, in which case there is necessarily perfect equality of opportunity.

stratification system that has a high degree of inequality, e.g., a tall, narrow pyramid. Inversely, systems with low degrees of inequality could logically be rigid caste systems with the children automatically receiving the status of their parents. Empirically there does tend to be a direct relationship between inequality and inequality of opportunity: societies with high degrees of inequality tend to have a high degree of inequality of opportunity. The precise strength and nature of the empirical relationship is determined by the rates and types of social mobility.

Social mobility refers to upward or downward changes in status by individuals or families.* We are concerned primarily with intergenerational

*Horizontal movement is also possible, but here we are concerned only with vertical mobility. It is also possible for various kinds of collectivities to experience mobility but our unit of measurement at this point is the individual. As with inequality, mobility can be measured in either absolute or relative terms. A son may be upwardly mobile in absolute terms because his annual income averages $6,000 over his lifetime compared to his father's average of $5,000 (both in constant dollars). But he may at the same time be downwardly mobile in relative terms if $5,000 fell above the median during most of the father's career, while $6,000 fell below the median during most of the son's working career.

changes. The amount and type of intergenerational mobility required to perfect equality of opportunity depends on the initial degree of inequality and the overall trends of inequality during any given generation, i.e., the initial shape and absolute level of the distribution and changes in the shape and level.

If the shape of the distribution is constant, perfect equality of opportunity requires that upward and downward mobility be equal in relative terms. That is, the sons of those from the upper classes must lose social status relative to their peers at the same rate that status is gained by those from the lower classes. This does not necessarily mean that the sons must lose in absolute measure of status. If the overall absolute level of the stratification system is being raised--the levels of income, occupations, and education are increasing--the sons of upper class background may keep or even increase their absolute levels, but to the extent that there is perfect equality of opportunity, most of them will have a lower status relative to their peers than their fathers had. If both the shape and the absolute level of the distribution are constant then the uppers will lose both absolute and relative status in the same proportion to that gained by the lowers.

If the shape of the distribution is changing, then it is possible for temporary imbalances to exist in upward and downward mobility in terms of both relative and absolute measures of status. Upward rates measured in relative terms may exceed downward rates if the shape of the distribution is becoming flatter, i.e., more equal. But eventually such a trend would produce a completely flat, equal distribution.

Up to this point we have talked as if the shape of the distribution [illegible]he limits for the types of mobility that could occur. This has been

a heuristic devise, however, to aid in explaining the relationship between mobility and inequality of opportunity. Empirically, the connections are quite the opposite: the shape of the stratification structure is largely a function of the past patterns of mobility. The shape remains constant if upward rates of those on the bottom just match the downward rates of those on the top, in relative terms. The shape changes to the extent that this condition is not met.

What is important to emphasize is that increasing the rates of upward mobility of those on the bottom in absolute terms does not necessarily have any effect on either inequality or inequality of opportunity.*

*That is, it has no necessary effect insofar as reducing inequality and/or inequality of opportunity are conceptualized in terms of moving toward, i.e., more closely approximating, models of perfect equality (e.g., a "straight" Lorenz curve) and perfect equality of opporutnity (e.g., a model of statistical independence). This is not to say that the "perfect models" must be reached or even closely approximated, only that they must in some degree be more closely approximated before it is meaningful to talk about reductions in inequality and inequality of opportunity.

For example, in the United States a great majority of sons will be upwardly mobile in the sense that they will have more education and a higher income than their father, simply because the average level of education and income has increased dramatically. However, the question that the concept of inequality of opportunity raises is not whether sons are better educated than their fathers, but whether the sons of poorly educated fathers tend to have significantly less education (or occupational status, or wealth) than the sons of well-educated fathers. As Clark (1962: 77) indicates, there is an important distinction between raising the average level of education or increasing the number of individuals who enter college, and equalizing the educational attainment of those with equal ability--without

regard to "irrelevant" criteria such as family socioeconomic status, race, or place of residence. To the extent that such absolute increases of the lower class are matched by the upper class, the existing structures of inequality and inequality of opportunity remain unchanged.

c. Preliminary sketch of the argument and an overview.--The chain of causation linking various forms of student aid with inequality and inequality of opportunity in the societal stratification system is a very long and complex one. Taken by themselves, any one of the links in this causal chain involves significant relationships, e.g., the relation between the availability of student aid and lower class enrollment in college, between educational attainment and occupational attainment, etc. While many of these linkages are "significant," in no case do the available data indicate that any factor accounts for more than about 60 per cent of the variance in the next factor in the chain. In most cases the strength of the relationship is much weaker. For example, a recent analysis of project TALENT data correlated thirty-eight personal and environmental factors with college attendance. The multiple correlation coefficients for all thirty-eight variables was .674 for males and .733 for females. For males, only five factors had a zero-order correlation of .30 or more (the highest being .549). The partial coefficients were of course much lower. The coefficients for the females were in some cases slightly higher. When these coefficients are squared we see that any causal connections which exist are at best quite loose (see Folger, et al., forthcoming). While other studies have sometimes found stronger relationships between similar sets of variables, these figures are not unrepresentative.

A hypothetical example may help to clarify this line of argument. Let us assume a causal model involving five variables linked in sequence.

Further assume that each linkage is a linear relationship with a regression coefficient of .50. Student aid counteracts the effects of parent's SES, parent's SES influences educational attainment, educational attainment influences occupational attainment, occupational attainment influences income. In such a model the coefficient for the effect of multiple links is equal to the product of the individual coefficients. For example the regression coefficient linking aid and education is the product of the coefficient linking aid and SES (.50) and SES and education (.50), i.e., .50 x .50 = .25. The coefficient linking aid and income is .065, i.e., .50 x .50 x .50 x .50. This means, for example, that if the financial resources available for college were completely equalized the income distribution would be 6.5 per cent more equal.* Of course a 6.5 per cent

*That is, the area under a Lorenz curve would be 6.5 per cent larger.

increase in income equality is not irrelevant--though it is a quite small increment. But it must be taken into account that even this small increment in equality of income was attained under what are probably unduly optimistic assumptions: that resources available to attend college are completely equal and that the coefficients would be .50. Even if the coefficients were raised to .60, income equality would be affected by about 10 per cent, while coefficients of .70--which are totally unrealistic--would equalize things about 25 per cent.

Consequently, even relatively large inputs at one end of the chain tend to be largely diluted if not "washed out" by the time their effects reach the other end. Trying to bring about changes in the societal stratification structure through traditional forms of student aid is analogous

to trying to move a very heavy rock which is some distance away from you by pushing on it with a very long and limber rod; it is possible to bring some force to bear on the rock but the amount of movement that is likely to occur is negligible.

Our conclusions about the probable effects of aid on inequality vary from earlier analyses primarily because of two factors. First, other recent studies oriented toward higher education policy* have tended to look

*For example the "Kerr Commission," the "Rivlin Committee" and the work of Joseph Froomkin. For references to the first two see the citations on pages I-2 and I-3. For Froomkin's work see U. S. Office of Education, 1968, and The Chronicle of Higher Education, 1969.

primarily at short run effects (or more accurately, next-link effects), e.g., how many additional lower class youth would enroll in college as a result of increased federal aid, rather than more distant consequences such as intergenerational mobility and the distribution of wealth and income. The second, less important factor has to do with how the variables used to measure inequality and equality of opportunity are conceptualized. In past studies variables have often necessarily been conceptualized in an imprecise manner. For example, the level of educational attainment is often measured in terms of the number of years of school completed. Such a method makes four years at Podunk College with a major in physical education and a "C" average equal to four years at MIT with a degree in electrical engineering and a "A" average. We would suggest that an individual with the latter training is likely to have a significantly different life experience than one with the former. Our conceptualizations and measurements are no better, but we have attempted to be sensitive to the probable consequences of such forms of measurement, and to take this into account in drawing our conclusion.

With respect to which forms of aid are most effective as measured by their more immediate consequences, we have attempted to rank traditional alternative forms of aid with respect to two factors: (1) the way in which they will distribute financial resources among the various SES groups, and (2) the extent to which they might encourage or discourage motivation--motivation for upward mobility in general and educational attainment in particular. We also consider briefly the probably independent impact of counseling and recruitment programs (as distinguished from "financial aid" per se) on college enrollment and attainment.

The discussion is presented more or less in the order of causal sequence through which federal aid would presumably operate. First, we focus on the current state of inequality of opportunity, i.e., the effect of socioeconomic status on the various stages and processes through which the college student passes. Secondly, we analyze the consequences. Finally we consider how these two sets of phenomena--the "drag" of SES and the "push" of publicly financed schooling--have interacted and influenced the stratification system over the last forty or so years.

2. Inequality of Opportunity in Higher Education: The Influence of Socioeconomic Status

The first task is to review the nature of the inequalities of opportunity that currently exist within the higher education system of the United States. More specifically, we will seek to determine how SES influences: (1) college attendance, (2) progress in college, (3) the type and quality of the college attended, (4) career choices as they are related to what one "majors in," and (5) enrollment and progress in graduate school.

a. SES and initial enrollment.--There has never been much question in the past about whether SES affects one's chances of attending college; clearly those from upper SES groups were more likely to enroll. This is still true.

While there are no regularly and systematically collected statistics showing the SES backgrounds of those who do and do not enroll in college, there are three recent bodies of data which permit a reasonable estimate of the current effects of social class differences. First, it is possible to compare the income distribution of the parents of 1968 college freshmen with the 1967 income distribution of those families who are headed by individuals 45-54 years old--the age cohort most likely to have college age children (Table 2.1). As could be expected, lower income groups tend to be under-represented among college freshmen and upper income groups over-represented, though among the general population the $10,000-$14,999 category is slightly larger.

TABLE 2.1

FAMILIES LIKELY TO HAVE COLLEGE AGE CHILDREN AND FAMILIES WITH COLLEGE FRESHMEN, BY INCOME: FALL 1968
(In Percentages)

Income Level	All Families With Heads 45-54	Families With College Freshmen
Under $4,000	10.4	6.3
4,000 - 5,999	11.2	10.3
6,000 - 7,999	15.6	15.5
8,000 - 9,999	15.2	16.9
10,000 - 14,999	28.4	27.2
15,000 - 24,999	15.2	16.5
$25,000 and over	4.1	7.3
Index of dissimilarity	--	6.3

*1967 family income.

American Council on Education, 1968, and U.S. Bureau of Census,

A second estimate of the impact of income on enrollment is provided by the 1968 school enrollment data of the Census Bureau's Current Population Survey (1969b) shown in Table 2.2. This table deals with the number of families that have dependent* children, 18-24, and shows the percentage of such families that have children enrolled in college. Obviously, differences in income are strongly correlated with chances of attending college: families from the top income group are nearly four times as likely to have dependents enrolled in college than those from the lowest income group.

*That is, unmarried and living with their parents or away at college.

TABLE 2.2

FAMILIES WITH ONE OR MORE DEPENDENTS 18-24 YEARS OLD ENROLLED IN COLLEGE AS PER CENT OF ALL FAMILIES WITH ONE OR MORE DEPENDENTS 18-24 YEARS OLD, BY INCOME: MARCH 1968

Income Level	Per cent of Families With Children in College
Under $3,000	16.0
3,000 - 4,999	22.8
5,000 - 7,499	33.2
7,500 - 9,999	41.3
10,000 - 14,999	49.7
$15,000 and over	63.4

Source: U. S. Bureau of the Census, 1969b.

The educational level of the head of the household has an effect similar to that of family income. Table 2.3 shows the percentage of white dependent family members 34 years old or younger who are high school graduates and have at some time been enrolled in college. It appears that the educational level of the family one grows up in is at least as important as their income level, since family income and educational level are as a rule not perfectly correlated.

TABLE 2.3

WHITE DEPENDENT FAMILY MEMBERS 34 YEARS OLD OR YOUNGER WHO ARE HIGH SCHOOL GRADUATES, WHO ARE NOW OR HAVE BEEN ENROLLED IN COLLEGE, BY THE LEVEL OF EDUCATION OF THE HEAD OF THEIR PRIMARY FAMILY: MARCH 1968

Educatipnal Level of Head of Family	Per cent Who Have Been or Are Currently Enrolled in College
Grade school	
1-4	37.8
5-7	30.5
8	43.2
High school	
1-3	47.1
4	65.3
College	
1-3	82.9
4 or more	88.3
Total (all levels)	61.9

Source: U. S. Bureau of the Census, 1969b.

One must keep in mind that most of the preceding figures significantly understate the effect of SES on educational attainment, because they focus primarily on the transition from high school to college. Children from lower SES families drop out of high school at significantly higher rates than middle and upper class children. Data showing the percentage of the age cohort by socioeconomic background that enroll in college would be necessary to see the full effect of social class. Unfortunately, such data are not available.

However, there is a study of 1965 high school seniors available which shows the percentage of these seniors who graduated from high school and the percentage that had entered college by February 1967, controlled by family SES characteristics. These figures are shown in Table 2.4. It allows us to see the effects of SES on both completing the last year of high school and entering college and to compare this with the figures for high school graduates. As would be expected, lower SES groups have higher attrition rates at both points--and possibly even more so at earlier stages of high school--producing a significant cumulative effect. While obviously federal aid to higher education cannot alleviate inequalities at lower levels in the school system, it is important to keep in mind the full lifetime effect that SES has on one's chances of attending college.

While Tables 2.1 to 2.4 present recently collected data, they do not control for the effects of intellectual ability. It could be argued that the reason upper SES groups have higher enrollment rates is not due to the ascriptive aspects of class background, but primarily because these groups are made up of smarter people. However, when we look at the enrollment rates of cohorts of high school graduates controlled for both SES and

TABLE 2.4

ATTRITION OF HIGH SCHOOL SENIORS; PERCENTAGES OF THOSE STARTING THEIR SENIOR YEAR IN HIGH SCHOOL WHO GRADUATED AND ENTERED COLLEGE AS COMPARED WITH THOSE GRADUATING FROM HIGH SCHOOL WHO ENTERED COLLEGE, BY FATHER'S LEVEL OF EDUCATION AND OCCUPATION AND FAMILY INCOME: SENIORS OF 1965

	All Seniors		Graduates	Seniors Who Entered College	Graduates Who Entered College
	N	%			
Total	2,833	100.0	92.2	43.2	46.9
Father's Education Level					
College 4 years and over	296	100.0	94.1	77.7	82.4
College 1-3	306	100.0	96.5	60.1	62.5
High school 4	746	100.0	96.0	51.5	53.6
Elementary 8 to high school 3	862	100.0	94.9	33.2	35.0
Less than 8 years	291	100.0	85.4	18.9	22.2
Not reported	331	100.0	77.0	25.7	33.3
Father's Occupation					
White collar	1,029	100.0	94.3	60.4	64.1
Manual or service	1,371	100.0	91.0	33.6	36.9
Farm worker	162	100.0	94.2	34.0	36.1
Unemployed, or not in labor force	237	100.0	88.7	27.8	31.2
Not reported	34	100.0	*	--	*
Family Income					
$15,000 and over	169	100.0	94.7	82.2	86.7
$10,000 - $14,999	508	100.0	93.7	57.5	61.3
$7,500 - $9,999	521	100.0	94.1	48.0	51.0
$6,000 - $7,499	393	100.0	93.3	38.4	41.1
$4,000 - $5,999	524	100.0	93.1	34.4	36.9
$3,000 - $3,999	192	100.0	87.0	28.1	32.3
Less than $3,000	309	100.0	86.8	17.2	19.8
Not reported	218	100.0	90.2	18.6	54.1

*Base less than 100,000.

Source: U. S. Bureau of the Census, 1969c.

intellectual ability we see that differences in ability do not fully explain the effects of SES. In 1962 Project TALENT did a follow-up study of a national sample of individuals who were first tested when in the eleventh grade in 1960. Table 2.5 (Project TALENT, 1966) shows the percentage of these students who enrolled in college in the year following graduation, controlled by sex, family SES and intellectual ability.

TABLE 2.5

PERCENTAGE OF STUDENTS ENTERING COLLEGE OR JUNIOR COLLEGE CONTROLLED BY SEX, SES, AND ABILITY

Ability Quartile	SES Quartile			
	Low	2	3	High
	Males			
Low	10	17	21	38
2	19	22	38	52
3	31	45	55	76
High	61	77	81	92
	Females			
Low	8	13	9	37
2	13	13	26	43
3	26	32	44	72
High	42	75	75	87

Source: Project TALENT, 1966.

These percentages can also be considered probabilities; each percentage figure represents the probability that a high school graduate of that sex, SES, and ability would enroll in college or junior college one year after high school graduation.

This table shows that even when ability and sex are controlled, SES still has a significant influence on one's chances of attending college. When each ability quartile (rows) is examined separately, the top SES groups tend to have an enrollment rate at least 30 per cent and sometimes 40 per cent higher than the lowest SES group. On the other hand, ability has an even greater influence on one's chances than SES, especially for boys.

Sewell and Shah (1967) studied a random sample of 1957 Wisconsin high school graduates. They found SES to have a greater influence on girls than the TALENT data indicated, stronger than the influence of ability. Otherwise the findings are essentially the same: "On the whole, the relative effect of socioeconomic status is greater than is the effect of intelligence for females, while the relative effect of intelligence is greater than the effect of socioeconomic status for the males. This is true whether effect parameters or path coefficients are used to measure the effects (Sewell and Shah, 1967: 22-23)." Table 2.6 presents their findings in detail.

Berdie's study (1965) of 1961 high school graduates in Minnesota found that while the effects of SES were still significant, it had less influence on college attendance than had been the case when a similar study was conducted in the state in 1950. Attendance was related more to academic ability and less to SES.

Another fairly consistent finding is that the relationship between SES and academic progress is less significant for those of superior ability.

TABLE 2.6

PERCENTAGE WHO ATTENDED COLLEGE, BY SOCIOECONOMIC STATUS, INTELLIGENCE, AND SEX*

Socioeconomic Status Levels	Intelligence Levels				Total
	Low	Lower Middle	Upper Middle	High	
Males					
Low	6.3 (363)	16.5 (267)	28.0 (193)	52.4 (149)	20.5 (972)
Lower Middle	11.7 (300)	27.2 (324)	42.6 (275)	58.9 (253)	33.8 (1,152)
Upper Middle	18.3 (273)	34.3 (277)	51.3 (316)	72.0 (289)	44.6 (1,155)
High	38.8 (134)	60.8 (232)	73.2 (299)	90.7 (442)	73.4 (1,107)
Total	15.0 (1,070)	33.5 (1,100)	51.0 (1,083)	73.8 (1,133)	43.7 (4,386)
Females					
Low	3.7 (411)	6.3 (316)	8.9 (236)	27.5 (138)	8.5 (1,101)
Lower Middle	9.3 (335)	20.2 (342)	24.1 (291)	36.7 (226)	21.2 (1,194)
Upper Middle	16.0 (250)	25.6 (342)	31.0 (332)	48.1 (289)	30.5 (1,195)
High	33.3 (126)	44.4 (223)	67.0 (324)	76.4 (458)	62.6 (1,131)
Total	11.4 (1,122)	22.5 (1,205)	34.7 (1,183)	54.9 (1,111)	30.7 (4,621)

*All x^{2}'s for each column and row in this table are significant beyond the 0.05 level.

Effect parameters: Males: Socioeconomic Status .134
Females: Socioeconomic Status .146

Males: Intelligence .166
Females: Intelligence .105

Wolfle found this nearly fifteen years ago (Halsey, et al., 1961: 232), and the same finding is demonstrated in the Project TALENT data in Table 2.5 (see figures below dotted line). More specifically, those who are in the top ability quartile have a very high probability of going on to college unless they are in the lowest SES group. On the other hand, the positive effect of high SES on college attendance is especially strong for those from the top SES quartile and the third ability quartile. This is, they enroll at a considerably higher rate than could be expected on the basis of ability alone. The Sewell and Shah data show approximately the same pattern (Table 2.6). In sum, if a person is really smart, he has a good chance of going to college unless he is on the bottom in terms of SES, while if he is well-to-do he still needs to be above average in terms of ability. Or to turn the evaluative emphasis around, if a person is poor, his chances are significantly reduced even if he is very smart, while if he is rich, chances are very good as long as he is of at least average ability.

The Human Resources Commission (Folger, et al., forthcoming) have recently done a correlation analysis of 38 variables grouped as ten factors which are believed to influence college attendance, using the Project TALENT cohort data. This makes it possible to quantify more precisely the relative influence of SES and intellectual ability. The multiple correlation coefficient for five measures of ability is .531 for males and .533 for females. The multiple-partial correlation coefficients--i.e., the cumulative effect of the five measures of ability when 33 other factors are controlled--are .279 and .302 The multiple coefficients for five measures of SES* were .366 for males and .438 for females, while the multiple-partial

*The measures of SES do not include racial or ethnic characteristics. These are measured separately and controlled in the partial coefficients.

coefficients are .133 and .164. The most impressive fact is how little of the variance is accounted for by either set of variables. Ability accounts for about six to nine per cent of the variance when the other factors are partialled out, while SES accounts for about two or three per cent. But it must be kept in mind that these two factors have a considerably stronger effect than any of the other factors.*

---

*An exception is the factor labeled "college commitment variables." However, most of the variance accounted for by this factor is due to the correlation between high school plans for college and college attendance. It is hardly surprising to find a close relationship since the causal linkage is so "short" it borders on the tautological. But even here only ten per cent of the variance is explained.

The effect parameters calculated by Sewell and Shah (1966) and shown at the bottom on Table 2.6 indicate about the same effect for SES, but the effect of ability is weaker than in the TALENT data. When compared to the impact of other factors the influence of SES is significant, but in terms of explained variance the relationship is quite weak.

In summary, SES can be said to have a definite impact on an individual's chances of attending college whether SES is measured in terms of income, occupation or education. The relationship holds even when ability and a wide variety of other factors are controlled. Its effect is less for those of high ability and for males. However, even for men in the top ability quartile the data available show about a thirty per cent differential in the college attendance rates of high school graduates from the bottom and top SES quartile. Now let us turn to the question of whether SES continues to affect academic achievement after the initial barrier of college enrollment has been overcome.

b. SES and progress in college.--A classic study of the early 1950's concluded that the primary effects of SES on the attainment of higher education took place at the point of entry into college. It was claimed that after students had enrolled in college their progress was determined primarily by academic ability (Wolfle, in Halsey, Floud, and Anderson, 1961: 232).

Studies conducted approximately eight to ten years later contradict these findings and show that SES continued to have a definite impact on educational attainment. Percentages of college enrollees who actually graduated, controlled by sex, SES, and ability, are presented for the Wisconsin and Project TALENT cohorts in Tables 2.7 and 2.8 respectively. For both cohorts we see that while the effects of SES are less than they were at initial enrollment, they still play a definite role. For example, Wisconsin high ability males in the top SES group are almost twice as likely to complete college as those with the same ability but from the lowest SES group. The relationship in the TALENT cohort seems weaker. The difference may be due either to the more complete follow-up procedures of the Wisconsin study or to the larger time period covered (eight years as compared to five).* Table 2.9 shows the various "measures of effect" from the Wisconsin and TALENT data. Not surprisingly, the relationships are consistently significant relative to other findings in social science, but only a relatively small proportion of the total variance is accounted for.

*It may be that high SES but low ability students tend to have academic trouble and take longer than five years to complete their degree. Lower SES students probably do not have the resources and are under less social pressure to persist. (See Eckland, 1964, for a discussion of this "persistence hypothesis.")

TABLE 2.7

PERCENTAGE* OF WISCONSIN COHORT WHO HAD GRADUATED FROM COLLEGE EIGHT YEARS AFTER HIGH SCHOOL GRADUATION, BY SOCIOECONOMIC STATUS, INTELLIGENCE, AND SEX

Socioeconomic Status Levels	Intelligence Levels				Total
	Low	Lower Middle	Upper Middle	High	
Males					
Low	4.4 (23)	47.7** (44)	38.9 (54)	38.5** (78)	36.7** (199)
Lower middle	20.0 (35)	27.3 (88)	39.3 (117)	58.4 (149)	42.2 (389)
Upper middle	24.0 (50)	28.4 (95)	47.5 (162)	64.9 (208)	48.7 (515)
High	26.9 (52)	38.3 (141)	52.5 (219)	70.6 (401)	57.3 (813)
Total %	21.3	34.2	46.9	64.0	49.8
N	(160)	(368)	(552)	(836)	(1,916)
Females					
Low	6.7 (15)	20.0 (20)	28.6** (21)	50.0** (38)	31.9** (94)
Lower middle	9.7 (31)	26.1 (69)	37.1 (70)	56.6 (83)	37.2 (253)
Upper middle	15.0 (40)	36.1 (83)	38.8 (103)	51.8 (139)	40.5 (363)
High	23.8 (42)	34.3 (99)	54.4 (217)	66.9 (350)	55.9 (708)
Total %	15.6	31.7	46.2	61.0	47.0
N	(128)	(271)	(411)	(610)	(1,420)

*Percentage based on number who attended college, not the total cohort of 1957 high school graduates.

**x^2 significant beyond 0.05 level for this column.

Effect parameters: Males: Socioeconomic Status: .049
Females: Socioeconomic Status: .061

Males: Intelligence: .131
Females: Intelligence: .142

Source: Sewell and Shah, 1967.

TABLE 2.8

PERCENTAGE OF COLLEGE ENTRANTS GRADUATING, BY SEX, ABILITY, AND SES: PROJECT TALENT COHORT, FIVE YEAR FOLLOW-UP

SES Level and Sex	Intelligence Level			
	Middle	High Middle	High	Total
Males				
Low	30	N.A.*	57	29
Low Middle	40	35	47	30
Middle	35	46	60	40
High Middle	39	55	63	50
High	48	51	70	55
Females				
Low	N.A.	N.A.	N.A.	40
Low Middle	27	48	62	37
Middle	36	41	57	43
High Middle	40	38	59	45
High	44	55	78	57

*Not available.

Source: Folger, et al., (forthcoming.)

TABLE 2.9
"MEASURES OF EFFECT" OF SES, AND ABILITY ON COLLEGE GRADUATION, BY SEX

	SES		Ability	
	Male	Female	Male	Female
Wisconsin data				
Path coefficient				
Total cohort	.24	.29	.33	.24
College enrollees	.13	.13	.28	.27
Effect parameters				
Total cohort	.081	.077	.123	.083
College enrollees	.049	.061	.131	.142
Project TALENT data				
Correlation coefficient (multiple)	.183	.104	.231	.182
Partial coefficients (controlling 33 other factors)	.120	.059	.138	.105

Source: Sewell and Shah (1967); Folger, et al. (forthcoming).

Some recent data for high school graduates under 34 and not in school also indicate the effect of SES on progress in college. The restricted nature of this population makes it impossible to tell the extent to which it represents the total population, though there are no obvious reasons why the data should be systematically biased.* For the population

*The population covered includes those who in October 1968 were high school graduates, but were (1) 34 years olds or younger, and (2) not currently enrolled in school. Since it excludes all those under 35 who were

than enrolled in college or graduate school it is not representative of a cohort of high school graduates. The population is likely to consist primarily of three groups: (1) all high school graduates from approximately age 17-34 who have not and will not go to college, (2) those who have completed their college training--primarily those past "college age," and (3) a few individuals who are in the process of obtaining a college education, but for some reason were not enrolled in October 1968.

covered, there is a definite tendency for progress through college to be related to SES. The relationship is weaker, however, for those from the lowest SES backgrounds. The results are shown in Table 2.10.

TABLE 2.10

COLLEGE EDUCATION OF HIGH SCHOOL GRADUATES UNDER 35 YEARS OLD NOT CURRENTLY ENROLLED IN SCHOOL: OCTOBER 1968
(In Percentages)

Education of Head of Family	No College	1-3 Years	4 or More Years
College			
4 or more	52.6	26.3	21.2
1-3	50.5	34.5	15.0
High School			
4	73.0	20.0	7.0
1-3	81.1	14.1	4.8
Elementary			
8	83.1	12.0	4.3
5-7	88.1	7.9	4.1
0-4	92.2	4.3	3.4
Total	75.6	17.2	7.2

Source: U. S. Bureau of the Census, 1969b.

In short, SES continued to influence educational attainment for those who have entered college, though its effects are weaker at this point than at the time of initial enrollment. Even when ability is controlled, graduation rates run from 20 to 60 per cent higher for those from the top SES categories than for those from the bottom ones. That is, the ratios between the graduation rates of the top and bottom SES categories (with the same ability) run between 1.2 and 1.6. Thus we conclude that socioeconomic background continues to be a significant influence on academic achievement.

c. SES and the type and status of college attended.--There are at least two reasons why the type and status of the college attended are important to our concerns. First, the quality and prestige of the college attended affects later occupational attainment or, at the very least, the chances of enrolling in graduate school.

Secondly, colleges which have high admission standards--and usually high prestige--have much lower attrition rates than the less selective institutions. Therefore, if SES is related to the type of college attended, SES is necessarily related to the chances of completing college, one of the findings in the preceding section. The type of college is one of the intervening variables which explains this relationship. We will now explore this intervening influence and then later examine how the type of college attended affects occupational attainment.

(1) Effect on attrition.--Data relevant to the relationship between SES and the selectivity or quality of the college attended can be derived from the American Council on Education's (1968a) National Norms for Entering Freshmen--Fall 1968. This report shows the percentages of 1968 freshmen whose parents fall in various income categories, and presents these data

separately for different types of institutions. It is generally held that junior colleges are less selective than four year colleges and the latter less selective than universities.* Therefore, Table 2.11 compares the

*The National Norms. . . . also provides a check on this since they show the percentage of freshmen in each type of institution whose average high school grades were A, B, C, etc. The percentage of entering students whose high school grades were B+ or higher is used as a selectivity index for the three types of institutions.

TABLE 2.11

SES (PARENTAL INCOME) AND THE SELECTIVITY OF THE COLLEGE ATTENDED: FRESHMEN, FALL 1968
(In Percentages)

	Type of Institution		
	Junior Colleges	4-Year Colleges	Universities
Selectivity Index*	11	34	42
Under $4,000	7.4	7.1	4.0
$4,000 - $5,999	13.3	10.1	7.5
$6,000 - $7,999	19.2	15.1	12.4
$8,000 - $9,999	18.6	16.6	15.6
$10,000 - $14,999	25.5	26.9	29.3
$15,000 - $19,999	8.9	11.4	13.5
$20,000 - $24,999	3.4	5.3	7.2
$25,000 - $29,999	1.4	2.7	3.5
$30,000 and over	2.3	4.9	7.0
Total	100.0	100.0	100.0

*Per cent of entering freshmen with average high school grades of B+ or higher.

Source: American Council on Education, 1968: 35, 39.

level of parental income and the type of school attended, indicating the relative selectivity of each type. The table shows a significant clear-cut relationship, but once again SES probably does not account for very much of the variance.

The ACE data deal only with freshmen, but a 1966 Census Bureau study includes college students at all levels. It shows that there is a definite tendency for students from lower SES backgrounds to enroll in two-year colleges, regardless of whether SES is measured by parents' education, occupation or income. The detailed findings are shown in Table 2.12.

TABLE 2.12

TYPE OF COLLEGE OF DEPENDENT FAMILY MEMBERS 14-34 YEARS OLD ENROLLED IN COLLEGE, BY EDUCATION AND OCCUPATION OF FAMILY HEAD, AND FAMILY INCOME: OCTOBER 1966
(In Percentages)

	Total	2-Year College	4-Year College
Years of School Completed by Family Head			
5 or more years of college	100.0	7.1	92.9
4 years of college	100.0	12.9	87.1
1-3 years of college	100.0	20.3	79.7
4 years of high school	100.0	19.5	80.5
3 years of high school or less	100.0	23.6	76.4
Occupation of Family Head			
Professional and technical	100.0	11.5	88.5
Other white-collar	100.0	17.9	82.1
Blue-collar, service, and farm	100.0	22.1	77.9
Head not in labor force	100.0	24.1	75.9
Family Income			
$15,000 and over	100.0	10.5	89.5
$10,000 - $14,999	100.0	16.0	84.0
$7,500 - $9,999	100.0	23.3	76.7
$5,000 - $7,499	100.0	22.7	77.3
$3,000 - $4,999	100.0	24.7	75.3
Under $3,000	100.0	24.2	75.8

U. S. Bureau of the Census, 1969d.

Moreover, the tendency for low SES students to attend junior colleges is not simply a result of lower ability. Table 2.13 shows the percentage of college enrollees who enter junior college by their SES and ability quartile when they were in high school. Quite clearly, even when ability is controlled, lower class individuals are much more likely to enroll in junior colleges.

TABLE 2.13

COLLEGE STUDENTS ATTENDING TWO-YEAR COLLEGES
BY HIGH SCHOOL SES AND ABILITY QUARTILE
(In Percentages)

Socioeconomic Status	Ability Quarters			
	1st (low)	2nd	3rd	4th (high)
1st socioeconomic quarter (low)	44	44	19	28
2nd socioeconomic quarter	21	28	26	11
3rd socioeconomic quarter	44	31	21	10
4th socioeconomic quarter (high)	32	27	15	6

Source: Schoenfeldt, 1968.

The two-year versus four-year distinction is significant in two respects. As we have shown, it is related to selectivity which (as will be demonstrated shortly) in turn influences attrition. However, there apparently is also a direct relationship to attrition, independent of selectivity. As Table 2.15 will show, students attending junior colleges receive bachelor's degrees at only about one third as high a rate as students attending the least selective four year colleges. Since the selectivity index of

two year colleges is about one third as high (11 compared to 34; see Table 2.11) as that for all four-year colleges, it is not possible for there to be this much difference in the selectivity rates of two year colleges and the least selective four-year colleges. Therefore, some of the difference in the proportion of bachelor's degrees attained must be independent of the differences in selectivity. One of the factors which probably accounts for this residual difference is lower initial aspirations of students who attend two-year institutions. Twenty-six per cent of the 1968 freshmen enrolling in two-year colleges did not plan to obtain a bachelor's degree; 8 per cent planned not to obtain any degree and 18 per cent sought an associate degree (American Council on Education, 1968: 36). It seems unlikely that this accounts for all of the "residual difference," and probably the remainder is due to such factors as differences between the quality of faculty and facilities of two-year and four-year institutions.

Data are also available which measure selectivity more directly, using average scores of entering freshmen on nationally standardized examinations. This allows us to tabulate SES by selectivity per se rather than by type of institution. Table 2.14 indicates that father's education, occupation, and income are all related to the selectivity of the college one attends. Moreover, it is likely that these data understate the relationships, since the percentage of students who attend institutions for which selectivity scores are not available is considerably higher for those from low SES backgrounds. It seems reasonable to assume that nonavailability of a selectivity measure is generally related to low selectivity as such.

TABLE 2.14

RANK OF COLLEGE ATTENDED BY DEPENDENT FAMILY MEMBERS 14-34 YEARS OLD ENROLLED IN COLLEGE, BY EDUCATION AND OCCUPATION OF FAMILY HEAD AND FAMILY INCOME, FOR THE UNITED STATES: OCTOBER 1966
(In Percentages)

	Total	Rank of College by Index of Freshmen Aptitude			
		Low	Medium	High	Not Available
Years of School Completed by Family Head					
5+ years college	100.0	6.9	41.2	39.9	12.5
4 years college	100.0	10.6	38.0	37.3	14.3
1-3 years college	100.0	16.7	43.7	20.8	18.9
4 years high school	100.0	19.5	45.8	17.3	17.5
3 years high school or less	100.0	20.5	42.8	14.6	22.0
Occupation of Family Head					
Professional and technical	100.0	11.6	44.6	29.8	14.2
Other white-collar	100.0	14.6	41.5	27.0	17.1
Blue-collar, service, and farm	100.0	20.8	45.5	13.5	20.3
Not in labor force	100.0	22.9	39.4	16.0	22.1
Family Income					
$15,000 and over	100.0	9.5	38.9	39.9	11.9
$10,000 - $14,999	100.0	15.9	45.7	22.6	16.0
$7,500 - $9,000	100.0	17.3	47.0	17.9	17.9
$5,000 - $7,499	100.0	20.5	47.6	13.3	18.7
$3,000 - $4,999	100.0	25.3	37.7	11.3	25.9
Under $3,000	100.0	24.5	25.8	14.5	35.8

Source: U. S. Bureau of the Census, 1969d: 20.

Using path analysis, Spaeth (1968) found that the quality of colleges attended by 1961 college graduates was related to family income and father's education. The path coefficient for family income--college was .22 compared to .17 for ability-college quality. The coefficient for father's education was .115 but was not statistically significant. What is somewhat surprising here is that family income apparently is more important than ability.

When Folger, et al.(forthcoming) tabulated the 1960 TALENT cohort by socioeconomic status and type of institution their findings were similar, except that in their sample the lower SES groups were more evenly distributed across the various types of institutions than was the case in 1968. This could be an indication that the more selective institutions have become even less accessible to the lowest income groups between 1960 and 1968. The two sets of data are only very roughly comparable, however, and at best this difference is suggestive.

So far we have considered the relationships between (1) SES and type of college, i.e., primarily two-year vs. four year (Tables 2.11 and 2.12); (2) SES and type of college controlled by ability (Table 2.13); (3) type of college and selectivity (the selectivity index of Table 2.11); (4) type of college and attrition (discussion on pages I-33 and I-34); and (5) SES and selectivity per se (Table 2.14). Now let us consider the relationship between type of college, selectivity, and attrition simultaneously. Folger and his colleagues also analyzed the effect of the type and selectivity of the college attended on progress in college. Table 2.15 reproduces their findings. Clearly, the selectivity of the college influences the chances of graduation: the more selective the institution one attends the ikely he is to graduate. Attending a community or junior college--

TABLE 2.15

PROGRESS OF THOSE ENTERING COLLEGE, BY TYPE OF COLLEGE, SELECTIVITY OF COLLEGE, AND SEX: FOLLOW-UP OF 1960 PROJECT TALENT COHORT
(In Percentages)

College Type and Sex	Total	College Progress		
		Bachelor's Graduates	Still Enrolled	Dropped Out
Males				
Junior College Transfer	100.0	20.5	(79.5)*	
Senior College Transfer				
Low and Low Medium Selectivity	100.0	50.6	22.7	26.7
Medium Selectivity	100.0	45.4	31.8	22.7
High Medium and High Selectivity	100.0	61.0	21.6	17.5
Senior College Nontransfer				
Low and Low Medium Selectivity	100.0	45.4	23.2	31.4
Medium Selectivity	100.0	54.6	20.9	24.6
High Medium and High Selectivity	100.0	76.8	11.6	12.0
Females				
Junior College Transfer	100.0	22.7	(77.3)*	
Senior College Transfer				
Low and Low Medium Selectivity	100.0	62.7	10.2	27.1
Medium Selectivity	100.0	61.4	10.2	28.4
High Medium and High Selectivity	100.0	73.5	12.9	13.5
Senior College Nontransfer				
Low and Low Medium Selectivity	100.0	52.4	6.5	41.1
Medium Selectivity	100.0	60.8	7.4	31.8
High Medium and High Selectivity	100.0	74.3	4.0	21.7

* Figures on junior college graduates are comparable with senior college figures, but other figures cannot be separated into the dropped out and still enrolled groups.

Source: Folger, et al. (forthcoming).

institutions noted for their lack of selectivity--seems to have an especially detrimental effect on the chances of graduating from college. The recent report of the Human Resources Commission states:

> Paradoxically, the community colleges appear to have increased college opportunities for low-status youth, and at the same time to have increased the socioeconomic differential in college completion. They have been successful in getting low income youth into college, but have not increased their chances of getting a degree nearly as much. This is illustrated indirectly by examination of the socioeconomic differentials in college completion among students who did all their work in degree granting institutions, i.e., they never attended a junior college.
> (Folger, et al., forthcoming, Chapter 10.)

In summary, low SES students tend to attend the poorer quality colleges--though there are many exceptions--and this is significantly related to their high attrition rates.

Finally, it needs to be kept in mind that most of the future expansion of college enrollments is expected in the traditionally lower quality two-year colleges. Jaffee and Adams (1969: 35) estimate that "the two-year college's national share of all first time freshmen will rise from the 38 per cent reported for 1967 to perhaps 70 per cent by the early to mid-1980's, duplicating the current situation in the Far West." If the current relationship between SES, type of institution, and attrition continues, this means that most of the lower SES individuals brought into the higher education system through these channels will have low probabilities of obtaining a bachelor's degree.

(2) Effect on occupational status and income.--The type of college one attends is also significant in its effect on occupational status and income. For a long time, conventional wisdom has maintained that it is

advantageous to attend a "good college."* In a study of 9,000 college

*Several things must be noted about the nature of this relationship. First, the relationship is in part spurious. Traditionally the sons of well-to-do families have gone to high prestige schools, but in most cases these individuals would have high incomes no matter what college they attended. Secondly, insofar as the relationship is not spurious a number of possible intervening variables are involved, i.e., whether the advantage is due to: better training, the personal contacts one makes, the effect of having a prestige degree, etc. The relationship is probably quite complex. Davis (1966), for example, has suggested that attending a high selectivity college may in some respects reduce occupational aspirations for students who rank toward the bottom of their class. He argues that even though they are considerably above the national average in ability they perceive their abilities relative to their more talented classmates and revise their career aspirations downward. However, in a reanalysis of Davis' work using the logic of path analysis, Werts (1968b) demonstrates that the data Davis presents are not adequate to confirm his hypotheses.

graduates conducted in 1947, Hovemann and West (reported in Clark, 1962; 72f.) found that there was a definite correlation between one's salary and the type of college he had attended. For example, graduates of Harvard, Yale, and Princeton had an average income in 1947 of $7,365 while other Ivy League graduates averaged $6,142. The differences were even greater for other types of schools: technical schools (e.g., MIT)--$5,382, twenty famous eastern colleges--$5,287, Big Ten schools--$5,176, all other mid-western colleges--$4,322, all other eastern colleges--$4,235.

A study conducted in conjunction with the March 1967 Current Population Survey (U.S. Bureau of the Census, 1969c) confirms the earlier findings of Hovemann and West. Colleges were ranked on the basis of the average aptitude of entering freshman from data developed by Project TALENT at the University of Pittsburgh. The relationship between rank of college and 1966 median earnings, by degree level, is shown in Table ?.16.

TABLE 2.16

RELATIONSHIP BETWEEN MEDIAN INCOME OF COLLEGE GRADUATES AND THE RANK OF THE COLLEGE THEY ATTENDED, BY LEVEL OF DEGREE: 1967

Rank	1966 Median Incomes			
	All Degrees	Bachelors	Masters	Others
All ranks	$ 9,489	$ 9,096	$ 9,339	$12,900
Low	7,881	7,641	8,327	N.A.
Medium	9,752	9,324	9,407	13,785
High	11,678	11,305	10,555	16,087
Not available	8,598	8,362	N.A.	9,041

Source: U.S. Bureau of the Census, 1969e: Table No. 4.

The effect is especially strong at the bachelor's level where those attending low ranking colleges make 33 per cent less on the average than those from top ranked institutions. This is especially significant since much of the expansion in enrollment is probably occurring in those institutions with relatively low ranking.

There are some data, however, that suggest that quality of college has little effect in a five year follow-up of a national random sample of all 1958 college graduates, Sharp (1969) found little relationship between the type of college and salary or attainment. One possible explanation of the apparent contradiction between the findings of Sharp and the recent Census Bureau study is that institutional effects accumulate over a relatively long period of time, and have not had much measurable effect only five years after college--the focus of the Sharp study. This interpretation

is supported very indirectly by the finding of Blau and Duncan (1967) that the effect of education on one's first job had not increased over time, but that its effect on later occupational status had.

d. SES, college major, and career choice.--Another way in which a person's class background tends to influence his future class position is through the selection of a college major and its subsequent effect on occupational attainment. In a study of a large random sample of 1958 college graduates Sharp (1963, Table A-4M) found that there was a relationship between father's occupation and major field of study. This seems to be especially true for majors which involve a fairly specific career commitment with strong implications for future occupational status. For example, 32 per cent of those graduates who were premedical majors had fathers who were classified as professionals, even though only 11 per cent of the total cohort had fathers with this occupational designation. In contrast, 23 per cent of the fathers were classified as farmers, farm laborers, or service workers, yet their sons made up 41 per cent of those who majored in education. Medicine is, of course, one of the highest status occupations, while primary or secondary teaching has traditionally been a relatively low status occupation for college educated men.

In Davis's study of 1961 (1964a and 1964b), there were similar findings: students with high SES backgrounds tended to make up a disproportionately high percentage of those going into the traditionally high status professions like medicine and law, whereas low SES students tended to be overrepresented in teaching and engineering. He also developed a theory that changes in majors and occupational intentions occurring in college are largely a result of individuals shifting to majors in which the students are closer to those of like personal and background experience.

Several recent articles by Werts (1966 and 1967a) have explored this relationship at some length. Cross-sectional analysis revealed that both father's occupation and father's education were linked to career choice, with high SES tending toward careers in law, medicine, and social sciences while low SES was related to education and engineering. When controls are made for academic ability it was found that both SES and ability have an independent effect. There are, of course, important exceptions. Engineers, chemists, and clergy, who have relatively high occupational status, tend to come from below average SES backgrounds. The relationship between father's education, ability (as measured by high school grade average) and the propensity to select various occupations is shown in Figure 2.1 (reproduced from Werts, 1967a). Werts also comments: " . . . the orderings from one study to another are so consistant that further cross-sectional studies of ability or SES differences among career choices of college students hardly seems worthwhile."

In a later article Werts (1967b) analyzed these relationships using longitudinal data on freshmen entering college in 1961, who were followed up in the summer of 1962. After the first analyses of the data he concludes "the results confirm Davis' finding that 'deviant' students tend to switch their preferences to career choices more compatible with their personal characteristics." This proposition is summed up as the "birds of a feather flock together" theory. In other words, those who come from low SES backgrounds, but enter high SES majors, tend to later switch to fields with greater proportions of low SES students. The reverse is true for high SES students and the same process applies to ability.

A later analysis (Werts and Watley, 1968) of the same data greatly ified the conclusion. "A reanalysis will demonstrate . . . that (the

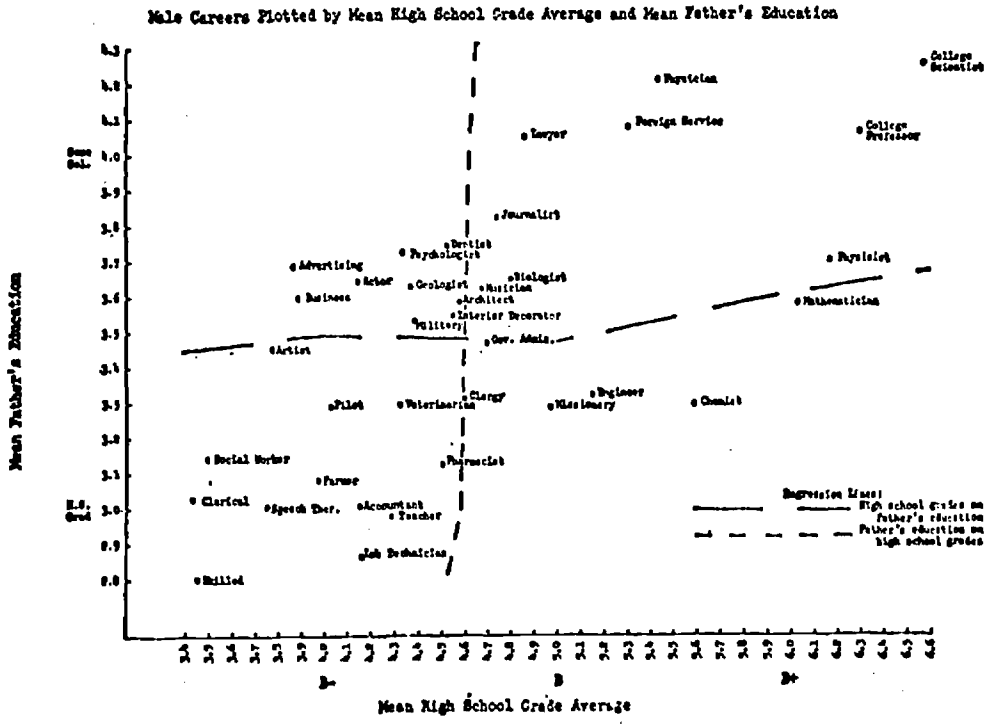


Figure 2.1.--The effects of socioeconomic background and academic achievement on college majors.

Source: Werts, 1967a.

earlier) conceptualization is incomplete because it does not deal explicitly with the possibility that student characteristics may be modified during the college years; 'birds' may change their 'feathers.'" However, most of the qualifications involve the effects of academic ability. With respect to the effect of father's education, the results show an increasing homogeneity within fields for males. That is, fields dominated by students from high (or low) SES backgrounds tend to become more so. However, the opposite seems to occur for females. In short, it is probably accurate to say that there is a moderate relationship between SES background and the SES implications of the college major and career field one chooses. This relationship, however, is frequently affected by other personal and environmental or low SES backgrounds than for those from the middle class, and stronger for males than females.

e. SES and graduate education.--The evidence concerning the effect of SES on the attainment of graduate education is less clear. It seems likely that SES continues to exert some influence on who enrolls in graduate education, though considerably less than on undergraduate enrollment. There is some evidence to indicate that an influence is exerted on the type and level of graduate education attained, but the data are only suggestive.

In a 1965 survey of graduate students conducted by the Office of Education (Hunter, 1967), four indicators of SES were used: parents' income, father's occupation, father's education, and mother's education. Initial examination of the data gives the impression that enrollment in graduate school is not related to SES since low SES groups seem to be very well represented. To quote the report: "Graduate students come from all economic levels. More than one-half reported that at the time they

were graduated from high school their fathers made less than $7,500 a year (Hunter, 1967: 5)." Moreover, when the educational attainment and the occupations of the fathers are compared to those of the fathers of the 1961 college graduates studied by Davis (1964: 6), the distributions are almost identical. Further reflection, however, raises serious questions about the usefulness of the OE data for studying the effects of SES on graduate enrollment and attainment. The problem is that all of the graduate students enrolled at any one time are not really a cohort.* Consequently, there is

*The 1965 students have the following age distribution:

23 and under	14%
24 - 28	40
29 and over	45

not an appropriate group of college graduates without graduate work with which to compare them in order to determine the correlates of graduate enrollment. It is even difficult to compare them with the population in general since the socioeconomic significance of parents' income, educational attainment, and to a lesser extent occupation is relative to the age cohort of the parents and the time of the observation (e.g., respondents were asked to report their parents' income for the year they graduated from high school, which would of course depend on the age of the respondent). The most we can say is that the data suggest that there is probably not a strong relationship between SES and graduate enrollment.*

*There are also technical difficulties with the data. It was collected by a mailed survey, and while the response rate was relatively high--78 per cent--there was no follow-up of a sub-sample of the nonrespondents in order to correct biases introduced by nonresponse.

Wegner (1969) studied 266 individuals who graduated from the University of Wisconsin in 1958 and 1959, and were interviewed in 1964. He found that for men there was at best a slight relationship between SES and postgraduate work. For women the relationship was negative; that is, low SES women were more likely to pursue postgraduate degrees. His population is, of course, a very restricted one.

Davis's (1964a: 118) study of the postgraduation plans of 1961 college seniors a few weeks before graduation found:

> SES has no consistent effect among women, but among male students higher SES was generally associated with immediate advanced study, lower SES was associated with perceived financial obstacles, and there was no consistent SES difference in motivational reasons.

Sharp's (1963) 1960 survey of 1958 college graduates produced like results. Graduate school attendance seemed to be related to parents' educational level for men but not for women. Table 2.17 reproduces these findings. Sharp found little relationship between father's occupation and propensity to enroll in graduate school, but the occupational categories used are broad and measure social status very imprecisely.

This study also found that " . . . graduates whose parents were more highly educated were somewhat more likely to have received a graduate degree within the 2-year period and to be working toward a second degree." This relationship also held only for men.

Sharp also has data (collected in 1960) on those who received master's degrees or professional degrees in 1958. These data are difficult to interpret, however, because as in the case of the Office of Education data discussed above it is not clear with whom these degree recipients should be compared in order to determine the effect of SES on their attainment. Table 2.18 shows the percentage of master's recipients which come

TABLE 2.17

PROPORTION OF BACHELOR'S DEGREE RECIPIENTS WHO SOUGHT OR RECEIVED A GRADUATE OR PROFESSIONAL DEGREE, BY SEX AND PARENTS' EDUCATION: 1958 GRADUATE

Parents' Education	Number in Survey		Per cent Enrolled for Graduate or Professional Degree	
	Men	Women	Men	Women
Total*	20,399	11,723	33.8	19.6
Both parents college graduates	1,619	1,346	43.3	19.4
Father only college graduate	2,123	1,638	41.4	19.2
Mother only college graduate	1,059	793	32.8	19.3
Both parents some college	739	574	37.2	18.3
One parent some college	2,677	1,743	33.8	20.1
Both parents no college	11,680	5,381	31.2	19.8

*Includes 750 respondents who did not report their parents' education.

Source: Sharp, 1963: 39.

TABLE 2.18

SOCIOECONOMIC BACKGROUND OF MASTER'S DEGREE RECIPIENTS
(SELECTED FIELDS OF STUDY)

Field of Study	Per cent in High Socioeconomic Status*		Per cent in Low Socioeconomic Status**	
	Men	Women	Men	Women
All fields	46	49	28	22
Mathematics	47	65	27	18
Physics	62	***	23	***
Chemistry	40	55	32	20
Engineering	51	***	25	***
History	48	68	31	10
Political science	57	***	15	***
Psychology	53	52	24	10
English	51	51	25	25
Art	48	59	29	21
Education	36	45	33	24
Business and commerce	55	***	22	***
Social work	40	58	42	24
Nursing	***	39	***	27

*Father's occupation: professional, proprietor, business official or executive.

**Father's occupation: skilled operator, machine operator, service worker, laborer, farm worker.

***Too few cases to compute percentages.

Source: Sharp, 1963: 72.

from high status and low status backgrounds as measured by father's occupation, controlled for major field of study. This table is at best suggestive both because a distribution is presented rather than a relationship and because, as noted above, this measure of social status is rather imprecise. Another thing that the table suggests, however, is the tendency for those with low status family backgrounds to go into relatively low status (or at least low paying) fields, e.g., education, while those from high status backgrounds tend to go into higher status fields, e.g., engineering and physics. This does not hold for all fields, with social work being a conspicuous exception.

The findings for professional degree recipients are about what "common knowledge" would predict: "With respect to family background, M.D.'s and L.L.B.'s were more often of higher socioeconomic origin than were those in other fields. Taking into account both the educational and the occupational levels of the family, the law graduates included the highest proportion of persons from 'high status' families" (Sharp, 1963: 5).

An analysis of the 1960 Project TALENT cohort (Folger, et al. (forthcoming), Table 5.20), shows SES to have a statistically significant but weak effect on graduate enrollment. The multiple correlation coefficient for five indicators of SES was .183 for men and .104 for women. It should be kept in mind, however, that none of 38 background and personal attributes was very useful in predicting whether or not college graduates would attend graduate school. All 38 variables accounted for only about 13 per cent of the variance. What is most surprising is that ability variables were only slightly more predictive than SES. The multiple correlation coefficients for measures of five types of ability were .231 for males and .182 for females.

However, when essentially the same data are tabulated in the form of probability tables (Table 2.19) we see that SES makes a significant

TABLE 2.19

PROBABILITY OF STUDENTS WITH BACHELOR'S DEGREES ENTERING GRADUATE SCHOOL IN YEAR AFTER RECEIPT OF DEGREE, BY ABILITY AND SES: PROJECT TALENT COHORT
(In Percentages)

Ability	SES			
	1 (High)	2	3	4 (Low)
1 (high)	54.0	50.6	41.8	30.5
2	41.7	40.8	29.4	49.2
3	43.1	39.6	33.7	17.6
4*	39.6	25.7	30.2	24.5
5* (low)	45.8	14.0	33.3	12.8

*The number of observations in the cells in these rows is very small.

Source: U.S. Department of Health, Education, and Welfare, 1969: Table A-16.

difference in the chance that a recipient of a bachelor's degree has of entering graduate school, even when ability is controlled. College graduates in the top SES and ability quartiles are almost twice as likely to attend graduate school as those with the same ability but in the bottom SES quartile. Such differences seem to hold at most ability levels. A word of caution is in order, however. The number of observations which the figures are based on are relatively quite small and therefore subject to much

greater sampling error than the Project TALENT data dealing with earlier stages in the educational process.

SES apparently has a slight influence on both the chance of getting some kind of graduate education and the quality of the graduate school attended. As indicated earlier, Spaeth (1968) found that the quality of the college attended was independently influenced most by family income, slightly less by ability, and probably also by father's education. The two SES variables also influence the quality of graduate school attended, both indirectly through the quality of the undergraduate college attended and the individual's college grade point average and probably directly--though the direct regression coefficients are not significant and all of the relationships are weak. However, as Spaeth (1968: 348) comments:

> (The multiple correlation) was .25 between the SES variables and quality of graduate school. The .25 explains relatively little of the variance (six percent), but the impact of parental SES is not trivial considering that the correlation applies to men who have not only graduated from college but also were enrolled in a program leading to an advanced degree. . . .

In a study of college professors and recipients of doctoral degrees, Crane (1969) concluded that class origin contirues to influence occupational achievement (defined here as holding positions at top ranked universities). This was in part due to the fact that low SES individuals were more likely to receive degrees from low-ranking universities. However, even when low SES individuals graduated from prestige universities they were still less likely to be on the staff of such universities than were their middle class individual counterparts.*

*Hargens and Hagstrom (1967) also found "that the prestige of the institution where a scientist received his doctorate is related to the prestige of his present affiliation even when the effects of productivity are controlled." Hargens (1969) also found that for new Ph.D.'s vertical academic mobility is more limited than indicated by earlier studies.

In sum, it is probably fair to conclude that SES continues to have some effect on who enrolls in graduate school, who completes graduate degrees, whether one takes work in a relatively low or high status field, the quality and prestige of the graduate institution, and apparently even on the occupational achievement of those with Ph.D.'s from major universities. The effects at this point are admittedly slight in terms of how much of the total variance is accounted for.

f. Summary.--In this chapter we have focused upon the effects of socioeconomic background on the individual's "college career." The general finding is the obvious one that, at a variety of points, those from high SES backgrounds have a definite advantage over those from low SES backgrounds. More specifically, high SES individuals are more likely to (1) enroll in college, (2) stay in college and graduate, (3) attend a high quality institution, (4) major in a subject that leads to a high status occupation, and (5) enroll in graduate school and obtain a graduate degree. A related finding, which is hardly surprising, is that the effect of SES does seem to weaken the farther and individual has progressed through the higher education system. The most plausible interpretation is that as individuals mature the status and social relationships of their family of origin make up a decreasing part of their total set of social relationships. At the same time, more recently acquired relationships--especially academically achieved statuses--play a more important role in shaping their personality structure and behavior and especially their academic performance. On the other hand, it is at least mildly surprising that socioeconomic background apparently continues to affect the academic and occupational achievement, not only of graduate students, but even of those who have obtained Ph.D. degrees from high prestige institutions.

Of course, it is to be expected that SES would have some effect, but the important question concerns the strength or significance of the effect. The answer to this question is in large measure dependent upon the reference point. Compared to most other societies, present and past, a high degree of egalitarianism exists and the effect of ascribed status is very modest--generally less than the effect of ability. When considered in terms of causation or "variance accounted for," the effects of SES are quite significant compared to any other factor which has been measured up to this time, but it still "explains" very little of the total variance. On the other hand, when we compare the findings to some model of perfect equality or perfect equality of opportunity we see that the effects of SES are very great indeed. It can hardly be argued that the educational system is truly egalitarian when those from the upper SES quartile are two to three times as likely to enter college as those with the same level ability but from the lower SES quartile. And, it must be kept in mind that very likely the measures of ability are biased in favor of those from high socioeconomic backgrounds, so that the actual inequities are greater than the data indicate.

Regardless of which of these perspectives is used to interpret the data, one implication of these findings is clear: simply reducing the inequality of opportunity at the point of entry into college--or even throughout the undergraduate career--cannot be expected to equalize fully the life chances of those from different socioeconomic backgrounds. Whether it will make a significant contribution toward reducing inequality and inequality of opportunity in the societal stratification system is a question we will consider in subsequent chapters. Next, however, we must

consider the extent to which federally funded student aid will equalize access to the higher education system.

3. The Uses of Federal Aid

a. Introduction.--We have seen that at every point in the process of attaining a higher education SES seems to exert some influence in producing inequality of opportunity, though its impact seems to grow weaker the farther one has progressed. These findings are hardly startling, but they help to set the context for our next problem: can these inequalities be removed or even significantly reduced by federal aid to higher education?

There are two primary ways in which federal aid to higher education might help to increase equality of opportunity. The first is to encourage more equal rates of initial enrollment in college for all SES groups through precollege counseling, recruiting, and remedial programs--and possibly more rigorous screening of low ability, high SES students. These means will be discussed only briefly in the next section. To the extent that such programs involve early and extensive training and counseling, they are matters of primary and secondary education rather than higher education, and fall outside our immediate focus. We will, however, consider two programs which are more "college related."

The second primary way federal aid to higher education might stimulate equality of opportunity is by attempting to equalize the financial resources available to those qualified to attend college. This is the primary focus of the chapter and is taken up in section c. entitled "Reducing the cost to students."

b. Precollege noneconomic assistance: recruitment programs.--Two federally supported recruitment programs are now in operation.* One is the

*Discussion of these two programs is based primarily on Froomkin, 1968.

Talent Search program operated by the Office of Education, aimed at relatively disadvantaged students, though not necessarily at the lowest income groups. The program is operated by local, state and regional agencies through grants from the Office of Education, and relies primarily on providing information about opportunities for higher education. It has been in operation a relatively short time and no evaluative data are yet available.

The second program is Upward Bound, formerly operated by the Office of Economic Opportunity, but now in the process of being transferred to the Office of Education. The program focuses on low achievers from the lowest socioeconomic classes. It offers these students remedial counseling and training during the last two years of high school. Of the first group of 953 students, 762 or 80 per cent went on to college. Fifty per cent of this group (388) entered the sophomore year. The cost of the program was approximately $2,400 per student. Froomkin concludes:

> First indications are, therefore, the Upward Bound will successfully motivate the disadvantaged youth to enter college, but the students will have difficulty completing their programs. (1968: 33.)

While experimentation with such programs seems worthwhile, they will probably have the same limitations with respect to cost and effectiveness that nearly all attempts at large-scale quasi-psychotherapy have encountered.

A logical extension of the types of programs described above would be further federal encouragement of counseling and guidance services in

high schools. However, Cicourel and Kitsuse's (1963) case study of talent development by this means opens to serious question the extent to which such programs would meaningfully increase equality of opportunity. They found that while decisions concerning the "proper" educational programs were not necessarily based on traditionally ascriptive influences, other equally nonrational and arbitrary considerations come into play. Moreover, low income students tended to receive less encouragement since the counselor's performances were measured in terms of the ratio between students admitted to college and students who declared they wanted to attend. Therefore, encouraging students who might not be able to afford to attend college would have the effect of lowering the counselor's performance. Jaffee and Adams (1969) have also developed extensive quantitative data from the Coleman Report which show that high school counselors discourage significant numbers of low SES and minority group students from attending college--even though they desire to do so, their mother desires that they do so, and they apparently have the required ability.

It does not follow from these findings that such a process is inevitable unless financial aid is expanded. The counselors could be explicitly measured in terms of other criteria, e.g., the per cent of lower class youth who apply for financial aid. However, extensive recruitment efforts among low SES students without subsequent financial assistance would produce frustration.

Three tentative conclusions seem warranted. It is unlikely that intensive remedial programs on other than an experimental basis can be justified because of the cost per student involved. The probable impact of less intensive, more widespread recruiting programs is unknown. Finally,

insofar as such programs are successful they will need to be linked with at least some expansion of financial aid--the question to which we now turn.

c. Reducing the cost to students.--Inequality of opportunity can be reduced, it is commonly believed, by furnishing more scholarships, loans, work programs or tax relief to low SES students and/or providing low tuition colleges and universities. Two principal kinds of mechanisms are at work in these programs. The first is simply the reduction of financial barriers by helping to meet the cost of attending college. The second involves increasing a student's self esteem through financial assistance and, subsequently, his motivation to study. Our primary focus will be on the first type of mechanism; the latter type will be considered more briefly. Now we will consider the general effects that any program of reducing the cost to students through expanded aid is likely to produce through these two mechanisms. Later we will attempt to estimate the differential effects of alternative forms of aid.

(1) General effects.--We now ask how extensively additional financial resources for low SES groups might increase their enrollment and attainment in higher education. Underlying this problem is the question of what the social mechanisms are which intervene between the relationship of low SES and low college attendance and completion. Figure 3.1 presents a diagrammatic model of the causal relationships that are frequently assumed to influence the attainment of higher education. The model is presented as a means of briefly summarizing a number of implicit and explicit propositions which arise when the effects of SES and financial aid on college attendance are discussed.

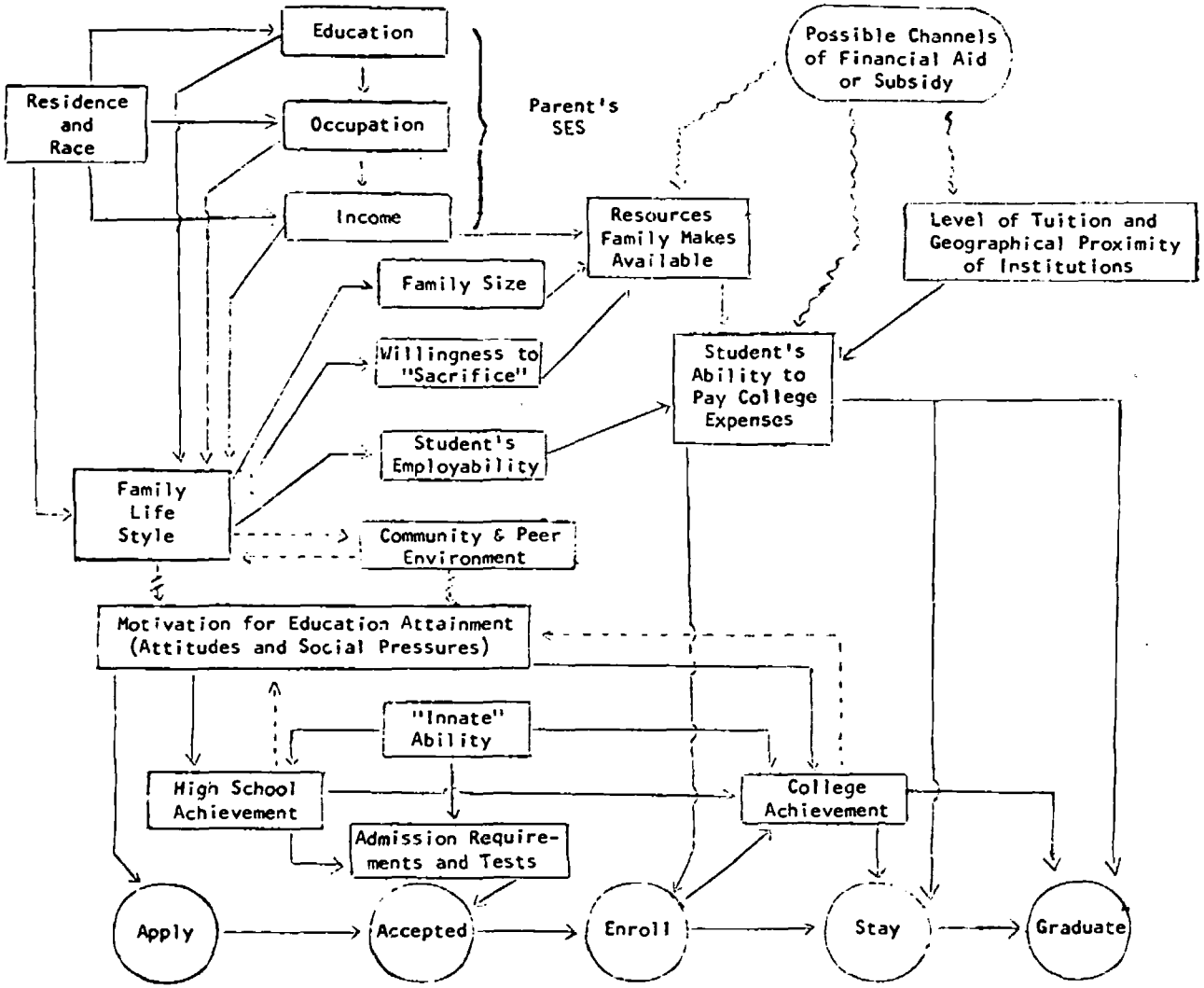


Fig. 3.1--A model of factors affecting college enrollment and completion

Examination of the model indicates that there are two relatively separate chains of causation that determine whether an individual receives a college education. One leads from family background characteristics, through individual motivation interacting with "innate" ability, to performance. The other causal chain leads from family income (qualified by such factors as family size, willingness of the family to reduce their level of living, and the employability of the student) to the student's ability to meet the cost of higher education. Since our primary concern is with the societal effects of increased student financial aid rather than with micro processes, we will not examine the evidence about each of the relationships specified in the model in any detail. Rather the model is presented as a set of contextual assumptions in order to remind us of the complexity of the intervening processes between socioeconomic background, and enrollment and attainment in college. As complicated as the model appears it is still greatly oversimplified. This is especially true with respect to the factors which affect what has been labeled "motivation for educational attainment." There is a considerable body of sociological literature relevant to the specification and elaboration of this model and especially the factors influencing motivation. (Some of the more important references are: Kadel and Lesser, 1969; Sewell and Shah, 1968b; Beverly Duncan, 1967; James Davis, 1966; Richard P. Boyle, 1966; Adams and Meidon, 1968; Sewell, 1964; McDill and Coleman, 1963; Schachter, 1963; Eckland, 1965; Crane, 1965; Elder, 1965; Sewell and Armer, 1966; Ellis and Lane, 1967; Sexton, 1961; Sewell and Shah, 1968a; McDill, et al., 1969.) Now we will proceed to summarize the evidence concerning the consequences of reducing cost (to students) for higher education.

Nash (forthcoming) has made an extensive review of the literature on the effects of student financial aid, for an article to appear in the fourth edition of the Encyclopedia of Education Research. After reviewing some 20 items of research covering about the same number of years he concludes:

> The relations between finances and college attendance is a complex one. Although money emerges as an important factor, it has come to be generally accepted that grant aid alone, offered at the end of the senior year of high school, will have relatively little effect on increasing the number and proportion of students who will attend college.
>
> . . .A large proportion of less talented, poorer students are not now attending college who could benefit from the education. To get these students to college requires both counseling and careful liaison between high school and college in addition to financial aid.

Jencks and Riesman (1968: 21) come to similar conclusions in their recent extensive study of academia:

> All in all, then we are inclined to be skeptical about theories that emphasize the high cost of attending college as the major obstacle, and to look for other explanations of the obvious relationship between class background and attainment.

Moreover, there are recent empirical studies not included in the reviews by Nash or Jencks and Riesman which come to the same conclusions. For example, Kimball (1968) reports that a study of 515 scholarship recipients in New Hampshire shows that the award received had little effect on educational aspirations or plans:

> Responses from 515 applicants suggest that these relatively small awards do not change the educational plans of recipients. Students most frequently report that such awards diminish the financial burden placed on student and family; post secondary educational choices usually are unchanged by the availability or absence of small scholarships. Even if scholarships were larger it appears the effect would be similar. Fewer than one third of the students report that a larger scholarship would cause a significant change in post secondary education.

Kimball's sample is certainly not representative of the national population, but the point we are making is that the "traditional literature" on student aid continues in the same line described by earlier surveys of these data.

However, the findings of Kimball and others do indicate that such financial assistance has enabled students to be more satisfied with their college experience. As one student put it, "The award enabled me not merely to attend college, but to become a part of it." (Kimball, 1968: 784)

Similar conclusions seem warranted with respect to the importance of finances for dropping out of college. Where finances do play a role, Nash (forthcoming) suggests that often students do not find college a sufficiently rewarding experience to make the financial struggle worth the effort. In a study of dropouts at twenty colleges and universities, Iffert and Clarke (1965) collected data on the "one most important reason for dropping out of college." They found that academic problems were the main reason given by far, with health and family problems next. Financial problems were third, with 17.9 per cent of those at public schools and 11.4 per cent of those at private schools giving this reason. It is quite likely, however, that this reason is given because it is socially acceptable rather than because it is the actual motivating factor. It does not seem likely that the need to work is an underlying problem behind the academic problems of dropouts. Studies of working students indicate that employment does not seem to affect their grades adversely.

In short, the "traditional" literature on student aid concludes that (1) money is not the main factor limiting lower class enrollments, and (2) consequently the greater availability of more financial aid is not going to increase enrollment of low SES groups very much, though it will help some. Two recent studies have come to slightly different conclusions;

in part this variance may be due to a difference in the methodological assumptions of these and older studies. In commenting on the methodology of the earlier studies Nash (forthcoming) points out that there are two ways in which this problem has been studied: "First, a sample of students enrolled in college can be asked what effect financial aid had. Second, a group of students can be selected while in high school and those who don't attend can be asked about their reasons for nonattendance." Both of these methodologies depend solely on the respondent's conscious knowledge about himself to explain his behavior. The two recent studies, on the other hand, do not depend on asking people why they did or did not attend (or stay in) college, but rather on observing variations in attendance rates in relation to variations in the availability of student aid or the cost of attending college. In other words, they are more strictly "behavioral" in approach.

The first of these is a study that was conducted by Paul Feldman and Stephen Hoenack (1969) of the Institute of Defense Analysis in connection with the HEW report to the President entitled Toward a Long-range Plan for Federal Financial Support for Higher Education. (The preliminary findings are presented in Appendix B of the above report). In brief, the study attempts to develop an economic demand model which will predict increases (and decreases) in enrollments in relation to changes in tuition for different income levels, ability groups, and types of institutions. The analysis is based on data from the tenth grade Project TALENT cohort and information on tuition charges at different types of institutions. The preliminary findings of the study are that for every $100 increase (or decrease) in tuition, enrollment would decrease (or increase) by five per [illegible] Lower income groups showed more responsiveness than high income

groups (the preliminary analysis dealt only with families with incomes between $6,000 and $12,000). The study also attempted to determine what effect lower college tuition rates might have on influencing completion of high school. The findings were that graduation rates are increased 0.7 per cent for each $100 decrease in tuition, with lower income groups being the most responsive and the relationship disappearing for those with incomes above $7,300. If these findings are valid, college enrollment is much more responsive to changes in the cost of tuition than earlier studies had even suggested.

In a later report of their research, Feldman and Hoenack (1968b) seem to have revised their findings drastically and, to a degree, come to focus upon different issues and problems. No mention is made here of the effect of tuition changes on high school or college completion. The problem is still conceptualized in terms of the effects of a $100 increase in tuition and on the proportion of tenth graders in various income and ability quartiles who will enroll in college within one year after high school graduation. However, the focus is on the differences in effect according to (1) type of colleges, (2) income and ability and (3) sex. The findings are that such a tuition increase would have no effect for males or females at two year colleges. For four-year private institutions it would have little effect on female students except those in the highest ability level where enrollment would be reduced--for this subgroup--about three per cent. A tuition increase would, however, have a substantial effect on males. Those in the relatively low income and ability groups would be affected most with the impact decreasing proportionately as these two variables increase. At public four year colleges the effect is even more substantial, though the effects of family income and ability are different for each sex.

For females, demand would be reduced the most for those with low ability scores but high incomes, while for males the greatest reduction would be for those with both high incomes and ability. In summary, the most important findings are that demand for higher education is definitely influenced by tuition, but the lowering tuition at public institutions is more likely to increase enrollments for upper income groups then for lower income groups.

While it is difficult to criticize this study on the basis of the limited information available about it,* at least one question must be

*The methodology involved in making the estimates was not described in any of the published materials. We are frankly skeptical about the validity and relevance of these findings, but include them because they apparently are an important reference point for the Rivlin Committee's Toward A Long Range Plan. . . . (U.S. Department of Health Education and Welfare, 1969).

raised about its direct relevance to our concerns. The preliminary analysis did not deal with families whose incomes are below $6,000 and it is these families which are of most concern in terms of improving equality of opportunity. Apparently, the later analysis was restricted to even higher income groups, though this point is unclear.

The second study was conducted by Joseph Froomkin, Assistant Commissioner for Program Planning and Evaluation of the Office of Education. Some of its preliminary findings are reported in The Chronicle of Higher Education (1969). Mr. Froomkin reports that college enrollment by lower class youth was much higher in 1968 than would have been expected on the basis of projections of 1966 enrollments. His findings are presented in Table 3.1.

According to the Chronicle article, Froomkin does not say that the increased enrollment for lower income groups is the result of any specific [illegible]al program, but apparently does suggest that increases among poor

TABLE 3.1

FALL 1968 FRESHMAN ENROLLMENT AND ITS VARIANCE FROM LEVELS PROJECTED IN 1966, BY FAMILY INCOME AND TYPE OF INSTITUTION

	Less Than $4,950		$4,950-7,970		$7,970-11,580		Over $11,580	
	Fall 1968 Enrollment	More or Less Than Expected	Fall 1968 Enrollment	More or Less Than Expected	Fall 1968 Enrollment	More or Less Than Expected	Fall 1968 Enrollment	More or Less Than Expected
Public 2-year colleges	50,000	+27,000	96,000	+39,000	106,000	+35,000	103,000	+ 5,000
Private 2-year colleges	9,000	+ 4,000	21,000	+ 6,000	25,000	+ 8,000	34,000	+ 8,000
Public 4-year colleges	42,000	+17,000	74,000	+15,000	91,000	+25,000	99,000	+26,000
4-year nonsectarian colleges	9,000	+ 3,000	14,000	+ 1,000	22,000	+ 4,000	58,000	+ 4,000
4-year sectarian colleges	15,000	+ 2,000	28,000	-10,000	40,000	-13,000	63,000	-48,000
Public universities	27,000	+10,000	61,000	+ 7,000	101,000	+22,000	159,000	+20,000
Private universities	4,000	+ 1,000	10,000	0	20,000	+ 3,000	52,000	- 1,000
Technical institutes	2,000	+ 1,000	6,000	+ 1,000	13,000	+ 1,000	19,000	+ 3,000
All institutions*	159,000	+66,000	311,000	+61,000	420,000	+90,000	583,000	+12,000

*Figures do not add up exactly because of rounding.

Source: The Chronicle of Higher Education, 1969.

students were in large part the result of programs initiated by the Higher Education Act of 1965. While it is hard to judge the validity of the findings on the basis of the scanty information available, several points must be raised. First, the inference that jumps in enrollments were due to federal aid must be examined carefully when the full study becomes available. Second, if causation is involved, it does not necessarily follow that more aid would produce equally dramatic results since initial aid would probably go to those of lower SES who were highly motivated but lacked funds. As more and more funds are made available, motivation rather than finances is likely to be the bottleneck. Third, and most important, these figures deal with initial enrollment, not with relative educational attainment. Simply because lower SES groups make up an increasingly higher proportion of those who enter college, it does not necessarily follow that these students will increase their relative educational attainment in the same proportion. In fact, Froomkin's figures show that lower income students definitely have disproportionately high enrollments in institutions characterized by low quality and high rates of attrition. Moreover, the proportion of the lower income students enrolled in such institutions will increase in the future, according to Froomkin's figures.

What can be concluded about the probable effects of reducing the cost of higher education to lower SES students? The data are in part contradictory. According to the major portion of the literature, financial barriers are only one of many factors which reduce lower class enrollments and are probably less significant than motivational and academic factors. The findings of two studies (Feldman-Hoenack and Froomkin) seem to suggest that financial considerations are more important. A reasonable conclusion seems to be that further reduction of the cost of a college education to

those from low SES backgrounds would help to increase their rates of initial enrollment. While this would reduce the gap between upper and lower class rates of enrollment to some extent, it is likely that most of the gap would not be eliminated in the foreseeable future.

(2) Alternative forms of aid.--The problem on which this study initially focused was determination of the form of federal aid--scholarships, loans, work programs, tuition reduction, etc.--most likely to have the greatest impact on reducing inequality. As earlier sections have indicated, the focus of the study has shifted because we concluded that none of the commonly proposed forms of assistance will have "much" impact on either equality of opportunity or equality in the societal stratification system. However, they will have some impact. Moreover, they will have helped to increase the number of lower class youth who enroll in college and will increase their absolute level of educational attainment even though there is little change in their relative attainment, the crucial variable for equality. Consequently, it is necessary to attempt to evaluate the relative merits of the various forms of aid even though this is no longer the only focus of our analysis.

As noted earlier, the question of which form of cost reduction will best stimulate equality of opportunity breaks down into two subproblems. The first has to do with which form of aid will give how much financial assistance to which socioeconomic groups. The second considers which form of aid is more effective in encouraging students to seek higher education, holding constant the amount of resources that it provides the student. For example, are students any more motivated to college enrollment and academic performance by a $400 scholarship than by a $400 loan, or a $400 reduction in tuition? This will be taken up in the next section. However, before

trying to answer either of these questions it is necessary to give preliminary consideration to the significance of "details," i.e., the detailed specifications of alternative programs.

(a) The importance of "details".--The discussion of alternative forms of federal aid to higher education often centers around a debate over the merits of different general categories. For example, Wolk (1968) classified proposals and programs for federal assistance to higher education into five categories: (1) categorical aid--grants to institutions for specific purposes, (2) student aid, (3) grants to institutions--for broad or undesignated purposes, (4) tax relief, (5) revenue sharing and grants to states. Similarly, student aid can be broken down into several general subcategories: (1) grants, (2) loans, (3) work study programs, (4) tax relief schemes, and (5) tuition reduction and other forms of subsidized service.

One problem of grouping concrete proposals together under common sense categories is the implication that the effects of programs in the same general category are likely to be similar while the effects of programs in different categories will vary. Such an assumption can be quite misleading. There are limits to the extent that one type of program (e.g., aid to institutions) can produce the same effects as another type (e.g., tax relief). Nonetheless, different "types" of programs can have quite similar results. The extent to which the programs are similar or dissimilar depends in large part on the "details."

To illustrate this we will compare the current Educational Opportunity Program with the proposed Ribicoff Bill (1969). First, let us focus on the two programs in terms of their common categories and the general criticisms of each.

In one sense, scholarship programs are quite different from tax relief schemes but in another they are quite similar in that both are intended to provide college-aged youth with greater financial resources for college attendance. The critics of tax relief schemes point out that the results of the two types of programs are significantly different in terms of who gets what. The following table illustrates this point by showing that the current Opportunity Program helps primarily low income youth while the Ribicoff plan would help primarily upper income groups.

TABLE 3.2

DISTRIBUTION OF EDUCATION OPPORTUNITY GRANTS AND RIBICOFF TAX CREDITS BY INCOME QUARTILE OF STUDENTS' PARENTS, 1966-67

Income Quartile	Number Full-Time Students (thousands)	Opportunity Grants (millions)	Ribicoff Tax Plan* (millions)
High	1940	$1	524
Second	1145	6	301
Third	671	18	122
Fourth	302	33	0

*Hypothetical estimates.

Source: U.S. Office of Education, 1968, Tables 10 and A23.

On the other hand, it is possible for tax relief programs to distribute less of the benefits to upper income groups. For example, (1) granting 100 per cent of the first $350 in expenses, (2) less the amount of student aid grants in excess of $2,000, (3) less 15 per cent of the amount that the family incomes exceeds $6,000, and (4) refunds in cash to

the extent that the higher education credit exceeds the tax owed, the distribution shown in Table 3.3 would result.*

*Using the assumptions and figures on which the calculations in OE's calculations in OE's Students and Buildings (Froomkin, 1968) are based. See Tables 9 and A20. The empirical validity of some of these assumptions is questionable. The focus of this discussion, however, is on variations in "criteria" given similar assumptions, rather than predictions about the actual empirical outcome.

TABLE 3.3

THE DISTRIBUTION OF BENEFITS OF A HYPOTHETICAL TAX RELIEF SCHEME

Family Income Quartile	Average Tax Credit	Total Millions
High	0	$ 0
2nd	5	6
3rd	330	221
Low	350	105

What these criteria essentially do, of course, is turn the program into a combination of a tax credit scheme for those in the third quartile group, and scholarship grant scheme for the lower income quartile through a negative income tax, with virtually no benefits to those in the two top quartiles.

A second "detail" which needs to be taken into account is the probable reaction of institutions. If a plan like the Ribicoff Bill were enacted, the financial benefit to many in the upper income groups might be short-lived. Knowing that upper income groups have benefited most, institutions (especially private ones) might increase their tuitions and use the

money for expanded student aid programs to lower income groups and to cover increasing operating costs. It is doubtful that such a reaction would be universal enough to offset fully the tax benefits, but the effect could be significant.

As we have seen, the general category or "form" of assistance is not as important as the details of a given program in determining which SES groups would benefit most. While nearly all forms of aid can have their detailed specifications changed so as to benefit any SES group desired, each one of these forms tends to already have a set of traditional detailed specifications. Congress might possibly enact programs with highly non-traditional detailed specifications, e.g., federal aid for lowering the tuition charged low income students, but requiring colleges to raise tuition for high income students. More likely, however, is the enactment of programs approximating traditional specifications, e.g., everyone paying the same low tuition. Consequently, it seems worthwhile to estimate which of these general categories is likely to benefit which SES groups most, assuming that the more or less traditional specifications are maintained. The next section will focus on how alternative types of programs with "traditional specifications" are likely to distribute financial assistance among varying socioeconomic groups.

(b) The distribution of resources.--The most extensive data concerning which SES groups benefit from different types of assistance programs are reported by Froomkin. His findings are reproduced in Table 3.4 (see page I-74), but before these data can be interpreted it is necessary to give a brief description of each program considered in the table.

1. Grant Programs

a) Institutional--this includes nonfederal scholarships, fellowships, loans and those portions of the work-study and educational opportunity grants (EOG) provided by the institution. Most of the money involved is committed to nonfederal scholarships.

b) Work-study program--provides part-time employment for low-income students with the federal government providing 80 per cent of the funds and the institutions the remainder.

c) EOG (educational opportunity grants)--federal grants up to $1,000 for each student are given to match scholarship funds awarded by the institution.

d) Veterans benefits--the "G.I. Bill" grants stipends for certain categories of veterans enrolled in educational programs.

2. Loans

a) National Defense Student Loans (NDSL)--a federal program which allows undergraduates to borrow up to $1,000 per academic year and up to a total of $5,000. The limits on graduate and professional students are $500 per year and a total of $10,000. The government furnishes 90 per cent of the funds with the institutions administering the program being responsible for collection.

b) Guaranteed Student Loan Program--the federal government guarantees to cover any defaults sustained by regular financial institutions on loans to students, and pays the cost of interest while the student is in school. During 1968 and 1969 high interest rates made the program virtually nonoperative because of a provision limiting interest to 7 per cent.

3. Proposed Programs

a) Ribicoff and Prouty tax credit (1969)--provides for a credit against taxes owed for expenditures on tuition, fees, and books, but not for living expenses: 75 per cent of the first $200, 25 per cent of $201-500, 10 per cent for $501-1,500. The amount of the credit is reduced by the amount of scholarship aid or veterans' benefits. Prouty proposes to give a refund--in effect a grant--of up to $100 to those who owe no taxes and to revise the schedule of computation to give proportionately greater credit to lower income persons.

b) One thousand dollar taxable grant to parents of college students--the idea is that lower income parents would receive proportionately more because of their lower tax bracket, while high income groups would lose most of the "grant" through taxes.

c) Federal scholarship according to need--essentially an extension of the EOG program to cover all students who have serious financial needs.

Table 3.4 clearly shows that the current scholarship programs ("institutional" and EOG) along with the work-study program benefit the lower income groups the most. The National Defense loans and veterans benefits are next. In contrast, the guaranteed student loan program and the proposals studied by Froomkin seem to aim their benefits at upper income groups.

TABLE 3.4

FUNDS DISBURSED UNDER CURRENT STUDENT AID PROGRAMS AND ESTIMATED COST OF PROPOSED PROGRAMS BY STUDENT FAMILY INCOME: 1966-67
(millions of dollars)

Quartile	Current Programs						Proposed Programs Amounts Net of Current Grants			
	Grant Programs				Loans					
	Institutional	Work-Study	EOG	Veterans Benefits	NDSL	Guaranteed Loans	Ribicoff Tax Credit	Prouty Tax Credit	$1,000 Taxable Grants to Parents	Federal Scholarships According to Need
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
High	14	6	1	32	40	139	524	256	1,214	-
Second	28	8	6	81	40	96	301	285	801	719
Third	77	36	18	24	72	73	122	143	445	667
Low	145	102	33	20	69	52	0	0	74	248
Total	264	152	58	157	221	360	947	684	2,534	1,634

Source: U.S. Office of Education, 1968.

Some additional data are available for the National Defense Student Loans, and are presented in Table 3.5. The indication is that these funds are definitely, and primarily, benefiting lower income groups.

TABLE 3.5

INCOME DISTRIBUTION OF FAMILIES OF NDSL BORROWERS COMPARED TO GENERAL STUDENT POPULATION
(In Percentages)

Families With NDSL Borrowers				Families With Dependent Members 14-34 Enrolled in College October, 1966		
Income Level	Year 1965-66		1966-67	Income Level		
Under $3,000	23		23	Under $3,000	3.7	
$3,000 - $5,999	31	49	29	46	$3,000 - $4,999	8.7	27.4
$6,000 - $7,499	18		17		$5,000 - $7,499	18.7	
$7,500 - $11,999	22	26	25	29	$7,500 - $9,000	17.8	43.2
$12,000 - $14,999	4		4		$10,000 - $14,999	25.4	
$15,000 or more	2		2		$15,000 and over	16.0	
					Not reported	9.8	
Total %	100		100		Total %	100.0	

Sources: Notes and Working Papers . . . Under Student Financial Assistance Statutes, 1968.

U.S. Bureau of the Census, 1969e.

None of the above data deal with the most widespread form of cost-reduction--low tuition, publicly supported colleges. Two recent sources of data are available showing who benefits from low tuition. The first is from the Feldman and Hoenack (1969b: 394-395) study and has already been reviewed. It is worthwhile, however, to quote their conclusions about this matter:

> Most persons familiar with State, College and University systems often hear as a justification for low tuition that such a tuition policy opens up access to higher education to low income students. Yet the readers can see [from the data summarized earlier] that a decrease in the level of tuition charged at four year public institutions would attract more students from relatively high income families than from relatively low income categories. If the objective is to bring more of the relatively low income students into college a policy of differentially pricing education for students of equal ability, but different family income is more appropriate.

In a recent study of California public higher education, Hansen and Weisbrod found that not only does tax supported low tuition encourage enrollments by the upper income groups more than by those with lower incomes, but that both the relative and absolute financial subsidies are higher for the upper income groups. Table 3.6 and 3.7 reproduce their essential findings. Table 3.6 shows that those who attend junior colleges--students who tend to come from lower income groups--received a subsidy of $1,050, or 12 per cent of their average income. The subsidies received by those attending senior colleges and the University of California are $3,810 and $4,870 respectively, which is both more absolutely and a higher percentage of the family incomes of those individuals--even though their incomes are higher to begin with. Moreover, Table 3.7 shows that this is not a matter of the upper income groups getting more back because they paid more in taxes. On the contrary, families with a student in junior college received a subsidy

TABLE 3.6

AVERAGE FAMILY INCOMES FOR ALL FAMILIES, AND FOR FAMILIES WITH AND WITHOUT CHILDREN IN PUBLIC HIGHER EDUCATION, AND AVERAGE HIGHER EDUCATION SUBSIDIES RECEIVED BY THE LATTER FAMILIES, BY TYPE OF INSTITUTION CHILDREN ATTEND: CALIFORNIA, 1964

	All Families	Without Children	With Children			
			Total	JC	SC	UC
Average family income*	$8,000	$7,900	$9,560	$8,800	$10,000	$12,000
Average higher education subsidy per year**						
a. Amount in dollars	--	--	880	720	1,400	1,700
b. Per cent of line 1	--	--	9	8	14	13
Average number of years higher education completed	--	--	1.7	1.2	2.6	2.8
Average total higher education subsidy***						
a. Amount in dollars	--	--	1,700	1,050	3,810	4,870
b. Per cent of line 1	--	--	18	12	31	41

*Median incomes from Table IV-7 (Hansen and Weisbrod, 1969).

**Average subsidies are based on the distribution of enrollments by year of school and on distribution of enrollment by type of institution.

***Average number of years and average subsidies are based on the assumption that entering students progress through the various types of institutions as shown in Table IV-5 (Hansen and Weisbrod, 1969), and that the various subsidies are those shown in Table IV-3 (Hansen and Weisbrod, 1969).

Source: Hansen and Weisbrod, 1969.

TABLE 3.7

AVERAGE FAMILY INCOMES FOR ALL FAMILIES, AND FOR FAMILIES WITH AND WITHOUT CHILDREN IN PUBLIC HIGHER EDUCATION, AVERAGE HIGHER EDUCATION SUBSIDIES RECEIVED BY THE LATTER FAMILIES, AND AVERAGE STATE AND LOCAL TAXES PAID BY ALL FAMILIES, BY TYPE OF INSTITUTION CHILDREN ATTEND: CALIFORNIA, 1964

	All Families	Without Children	With Children			
			Total	JC	SC	UC
Average family income*	$8,000	$7,900	$9,560	$8,800	$10,000	$12,000
Average higher education subsidy per year**	--	--	880	720	1,400	1,700
Average total state and local taxes paid***	620	650	740	680	770	910
Net transfer (line 2 - line 3)	--	-650	+140	+40	+630	+790

*From Table IV-7 (Hansen and Weisbrod, 1969).

**From Table IV-8 (Hansen and Weisbrod, 1969).

***Total state and local tax rates from Table IV-11 (Hansen and Weisbrod, 1969) were applied to the median incomes for families in each column.

Source: Hansen and Weisbrod, 1969.

of $40 per year over state and local taxes, those with a student in a senior college $630, and those with a student in the university $790.

It is difficult to know the extent to which this situation applies to the whole country. However, as time goes on the national situation will probably approximate California more and more. That is to say, California has an unusually high proportion of its students in public colleges in general and junior colleges in particular. The national trends are definitely in that direction (Jaffe and Adams, 1969: 37-40). Moreover, the relatively higher expenditure per student at four year colleges and universities is a national phenomenon. Consequently, we can reasonably assume that the distributional effects of publicly supported, low tuition in California are a good indicator of the future national situation.

(c) Differential effects on the motivation to attend college.--In the preceding section we attempted to estimate the relative impact that alternative support systems would have on the socioeconomic distribution of students through providing financial assistance. Now we want to discuss briefly the relative effect that the alternatives might have on increasing or decreasing the motivation to attend college, and performance during college.

It seems obvious that grants will be more attractive than loans or part-time work. That is, if a high school graduate has financial problems and is wavering about going to college, he is more likely to make the leap if offered a scholarship than if he is offered a loan or part-time work.

But of much more interest is the effect that these alternative forms of aid may have on his self image, motivation, and performance. Several seasoned observers of the academic scene believe that the primary

effect or function of scholarships is not the financial aid they provide, but as symbols of approval and encouragement. Jencks and Reisman (1968: 139-140) observe:

> . . . we are inclined to suspect that the main importance of money to most students today is symbolic. We have frequently been astonished to hear students explain that they decided to attend one college rather than another because they "got a better offer" from it. In most cases this turns out to mean that the college where they finally went offered them $100 or $200 more scholarship help than the others they were considering. Or it may mean they were offered a scholarship at one place whereas they would have had to take a $500 loan at another. These same students may later mention that the college they picked actually charges more tuition than the ones they rejected, so that the difference in actual outlay is nil.
>
> Only in this context can one begin to understand why most colleges, despite considerable criticism from professionals in the financial aid business, continue to offer lots of small scholarships that cannot possibly be of real use to a poor boy instead of a few big ones that might make the difference between attending college and not attending. The small scholarships are not meant to help the needy; they are offered to middle-class students whom the college wants to recruit and whom it fears will go elsewhere if they don't receive some token of the college's esteem.

Howard R. Bowden (1968: 12), president of the University of Iowa and former president of Grinnell College, has come to a similar conclusion.

An important question in our context is whether the symbolic awards of scholarships can be used not only to lure able students to one school rather than another, but also to increase the motivation and performance of students of varying backgrounds and abilities. Obviously, if everyone received a scholarship the symbolic value would be lost. But it is possible that the proportion of students receiving scholarships could be increased considerably without this happening--especially if specific efforts were made to accentuate their symbolic effect. This might be accomplished through a variety of mechanisms: news releases to the recipients' hometown newspapers, awarding gold keys or medals, ceremonies of public recognition, etc. There is research on the factors influencing educational aspirations

that suggests this line of argument may be valid. For example, Jaffe and Adams (1969: 71f) found that a key influence on aspirations was whether students had a favorable image of themselves. Supposedly, receiving a scholarship with significant public recognition would tend to produce favorable self images. However, the few studies that have focused on the effects of scholarships find little evidence of better performance when controls are made for initial ability (Nash, forthcoming). Consequently, further research is required to resolve the issue.

(d) Summary.--In summary, several things can be said about the relative merits of various alternative forms of federal aid. First, the consequences of a program are primarily dependent upon the detailed specifications of the program rather than on the general category (tax relief, student aid, grants to institutions, etc.) under which the program is classified. Therefore, the distribution of benefits (among SES categories, for example) can be varied by changing the "details" of the program.

Second, while it is possible to vary the details of different general categories of aid, there tends to be a more or less traditional set of specifications connected with each type of program. Third, assuming that the traditional sets of detailed specifications are adopted, scholarships based on need, National Defense type loans, and work study programs definitely distribute additional resources to those from lower income groups. In contrast, the guaranteed loan program, tax relief schemes and low tuition have the opposite effect, i.e., more benefits are made available to upper income groups than to lower income groups. Consequently, it seems likely that only the first three types of programs are likely to contribute significantly to equality of opportunity.

Fourth, scholarships may have the additional advantage of stimulating a student's motivation and performance by raising his self image. This effect could be increased through special efforts to bring public recognition to scholarship recipients.

Up to this point the discussion of the advantages and disadvantages of alternative forms of aid has focused on empirical questions: (1) to which SES groups will the financial benefits be distributed, and (2) what will be their effect on the student's motivation to continue his education. But there are also issues of social justice relevant to choosing between tax cuts, tuition reduction and grants on the one hand and loans and work programs on the other. The first three programs involve "giving" people something while the other two programs require the recipient to work for what he gets or to pay it back at a later date. Arguments can be made for either alternative. A not uncommon argument is that it is demoralizing to people to receive "something for nothing." On the other hand--and this is often overlooked--the children of high SES families whose parents pay the bill for college just as clearly receive "something for nothing" as do the recipients of government grants. Consequently, an important value judgment involved in the selection of alternative means is whether low SES students should be expected to repay the cost of money invested in them while upper income students (who are given money by their parents) are expected to repay nothing. It could be argued that certain "realisms" of the situation, e.g., the scarcity of resources available for student aid, would make helping more people through loans and work programs a greater contribution to social justice than to help fewer people through grants. The job of the policy researcher is not to resolve these moral questions, but to point out and clarify the issues involved.

d. Summary of the argument.--Our thesis is that while some forms of federal aid will affect social mobility to a limited degree, no form of aid is going to change the patterns of mobility sufficiently to have significant effects on either equality of opportunity or equality in the societal stratification system. Up to this point we have traced two lines of argument to support this thesis.

First (chapter 2), we have seen that SES affects not only the transition from high school to initial college enrollment, but that it continues to influence an individual's life chances throughout the higher education process. Once conclusion that we draw from this is that even if student aid significantly increased the enrollment rates of lower SES students this would not nearly equalize their chances in terms of total educational, occupational and income attainment.

The second line of argument (chapter 3) is concerned with how much reducing the cost of higher education and improving recruiting and counseling services would increase lower SES enrollments and overall educational attainments. Most studies suggest that they would have very little impact. One more recent analysis suggests that such aid would at least increase initial enrollments, and undoubtedly increase the number of lower SES individuals who received some type of college education. The most we can say at this point is that it would help "some," but we do not know how much. Among alternative forms of aid, however, scholarships based on need would clearly help the most, tax relief and lowered tuition the least (and they might even increase inequality), and loans and work programs would fall in between.

4. Educational Attainment, Mobility, Opportunity, and Equality

a. Elaboration of the argument.--Now we are ready to present a third line of agrument. In this chapter we are going to look at historical trends in educational attainment and opportunity and compare these with historical trends in social mobility and equality in the societal stratification structure. In essence, the findings are that while there have been large increases in educational attainment for all SES groups, some equalizing of the distribution of the years of schooling, and dramatic changes in the occupational structure, social mobility and the distribution of income have remained practically unchanged. We would be very hesitant to base any conclusions on the comparisons of such gross trends if we had not in previous sections examined some of the intervening social processes and found that there is at least a serious question as to whether they will be efficacious in bringing about changes in the relative educational attainment of varying socioeconomic classes. Our argument here is that using federal aid primarily to expand college enrollments--even of low SES students--is another round in the long history of expanding education with the prospect of increased opportunity and equality used as part of the justification for this expansion. While such expansion has undoubtedly had other effects on American society,* the evidence does not show that it has significantly increased social mobility or equality.

*To cite only one example, higher levels of formal schooling have undoubtedly increased the skills of the work force to some extent and contributed to increased economic productivity--though, as we will argue later, this effect is often overemphasized.

b. Educational attainment and mobility.--We will consider the idence in the order of its assumed causal relationship: educational

attainment and mobility, occupational distribution and mobility, and income distribution. We will focus primarily on the last generation.

The educational attainment figures which seem most relevant are the proportions of different age cohorts which attain various levels of education.* Data covering approximately the last 35 years are presented in

*Measures of central tendency for the total population over time reflect the effects of variations in the size of different age cohorts, i.e., the birth and death rates, as well as changes in educational attainment. Such figures would actually make our argument seem stronger since the youngest cohorts (who had completed school) would be both larger and have the highest rates of attainment and therefore "inflate" increases in measures of the central tendency for the whole population.

Table 4.1. We find the expected: with few exceptions, e.g., high school graduation and college entrance during World War II, attainment rates of subsequent cohorts have steadily increased. Moreover, the rate of increase in the percentage of a cohort attaining the various levels (e.g., high school graduation, college graduation, etc.) seems relatively constant until a ceiling effect sets in because of the high percentage of the cohort that has attained that level.

When we consider educational mobility, the primary source of data available is that collected in a 1962 Current Population Survey of the Census Bureau. In Spady's analysis of these data (1967: 277), he presents Gamma coefficients for the relationship between father's and son's education for four age cohorts which cover a period of forty years. The same data are used by Blau and Duncan (1967: 178) in their study of the U.S. occupational structure, and they give correlation coefficients for both the relationship between father's education and son's education and father's

TABLE 4.1

ESTIMATED RETENTION RATES,* 5TH GRADE THROUGH COLLEGE ENTRANCE, IN PUBLIC AND NONPUBLIC SCHOOLS: UNITED STATES, 1924-32 to 1959-67

School Year Pupils Entered 5th Grade	Retention Per 1,000 Pupils Who Entered 5th Grade								High School Graduates	Year of High School Graduation	First Time College Students
	5th Grade	6th Grade	7th Grade	8th Grade	9th Grade	10th Grade	11th Grade	12th Grade			
1	2	3	4	5	6	7	8	9	10	11	12
1924-25	1,000	911	798	741	612	470	384	344	302	1932	118
1926-27	1,000	919	824	754	677	552	453	400	333	1934	129
1928-29	1,000	939	847	805	736	624	498	432	378	1936	137
1930-31	1,000	943	872	824	770	652	529	463	417	1938	148
1932-33	1,000	935	889	831	785	664	570	510	455	1940	160
1934-35	1,000	953	892	842	803	711	610	512	467	1942	129
1936-37	1,000	954	895	849	839	704	554	425	393	1944	121
1938-39	1,000	955	908	853	796	655	532	444	419	1946	**
1940-41	1,000	968	910	836	781	697	566	507	481	1948	**
1942-43	1,000	954	909	847	807	713	604	539	505	1950	205
1944-45	1,000	952	929	858	848	748	650	549	522	1952	234
1946-47	1,000	954	945	919	872	775	641	583	553	1954	283
1948-49	1,000	984	956	929	863	795	706	619	581	1956	301
1950-51	1,000	981	968	921	886	809	709	632	582	1958	308
1952-53	1,000	974	965	936	904	835	746	667	621	1960	328
1954-55	1,000	980	979	948	915	855	759	684	642	1962	343
1956-57	1,000	985	984	948	930	871	790	728	676	1964	362
1958-59***	1,000	985	978	960	940	906	838	782	717	1966	394
1959-60***	1,000	990	983	976	966	928	853	785	721	1967	400

*Rates for the 5th grade through high school graduation are based on enrollments in successive grades in successive years in public elementary and secondary schools and are adjusted to include estimates for nonpublic schools. Rates for first-time college enrollment are based on data supplied to the Office of Education by institutions of higher education.

**Retention rates not calculated because of the influx of veterans in institutions of higher education.

***Preliminary data.

Source: U.S. Office of Education, 1969b: 7.

occupation and son's education. Both sets of data are presented in Table 4.2. While there are minor fluctuations over time, the overall impression

TABLE 4.2

MEASURES OF THE RELATIONSHIP BETWEEN FATHER'S SES AND SON'S EDUCATIONAL ATTAINMENT, BY AGE OF SONS: 1962

Son's Age	Son's Education X Father's Education (γ)*	Son's Education X Father's Education (r)**	Son's Education X Father's Occupation (r)**
55-64	.507	.409	.392
45-54	.470	.373	.428
35-44	.482	.424	.440
25-34	.513	.416	.411

*Spady, 1967: 276.

**Blau and Duncan, 1967: 178.

that the data leave is one of little change. Blau and Duncan (1967: 179) note one exception to this: the relationship between SES background and educational attainments seems to have decreased for the cohort that graduated from high school during the late 1920's and early 1930's, but they are unable to suggest a plausible interpretation.

They suggest another interpretation, however, that is worth quoting:

> It may be sheer coincidence that both r_{ux} [son's education by father's occupation] and r_{uv} [son's education by father's education] show the highest value for the 33-45 cohort. This cohort happens to be the one with by far the largest proportion (roughly three quarters) of its members who were veterans of World War II. Sociologists have sometimes speculated that the availability of educational benefits in the "G. I. Bill" may have equalized opportunities for men coming from different socioeconomic backgrounds. The present data contain no hint of such an equalization effect, which would have reduced r_{uv}, not enhanced it. (1967: 179)

The same data have been analyzed in even more detail by Beverly Duncan (1967). She divides the sample into seven five-year cohorts and analyzes the effects of five background factors on educational attainment: (1) family head's education, (2) family head's occupation, (3) whether the family was intact or broken, and (4) the number of siblings. She found that these background factors accounted for about 30 per cent of the variance in educational attainment. Moreover, with one possible exception* no

*It appears that the negative effect of growing up in a broken family may have decreased over time.

trend could be detected concerning the effects that these factors have on education. That is, their effect was roughly constant over time. If the expansion of public education had increased "equality of opportunity," these relationships should have become weaker, not remained constant.

It must be added that the distribution of years of schooling has been equalized over time. That is, the distance between the least educated and the best educated has decreased. Jencks and Reisman (1968: 83f) present the data on this distribution derived from Census figures (Table 4.3). As they point out, this distribution refers to years of schooling, and clearly the later years of school cost many times more than earlier ones. Therefore, they conclude that while there are no reliable data, the distribution of educational resources has probably been equalized considerably less than the years of schooling. On the basis of crude calculations, they guess that it has remained about stable.

TABLE 4.3

PERCENTAGE SHARES OF TOTAL YEARS OF SCHOOLING OBTAINED BY BEST- AND WORST-EDUCATED TWENTIETHS AND THIRDS OF U.S. MALES: 1875-1934

Year of Birth	Top 20th	Bottom 20th	Top 3rd	Middle 3rd	Bottom 3rd	Total
1930-34	8	1	43	35	22	100
1910-14	9	1	46	34	20	100
1875-85*	12	**	53	34	13	100

*Includes all those alive and over seventy-five in 1960.

**Less than 0.5 per cent.

Source: Jencks and Reisman, 1968: 831.

c. Occupational mobility.--When we look at the occupational structure and intergenerational occupational mobility, a similar picture emerges. It is clear that over time a greater and greater percentage of the population has shifted into the higher status occupations. (For trends from 1950-67, see U.S. Statistical Abstract, in 1968, Table 325, p. 226.) The meaning of this in terms of equality, however, is open to question. What does seem clear from the recent study of Blau and Duncan (1967) is that the rate of social mobility has remained quite stable over the last forty years. Table 4.4 gives the simple correlation coefficients between father's occupation and son's first job. Blau and Duncan comment that "as far as career beginnings are concerned, the influence of social origins has remained constant since before World War I" (1967: 111).* They conclude

*It should be pointed out that the major effect of education is on career beginnings. That is, probably the largest effect of a college degree is

that a graduate can apply for kinds of jobs that usually are not even open to one with just a high school diploma.

that there is no evidence of "rigidification." The opposite conclusion seems equally warranted: there seems to be no evidence of increased equality of opportunity. We will return later to a consideration of the significance of education for changes in the occupation structure.

TABLE 4.4

SIMPLE CORRELATIONS BETWEEN FATHER'S OCCUPATIONAL STATUS AND STATUS OF SON'S FIRST JOB FOR FOUR AGE GROUPS OF NONFARM MEN: 1962

Son's Age: 1962	Father's Occupation X Son's Occupation
55-64	.384
45-54	.388
35-44	.377
25-34	.380

Source: Blau and Duncan, 1967: 110.

d. Distribution of income and wealth.--Little needs to be said about the trends in income distribution except to repeat the well known fact that the distribution of income has remained more or less constant since shortly after World War II. The data for the period 1947-1966 are shown in Table 4.5.*

*For an extensive discussion of trends in income distribution, see Miller, 1966.

TABLE 4.5

PERCENTAGE SHARE OF AGGREGATE INCOME IN 1947, 1950, AND 1956 TO 1967, RECEIVED BY EACH FIFTH OF FAMILIES AND UNRELATED INDIVIDUALS, RANKED BY INCOME: FOR THE UNITED STATES

Income Rank	1967	1966[r]	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1950	1947
Families															
Per cent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Lowest fifth	5.4	5.5	5.4	5.3	5.2	5.1	5.1	4.8	4.9	5.0	5.1	5.0	5.0	4.5	5.0
Second fifth	12.2	12.4	12.3	12.1	12.0	12.0	12.0	11.7	12.0	12.1	12.4	12.6	12.4	12.0	11.8
Middle fifth	17.5	17.7	17.7	17.7	17.7	17.6	17.5	17.4	17.6	17.7	17.9	18.1	17.8	17.4	17.0
Fourth fifth	23.7	23.7	23.7	23.7	24.0	23.9	23.7	23.6	23.6	23.7	23.7	23.8	23.7	23.5	23.1
Highest fifth	41.2	40.7	41.0	41.3	41.1	41.4	41.7	42.6	42.0	41.4	40.9	40.5	41.2	42.6	43.0
Top 5 per cent	15.3	14.8	15.3	15.8	15.7	16.0	16.3	17.1	16.8	16.3	15.8	15.7	16.3	17.0	17.2
Unrelated Individuals															
Per cent	100.0	(NA)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Lowest fifth	3.0	(NA)	2.8	2.6	2.4	2.4	3.0	2.6	2.6	2.3	2.4	2.6	2.7	2.3	1.9
Second fifth	7.5	(NA)	7.5	7.6	7.1	7.3	7.4	7.0	7.1	6.9	7.0	7.3	7.3	7.0	5.8
Middle fifth	13.3	(NA)	13.2	13.5	12.8	12.7	12.7	13.0	13.6	13.0	13.1	13.7	13.6	13.8	11.9
Fourth fifth	24.4	(NA)	23.8	25.1	24.5	24.6	24.1	24.2	25.7	24.2	25.1	25.4	25.3	26.5	21.4
Highest fifth	51.8	(NA)	52.7	51.2	53.1	53.0	52.8	53.3	50.9	53.5	52.5	51.1	51.1	50.4	59.1
Top 5 per cent	22.0	(NA)	22.5	20.2	22.6	21.2	21.1	22.7	20.0	22.8	21.4	19.8	20.3	19.3	33.3

NA percentage share of aggregate income not calculated for unrelated individuals because detailed distribution not available.

[r]Based on revised methodology.

Source: U. S. Bureau of the Census, 1969a.

Two other things should be kept in mind with respect to the degree of inequality indicated by the income distribution. First, a more important indicator of the degree of social inequality would be the distribution of wealth. Systematic long-term trend data are not available, but the distribution of personal wealth is probably much more unequal. (If for no other reason this assumption seems justified on the basis of the economic principle that upper income groups save a higher proportion of their income than lower income groups.) Secondly, it seems reasonable to assume that, except for possibly the most wealthy, passing on wealth is easier than passing on high occupational status not based on inherited wealth. To give an example, the probabilities that a businessman of moderate wealth can pass his assets on to his heir are higher than the probabilities of a college professor, minister, or judge being able to pass his occupational status on to his children.

In conclusion, the past expansion of education has had little effect on mobility, and consequently the degree of inequality and inequality of opportunity have remained roughly constant. The two previous conclusions were that socioeconomic background continues to affect achievement significantly after college enrollment, and that expanded student aid will have at best a moderate effect on lower class college enrollment. When we link these three conclusions together it seems much more reasonable to assume that the expansion of student aid programs will have little effect on opportunity and equality than to assume the opposite. For some time we have been pushing on the rock that is the stratification system with the long limber rod of educational opportunity. Given the lack of movement up to now, it seems doubtful that pushing a little harder will make much difference in the future.

B. Racial Inequality: Trends in Racial Inequality and the Effects of Expanded Opportunities for Higher Education

5. Trends in Racial Inequality

a. Introduction.--In Section A, the argument was made that federal aid to higher education--primarily in the form of financial aid to students and recruitment counseling programs--will do relatively little to equalize the opportunities available to those from differing socioeconomic backgrounds. Now we turn to the question of whether federal aid to higher education will help to reduce racial inequality--and a seeming paradox presents itself. Here the argument will be the opposite of the one presented in Section A concerning class inequality. That is, we will argue that federal aid can, over the long run, significantly help to raise the educational, occupational, and income levels and improve the life chances of black* Americans. In this chapter and the next we will present

*In this paper "black" and "Negro" are used interchangeably. When "nonwhite" is used its meaning is identical to the definition used by the U. S. Census: "The nonwhite group includes Negroes, Indians, Japanese, Chinese and other nonwhite races" (U. S. Bureau of the Census, 1969a: 9).

data to support this line of argument. At the end of the next chapter we will attempt to present the theoretical basis for resolving the apparent contradiction.

In Section A we saw that even if student financial aid is effective in increasing college attendance for lower class high school graduates, this gain is offset by a series of countervailing social processes within the larger educational and occupational structure. Consequently, in our consideration of racial equality we will look at these "larger" societal processes first. After we have examined the context and the limits it sets

on the movement toward racial equality, we will take up the question of the effects of student aid for black college students.

b. Overview of the argument.--Our argument is based on the observation that the expansion of subsidized education--whether it be through low tuition state schools or scholarships and loans to individual students--has allowed Negroes to increase their levels of education at a rate considerably faster than that of whites. This is in contrast to lower class whites who have been able to increase their absolute level of education, but not at a rate fast enough to close the gap significantly and overtake members of the upper class. The second key point of the argument is that racial discrimination in the job market seems to be decreasing fairly rapidly--at least for black college graduates--thereby enabling Negroes with higher educations to obtain jobs similar as to status and income to those held by whites with the same levels of education. To state it another way, blacks are increasingly able to translate gains in higher education into gains in occupational status and income.

This chapter will focus on the extent to which the gap between blacks and whites--with respect to education, occupation, and income--has been reduced, and discusses the implications that has for further reductions. The next chapter will deal with the relationship between these three variables, and attempt to indicate the extent to which Negro gains in education are likely to produce gains in occupational status and income. Chapter 7 discusses the probable effects of student aid on college enrollment and attainment for black students. Finally, chapter 8 looks at the problem from a different perspective by attempting to estimate the effects of lowering academic requirements for students from underprivileged backgrounds. That is, instead of asking what can be done to help disadvantaged students progress

through the existing education-certification system, the focus is on how this system might be modified in order to make it easier for these students to obtain the level of educational certification they desire--and the probable results of such modifications.

c. Current inequality: the gap.--While the fact that Negroes are underprivileged relative to whites hardly needs to be substantiated, it is appropriate to set the context for our discussion by briefly reviewing some of the data which show the magnitude of this difference. The median income of white families in 1968 was $8,937 while the median for blacks was $5,360, or 60 per cent of the white median. The income distribution for whites, nonwhites and blacks for 1967 is shown in Table 5.1.

The occupational distribution for employed persons in 1968 is shown in Table 5.2. The index of dissimilarity is 32.5, which means that this per cent of either the whites or nonwhites would have to change occupational categories in order for the two groups to have the same distribution.* This

*An index of 100 would mean that there was complete occupational segregation: no whites would be in occupations held by nonwhites and vice versa.

index actually understates the degree of inequality suffered by blacks since whites are compared with nonwhites rather than Negroes. Moreover, blacks usually hold the lower status jobs within the broad occupational categories on which the index is based. This is partially reflected in the even greater difference in median income indicated above.

TABLE 5.1

INCOME DISTRIBUTION OF HOUSEHOLDS IN 1967, BY RACE

(Excludes inmates of institutions; includes 1,067,000 members of the Armed Forces in the United States living off post or with their families on post but excludes all other members of the Armed Forces. Number of households as of March 1968.)

Total Household Income	Total	White	All Nonwhite	Negro Only
Total Number (thousands)	60,446	54,188	6,258	5,728
Median Income (dollars)	7,181	7,485	4,559	4,359
Mean Income (dollars)	8,192	8,485	5,656	5,397
Under $1,000	4.6	4.2	8.3	8.7
$1,000 to $1,499	4.2	3.8	7.1	7.5
$1,500 to $1,999	3.8	3.6	5.9	6.3
$2,000 to $2,499	3.9	3.5	7.2	7.5
$2,500 to $2,999	3.2	2.9	5.4	5.4
$3,000 to $3,499	3.6	3.3	6.1	6.4
$3,500 to $3,999	3.2	3.0	4.7	4.7
$4,000 to $4,999	6.6	6.3	9.3	9.4
$5,000 to $5,999	7.6	7.4	9.2	9.6
$6,000 to $6,999	7.8	7.9	7.3	7.3
$7,000 to $7,999	8.0	8.2	6.0	5.8
$8,000 to $8,999	7.4	7.7	4.8	4.5
$9,000 to $9,999	6.2	6.4	3.9	3.6
$10,000 to $11,999	10.3	10.8	5.9	5.6
$12,000 to $14,999	9.1	9.7	4.4	4.0
$15,000 to $24,999	8.3	8.9	3.6	3.0
$25,000 to $49,999	1.9	2.0	0.7	0.4
$50,000 and over	0.3	0.3	0.1	0.1
Total	100.0	100.0	100.0	100.0

Source: U. S. Bureau of the Census, 1968b.

TABLE 5.2

OCCUPATIONAL DISTRIBUTION OF EMPLOYED PERSONS, BY COLOR: 1968

Occupation	Whites	Nonwhites
Professional	14.3	7.8
Managers	11.1	2.8
Clerical	17.5	11.8
Sales	6.6	1.9
Craftsmen	13.8	8.0
Operatives	17.7	23.7
Nonfarm laborers	4.0	10.7
Private household workers	1.4	9.5
Other service workers	9.0	18.8
Farmers	2.7	1.2
Farm laborers	1.8	3.7
Index of dissimilarity	32.5	

Source: U. S. Bureau of the Census, 1969h: 223.

With respect to educational attainment as measured by years of schooling, the differences are not as great, though still significant. The median years of schooling in 1968 for individuals 25 and over was 12.1 for whites and 9.3 for Negroes, i.e., the Negro median was 77 per cent of the white median. For younger generations, however, the attainments were much more similar. For those 22-24 years old the white median was 12.7 vs. 12.2 for blacks. For the 25-20 age cohort the figures were 12.6 and 11.6. With

respect to higher education as such, the gap is considerable even for younger age groups as indicated by the data in Table 5.3.

TABLE 5.3

PERCENTAGES OF WHITES AND NEGROES IN SPECIFIED AGE GROUPS WITH ONE OR MORE YEARS OF COLLEGE AND THE RATIO OF NEGRO TO WHITE PERCENTAGES: MARCH 1969

Age	Whites	Negroes	Ratio
20-21	40.1	21.2	51.6
22-24	35.7	19.1	53.4
25-29	32.1	15.7	48.9

Source: U. S. Bureau of the Census, 1969g: 9.

Not unexpectedly, we see that the most recent data clearly show that Negroes are significantly underprivileged with respect to income, occupational status and educational attainment. As Tucker (1969: 343-345) has pointed out, these disparities are actually understated because of differences in the age distribution of the population. For example, when the 1960 Census data are standardized for age, the median incomes for nonwhites with various levels of education are up to 15 per cent lower than the unstandardized medians.

d. The trend: is the gap closing?--We have stated that the first point of the argument is that Negroes have been able to increase their level of education, occupation and income at a faster rate than whites so that there has been a significant reduction in racial inequality--in contrast to the trends with respect to class inequality. Before we review

the data relevant to this line of argument it is necessary to qualify and elaborate this thesis.

As we shall see, while Negroes have raised the absolute level of their income considerably there has been relatively little change in the white-black income gap until quite recently, and even now gains are small. The same is true for occupational status though the gap has been reduced somewhat more than with respect to income.

The same pattern seems to hold for education when we look at the whole population, though the gains have been slightly greater than for income and occupation. However, when we examine the changes that have occurred in the younger cohorts who have just completed their education the picture is much more optimistic with respect to median levels: about 90 per cent of the gap that existed in 1950 has been eliminated and the Negro median is now 96 per cent of the white median. These gains do not seem to hold, however, at the college level for those who have completed their college work in the last five to ten years. There is some evidence that those Negroes who are now in college are beginning to make the gains that were made primarily at the high school level in earlier years.

One possible interpretation of these findings is that after World War II Negroes were able to make rapid gains in education at those levels where free education was widely available and socially expected, but were unable to do so at the college level where this was not so. The apparent gains of those now in college could reflect quite recent efforts by the Federal government to make higher education more easily available to the underprivileged. Because our focus in this section is on whether Negroes have been able to gain on whites rather than why, such an interpretation

is not essential to this part of the argument. We will return to it when, in the last section of the chapter, we focus on the question of whether more aid to students will increase the educational attainments of blacks.

The primary point of this section is that, for the younger age groups, very significant gains have been made in reducing the degree of educational inequality between blacks and whites at the precollege level, and that this process seems now to be underway in the higher education system. Moreover, there is some evidence that these educational gains are beginning to affect occupations and incomes. Later we will elaborate on why the impact in these areas is expected to increase even more significantly in the future. Now we turn to a review of the data on which the above line of argument is based.

(1) Income.--Prior to 1965, income figures were usually tabulated for nonwhites rather than Negroes per se. The longer term trends based on comparisons of white and nonwhite family income are presented in Table 5.4. White and Negro comparisons are available for more recent years and these are shown in Table 5.5.

While the figures for the longer time period indicate that nonwhites are able to raise their incomes faster than whites--a 319 per cent increase versus a 262 per cent increase for the twenty year period--clearly most of these gains have occurred very recently. In 1947 nonwhites had a median income which was 51.1 per cent of the white median income. In 1963 it was 52.9 per cent, an improvement of only 1.8 per cent in 16 years.

TABLE 5.4

MEDIAN FAMILY INCOMES* OF WHITES AND NONWHITES, AND NONWHITE INCOME AS A PERCENT OF WHITE INCOME: 1947-1967

Year	Median Income**		Ratio of Nonwhite to White
	White	Nonwhite	
1947	3157	1614	51.1
1950	3445	1869	54.3
1956	4993	2628	52.6
1957	5166	2764	53.5
1958	5300	2711	51.2
1959	5643	2917	51.7
1960	5835	3233	55.4
1961	5981	3191	53.6
1962	6237	3330	53.4
1963	6548	3465	52.9
1964	6858	3839	56.0
1965	7251	3994	55.1
1966+	7792	4674	60.0
1967	8274	5141	62.1
Per cent increase 1947 to 1967	262%	319%	

*Families only, does not include unrelated individuals.

**Current dollars.

+ Revised figures for 1966.

Source: U. S. Bureau of the Census, 1969a: Table 1, 21.

TABLE 5.5

MEDIAN FAMILY INCOME OF WHITES AND NEGROES, AND NEGRO INCOME AS A PER CENT OF WHITE INCOME: 1965-1968

Year	Median Family Income (Dollars)		Ratio of Negro to White
	White	Negro	
1965	7251	3886	54
1966	7792	4506	58
1967	8274	4919	59
1968	8937	5360	60

Source: U. S. Bureau of the Census, 1969g: 4.

In more recent years progress has been faster with a shift from 52.9 per cent in 1963 to 62.1 per cent in 1967. Nonetheless, in the 17 years from 1950 to 1967 only about 17 per cent of the original gap had been removed.*

*That is, in 1950 the nonwhite median income was 54.3 per cent as high as that for whites. This means there was a relative gap of 45.7 per cent (100 minus 54.3). By 1967, nonwhite income was 62.1 per cent of whites. In the 17 year period 7.8 per cent (62.1 minus 54.3) or 17 per cent of the original 45.7 gap had been eliminated. Nonwhites had increased their incomes by over 270 per cent during this period, but whites had of course also made large increases--about 240 per cent--so that the relative gap between the two groups was reduced by only 17 per cent. (The same procedure will be used to estimate decreases in the gap for occupation and education.)

The more recent figures for Negroes per se (Table 5.5) show approximately the same thing except the absolute and relative position of Negroes is, of course, lower than that of all nonwhite combined.

In summary, until five or six years ago there had been virtually no permanent reduction in the relative gap between white and Negro income since World War II, though of course both groups had steadily increased the absolute level of their income. In the last five years there has been a steady decrease in the gap between whites and blacks. (The reasons behind such a decrease will be considered in the next chapter.)

(2) Occupation.--When we look at occupational attainment the picture is approximately the same. Table 5.6 shows the occupational distributions of whites and nonwhites for selected years between 1950 and 1967. For the years between 1950 and 1960 we see that occupational opportunities for nonwhites first improved and then worsened. In 1950, the index of dissimilarity was 41.0. It decreased to 39.9 in 1955, but by 1960 had increased to 42.6. In the period since then the occupational distributions of the two groups have grown steadily more similar with an index of 32.5 in 1968. That is, about 21 per cent of the 1950 gap had been eliminated by 1968.

Another way of looking at this trend is to compare the proportion of nonwhite workers in high status job categories to the proportion of whites in these categories. Such an approach is used to examine the changes between 1962 and 1967 in a recent report by the Labor Department (U. S. Department of Labor, 1969: 23-24). The data used in the Labor Department study are broken down into more detailed occupational categories than are shown in Table 5.6 and this enables us to identify more precisely where changes have occurred. The percentage of the gap* that has been closed

*The gap is the difference between the percentage of the workers in a given occupational category in 1962 that were nonwhite and 10.8, the percentage of nonwhites in the labor force.

during this period ranges from a high of 48 per cent for elementary and secondary teachers to a low of one per cent for "other sales workers."

TABLE 5.6

OCCUPATIONAL DISTRIBUTIONS FOR WHITES AND NONWHITES, 1950-1968
(In Percentages)

Major Occupation Group	White						Nonwhite					
	1950	1955	1960	1965	1967	1968	1950	1955	1960	1965	1967	1968
Total employed (thousands)	54,286	56,693	59,640	64,432	66,361		5,672	6,496	7,041	7,747	8,011	
Per cent	100.0	100.0	100.0	100.0	100.0		100.0	100.0	100.0	100.0	100.0	
White collar workers												
Professional and technical workers	8.0	9.8	12.0	13.0	14.0	14.3	3.0	3.5	4.7	6.8	7.4	7.8
Managers, officials, and proprietors	11.6	11.1	11.6	11.1	11.0	11.1	2.5	2.3	2.5	2.6	2.6	2.8
Clerical workers	13.8	14.2	15.6	16.3	17.2	17.5	3.5	4.9	7.2	8.2	11.2	11.8
Sales workers	6.9	6.9	7.2	7.1	6.6	6.6	1.2	1.3	1.6	1.9	1.7	1.9
Blue collar workers												
Craftsmen and foremen	13.7	14.1	13.7	13.5	13.9	13.8	4.8	5.2	5.9	6.7	7.7	8.0
Operatives	20.6	20.2	17.7	18.2	18.1	17.7	18.6	20.9	20.1	21.3	23.5	23.7
Nonfarm laborers	5.0	4.7	4.5	4.5	4.0	4.0	14.1	15.8	13.8	12.7	11.2	10.7
Service workers												
Private household workers	1.6	1.8	2.0	2.0	1.4	1.4	17.7	14.8	14.3	12.7	10.4	9.5
Other service workers	6.9	7.2	8.2	8.7	9.1	9.0	16.1	16.8	17.5	19.0	19.0	18.8
Farm workers												
Farmers and farm managers	7.3	6.0	4.3	3.3	2.8	2.7	7.5	4.0	3.1	1.3	1.3	1.2
Farm laborers and foremen	4.4	3.9	3.3	2.4	1.9	1.8	10.9	9.5	9.3	6.3	4.0	3.7
Index of Dissimilarity							41.0	39.9	42.6	36.3	33.6	32.5

Source: U. S. Bureau of the Census, 1968a: 226 and 1969h: 223.

The most noticeable fact is the small amount of change in salaried managers, officials and proprietors, and for sales workers; only about 5 per cent of the 1962 gap was eliminated by 1967. On the other hand, the most change has occurred in professional and clerical occupations, where the gap has been reduced by 23 and 39 per cent respectively.

(3) Education.--Educational gains have, in most respects, paralleled gains in income and occupational status. Table 5.7 shows the median years

TABLE 5.7

TRENDS IN MEDIAN YEARS OF SCHOOLING FOR WHITES AND NONWHITES: 1940-1968

25 Years Old and Over	Median Years of Schooling		
	White	Nonwhite	Ratio
1940	8.7	5.7	65.5
1950	9.7	6.9	71.1
1960	10.8	8.2	75.9
1964	12.0	8.9	74.2
1965	12.0	9.0	75.0
1966	12.1	9.2	76.0
1967	12.1	9.4	77.7
1968	12.1	9.5	78.5

Source: U. S. Office of Education, 1969b: Table 9, 9.

of schooling for whites and nonwhites from 1940-1968. From 1950 to 1968 about 26 per cent of the initial 1950 gap was eliminated. This is only slightly higher than the gains in income and occupation. (Seventeen per cent of the "income gap" and 21% of the "occupational gap" had been eliminated in approximately the same time period.)

Of more significance, really, than educational differences between the total white and nonwhite or Negro populations is whether those age groups who have recently completed their education received similar levels of training. Such figures help to indicate (1) the extent to which discrimination has been eliminated in the educational system as such, and (2) the extent to which the educational level of the total white and Negro populations will eventually reach parity as the older, less equal cohorts are replaced by younger groups. As a basis for this estimate the median years of schooling for those in the 25-29 age cohort are presented in Table 5.8. Here the picture is much more optimistic. In 1969 the median number of years of schooling for Negroes was 96 per cent as high as that of whites (71.3% for nonwhites). This means that approximately 90 per cent of the gap that existed in 1950 had been removed by 1969.

It must be kept in mind that the above figures deal with median levels of education. These data are relevant to our considerations because the indication is that, in the educational system as a whole, efforts to reduce the differences between whites and Negroes have been in large measure successful. Consequently we can reasonably expect them to be effective in the realm of higher education per se.* This does not, of course, indicate

*This is in contrast to efforts to reduce differences in the educational attainment for those from different SES backgrounds. As we saw in Section I the "gap" has been reduced to only a modest extent.

the extent to which such equality has in fact been obtained at the level of higher education. We now turn to that question.

TABLE 5.8

MEDIAN YEARS OF SCHOOLING FOR THOSE AGED 25-29 BY COLOR (1940-1968) AND RACE (1964-1969), AND THE RATIO* BETWEEN NONWHITES AND WHITES AND NEGROES AND WHITES

	White	Nonwhite	Negro	Ratio	
				Nonwhite-White	Negro-White
1940	10.7	7.1	NA	66.4	-
1950	12.2	8.7	NA	71.3	-
1960	12.3	10.8	NA	87.8	-
1964	12.5	11.8	11.5	94.5	92.0
1965	12.4	12.1	12.0	97.6	96.8
1966	12.4	12.0	11.8	96.0	94.4
1967	12.6	12.1	12.1	96.0	96.0
1968	12.6	12.2	12.1	96.8	96.0
1969	12.6	NA	12.1	-	96.0

*That is, the percentage that nonwhite and Negro medians are of the white median for the same year.

Source: U. S. Office of Education, 1969b: Table 9, 9; U. S. Bureau of the Census, 1966 and 1969f.

Table 5.9 indicates the percentage of whites and nonwhites aged 25 and over who had received four or more years of college for selected years for 1940 to 1968. These data show that over the total time period there has been a clear trend of nonwhites catching up with whites, both absolutely

and relatively. Some 30 per cent of the gap that existed in 1950 had been eliminated by 1968, even though nonwhites were still only about half as likely as whites to obtain four or more years of college.

TABLE 5.9

PERCENTAGES OF WHITES AND NONWHITES 25 YEARS OLD AND OVER WITH FOUR OR MORE YEARS OF COLLEGE AND RATIO OF NONWHITE TO WHITE PERCENTAGES--SELECTED YEARS 1940-1968

	White	Nonwhite	Ratio	
1940	4.9	1.3	26.5	
1950	6.4	2.2	34.4	
1960	8.1	3.5	43.2	
1964	9.6	4.7	49.0	
1965	9.9	5.5	55.6	
1966	10.4	4.7	45.2	50.6*
1967	10.6	5.0	47.2	
1968	11.1	5.6	54.5	

*Average for 1965-1968

Source: U. S. Office of Education, 1969b: Table 9, 9 and U. S. Bureau of the Census, 1969f.

Now let us look at similar figures for the 25-29 age cohort (Table 5.10). Our expectation was that, like the figures for median years of schooling, the gap would have been reduced more drastically for the younger cohort. This does not seem to be the case, however. For the years 1950 and 1960 there is little difference between the figures for the total population and for the 25-29 cohort. Of the more interest is that since 1965,

nonwhites and Negroes seem to be falling farther behind whites at a rapid rate. More specifically, the percentage of nonwhites or Negroes who receive a college degree seems to be holding constant or declining while the percentage of whites attaining this level is increasing significantly.

TABLE 5.10

PERCENTAGES OF WHITES, NONWHITES AND NEGROES AGED 25-29 WITH FOUR OR MORE YEARS OF COLLEGE AND RATIO OF NONWHITE TO WHITE, AND NEGRO TO WHITE PERCENTAGE--SELECTED YEARS 1940-1968

	White	Nonwhite	Negro	Ratio	
				Nonwhite-White	Negro-White
1940	6.4	1.6	NA	25.0	-
1950	8.1	2.8	NA	34.6	-
1960	11.8	5.4	NA	45.8	-
1964	13.6	7.0	5.6	51.5	41.2
1965	12.9	8.3	6.8	59.7	52.7
1966	14.7	8.3	6.0	56.5	40.8
1967	15.5	8.3	5.4	53.6	34.8
1968	19.1	7.9	5.4	41.4	28.3
				52.8*	

*Average for 1965-1968.

Source: U. S. Office of Education, 1969b: Table 9, 9 and U. S. Bureau of the Census, 1969f.

An important word of caution needs to be added here. The figures for 1964-1968 are based on the Current Population Survey which relies on a national random sample. When we focus on those with four or more years of college, the number of cases involved becomes relatively small and is therefore subject to significant sampling error. However, such data are available for five different years. With the exception of 1965, which shows a sharp increase in the nonwhite and Negro attainment rates and a decrease in the white rate, there is a definite tendency for the blacks to fall behind. While we are not confident that the figures give an accurate estimate of the extent of this trend, there certainly seems to be no evidence that the trend was in the other direction. That is, the educational gap was certainly not reduced for these younger cohorts.

The immediately preceding figures deal with those who have four or more years of college. The finding that the "college gap" between whites and blacks has not been decreasing in recent years--and has probably been increasing--raises at least two related questions. Why has this been happening, and is the same thing happening with respect to those who enter college but do not stay a full four years? Let us focus on the last question first. Table 5.1 suggests a partial answer. This table deals with the cumulative percentages of the 25-29 age cohort by sex and race that have attained at least a given level of education.* That is, in 1964

*The same warnings made earlier about sampling error apply to this table.

71.9 per cent of the men aged 25-29 had obtained at least a high school education, 31.9 per cent had completed one year of college or more, etc.

TABLE 5.11

ACCUMULATIVE EDUCATIONAL ATTAINMENT FOR MALE AND FEMALE HIGH SCHOOL GRADUATES 25-29 YEARS OLD AND TRANSITION RATES FROM ONE LEVEL OF EDUCATION TO ANOTHER, BY RACE: 1964-1968

Minimum Level of Attained Education	(1) At Least a High School Graduate	(2) At Least 1-3 Years of College		(3) At Least 4 Years of College		(4) 5 or More Years of College	
Transition Rates		(2)÷(1)		(3)÷(2)		(4)÷(3)	
			Male				
White							
1964	71.9	44.3	31.9	54.8	17.5	42.3	7.4
1965	72.8	42.2	30.7	53.4	16.4	40.2	6.6
1966	73.3	43.4	31.8	56.3	17.9	40.2	7.2
1967	74.3	43.0	34.1	53.7	18.3	42.6	7.8
1968	75.5	45.4	34.3	55.7	19.1	41.4	7.9
Negro							
1964	41.6	28.1	11.7	64.1	7.5	17.3	1.3
1965	50.1	32.5	16.3	44.8	7.3	17.8	1.3
1966	49.0	27.1	13.3	40.6	5.4	20.3	1.1
1967	51.6	25.0	12.9	32.6	4.2	14.3	0.9
1968	58.1	25.0	14.5	37.2	5.4	20.4	1.1
Ratio of Negroes to Whites							
1964	57.9	63.4	36.7	116.9	42.9	41.0	17.6
1965	68.8	77.2	53.1	83.8	44.5	44.2	19.7
1966	66.8	61.4	41.9	72.1	30.2	50.6	15.3
1967	69.4	54.5	37.8	60.8	23.0	50.0	11.5
1968	77.0	54.9	42.3	66.9	28.3	49.1	13.9

Source: U. S. Bureau of the Census, 1965, 1966, 1968c, 1969f.

TABLE 5.11--Continued

Minimum Level of Attained Education	(1) At Least a High School Graduate	(2) At Least 1-3 Years of College		(3) At Least 4 Years of College		(4) 5 or More Years of College
Transition Rates		(2)÷(1)		(3)÷(2)		(4)÷(3)
			Female			
White						
1964	72.5	29.7	21.5	45.7	10.0	21.0	2.1
1965	72.7	30.1	21.9	44.7	9.8	19.4	1.9
1966	74.4	32.4	24.1	49.0	11.8	20.3	2.4
1967	75.3	35.6	26.8	47.4	12.7	20.5	2.6
1968	79.9	38.7	30.9	39.5	12.2	21.3	2.6
Negro							
1964	47.8	27.0	12.9	29.5	3.8	23.7	0.9
1965	50.3	29.0	14.6	45.9	6.7	22.4	1.5
1966	47.0	23.0	10.8	59.3	6.4	18.8	1.2
1967	55.0	29.1	16.0	39.4	6.3	15.9	1.0
1968	53.7	26.3	14.1	38.3	5.4	7.4	0.4
Ratio of Negroes to Whites							
1964	65.9	91.0	60.0	63.3	38.0	112.9	42.9
1965	69.2	96.4	66.7	102.5	68.4	115.4	78.9
1966	63.2	70.9	44.8	121.0	54.2	92.2	50.0
1967	73.0	81.8	59.7	83.1	49.6	77.6	38.5
1968	67.2	67.9	45.6	97.1	44.3	34.7	15.4

First let us consider the numbers of blacks and whites that graduate from high school so that we have an idea of the size of the potential college populations. The table shows that Negroes have clea·ly lowered the gap with respect to the numbers graduating from high school, though their attainment rates a·e still only 65-80 per cent of the white rates. The differences for m:n and women are also of interest. Until relatively recent years Negro womer had tended to graduate in significantly greater numbers than men. Since 1964 this has apparently been reversed, with Negro men gaining on whites at a much faster rate than Negro women. No such reversal has occurred for whites; women continue to graduate from high school in slightly higher proportions than men.

With respect to the transition to college the differences between Negro men and Negro women are even more significant. Negro men have clearly gained on whites, moving from a ratio of 36.7 in 1964 to 42.3 in 1968, though they still remain far behind. Negro women on the other hand are apparently dropping farther behind, going from a ratio of 60.0 to one of 45.6. Therefore the answer to the question posed above of how many blacks relative to whites are entering college is that for the 25-29 cohort black men are enrolling in college in larger absolute numbers, that they are gaining relatively on whites, but that they still are far behind. On the other hand, while the absolute number of Negro women has increased they are falling proportionately farther behind white women and have lost the advantage they once had over black men.

The above observations answer in part the other question posed of why the ratio of Negro to white college graduates seems to be declining: the proportion of Negro women entering college is falling farther behind whites. There is a second part to the answer, and it has to do with the

percentage of entering college students that graduate. This is shown by the alternate columns of figures, which are the transition rates. That is, they indicate the percentage of the high school graduates who attended colleges for at least a year, the percentage of those with one year of college who graduated, etc.* For whites the picture is clear. The transition rates

*These transition figures understate the number who enroll in college and the rate of college dropouts since the category is those who completed one to three years of college. Since many individuals enroll but do not complete one year, the transition figures shown distort the actual picture to some extent. If this affects the comparison between blacks and whites at all it seems likely that the dropout rate for Negroes is understated, since supposedly more of them would have poor high school preparation and drop out during the first year. This may be offset, however, by the fact that many attend Negro colleges with lower academic standards.

have remained quite stable during the period for which data are available even though the percentage of the age cohort reaching any given level has increased during the same time period. For Negroes, however, the transition rates have decreased; i.e., the dropout or attrition rate has increased. This is especially true for those who finished at least one year of college but did not finish four years. The magnitude of the decrease is difficult to determine because of probable sampling error, but this trend has been reasonably clear during the years that these cohorts were in college.

Unfortunately, on the basis of the data concerning the 25-29 age cohort we cannot possibly know what is happening within the higher education system currently. Even the data for 1969 refer in large part to people who graduated from college four to eight years ago. In the last few years there seem to have been increased efforts to get black students into and through college. Consequently, what we need to know is the degree to which these recent attempts have been successful.

To some extent the data to answer such a question are inherently unavailable. College education is a fairly long process. Moreover, in the United States the channeling and scheduling mechanisms are rather loose. Some people do not enroll until several years after high school; others attend college awhile, drop out and later return; still others go part-time and extend their college career over a considerably longer time period than the "usual" four years. Consequently, data concerning school enrollments and the educational attainment of younger age groups may not give a very accurate picture of what the final educational outcome is likely to be for these age cohorts. Nonetheless, if these limitations are kept in mind it seems worthwhile to see what these data suggest about recent trends.

First we will consider the data on educational attainment of younger age groups, and then we will look at data on college enrollments.*

*Both types of data are based on Current Population Surveys conducted by the Bureau of the Census and are subject to the problems of sampling error mentioned previously. The educational attainment data is collected each year in March and is based primarily on two questions: (1) "What is the highest grade he has ever attended?" and (2) "Did he finish this grade?" That is, it focuses on the highest year of schooling completed. Enrollment data are collected annually in October and "are based on replies to the enumerator's inquiry as to whether the person had been enrolled at any time during the current term or school year in any type of graded . . . regular school system," in this case colleges or universities which grant academic degrees, whether full-time or part-time.

Table 5.12 compares the percentages of white and Negro 18 and 19 year olds who have completed one or more years* of college. We see from this table

*Most of the individuals in this category will have completed only one year. For example, of the 12.8 per cent of the whites who had completed one or more years in 1968, 11.5 per cent had completed only one year.

that Negroes seem to have been gaining on whites in recent years, though the 1967 data contradict the trend. Despite what appear to be recent improvements--about 18 per cent of the 1965 gap has been eliminated--Negroes are still far behind whites. If trends continued as they have in the past it would be approximately another 20 years before Negroes would finish one year of college at rates approximating those of whites. When we look at college graduation rates for younger cohorts (ages 20-24--the first age group which would have any appreciable numbers of college graduates), we find that recent changes are highly erratic. The Negro to white ratio goes from 44 in 1965 to 18 in 1966 to 21 in 1967 to 51 in 1968. Such wild fluctuations are probably due to error factors, and consequently nothing meaningful can be said about trends in recent graduation rates for whites and Negroes.

TABLE 5.12

PERCENT OF WHITES AND NEGROES AGE 18-19 ATTAINING ONE OR MORE YEARS OF COLLEGE: 1965-1968

	1965	1966	1967	1968
Whites	11.8	13.0	14.0	12.8
Negroes	5.4	6.1	6.0	7.1
Ratio	45.8	46.9	42.9	55.5

Source: U. S. Bureau of the Census, 1966, 1968c, 1969f.

When we consider school enrollment figures (rather than attainment levels), a similar picture emerges. From 1965 to 1968 the absolute number of Negroes enrolling in colleges increased 77 per cent for the 16-24 age cohort to a total of 434,000 (Table 5.13).

TABLE 5.13

NUMBER OF NEGROES ENROLLED IN COLLEGE AND NEGROES AS A PERCENTAGE OF THE TOTAL ENROLLMENT, BY AGE: 1965-1968

Age	Number Enrolled (thousands)					As A Percentage of Total Enrollment			
	1965	1966	1967	1968	Per cent increase 1965-68	1965	1966	1967	1968
16-17	30	17	16	20	-33⅓	11.4	6.3	6.7	7.1
18-19	111	112	141	182	64	5.0	4.6	6.2	7.3
20-21	99	112	105	112	71	4.4	4.6	5.8	6.1
22-24			51	58				5.1	5.6
25-29	34	41	42	33	82	3.7	4.4	5.9	4.2
30-34			15	29				4.2	7.8
Total	274	282	370	434	58	4.3	4.6	5.8	6.4

Source: U. S. Bureau of the Census, 1967d: Tables 4 and 5, 1969b: Tables 1 and 14.

The relative proportion of Negroes within the total college student population that they constitute also increased, moving from 4.3 per cent in 1965 to 6.4 per cent in 1968 for those of ages 16-34.

These figures are difficult to interpret, however. It is not clear whether the increase in the proportion of Negroes in the college population

is due to greater percentages of the Negro population enrolling or to a growing proportion of Negroes in the total population. The information needed to clarify this question fully is not available, but data for 1967 and 1968 suggest that at least a portion of such increases in Negro college enrollments is due to a higher proportion of Negroes in the younger college age cohorts (Table 5.14).

TABLE 5.14

NEGROES AS PER CENT OF POPULATION, BY AGE: 1967 AND 1968

Age	1967			1968		
	Total Population	Negro Population	Per cent Negro	Total Population	Negro Population	Per cent Negro
16-17	7,051	879	12.5	7,265	904	12.4
18-19	6,358	780	12.3	6,587	830	12.6
20-21	5,818	649	11.2	6,063	697	11.5
22-24	7,833	854	10.9	7,912	894	11.3
25-29	11,761	1,246	10.6	12,390	1,299	11.3
30-34	10,584	1,131	10.7	10,726	1,127	10.3

Source: U. S. Bureau of the Census, 1969): Tables 1 and 14.

On the other hand, some of the increase seems to be due to increases in the proportion of Negroes enrolling in college. Data showing the percentages of Negroes and whites in the 18-24 age groups who enrolled in college are available for 1964, 1967 and 1968 and are presented in Table 5.15. These data also indicate that Negroes have been gaining on

whites. Moreover, the remaining gap shown for 1968 is very close to the gap indicated by the data on educational attainment. That is, Negroes are enrolling in college (or completing one year of college)at a rate that is approximately 50 and 55 per cent of the white rate.

TABLE 5.15

RATE OF NEGRO AND WHITE COLLEGE ENROLLMENTS--PERCENTAGES OF THE 18-24 AGE COHORT ENROLLED IN COLLEGE, BY RACE AND DIFFERENCE AND RATIO OF NEGROES TO WHITES: 1964, 1967, 1968

	1964	1967	1968
White	22.0	27.8	27.5
Negro	8.1	13.4	14.5
Ratio	36.8	48.2	52.8*

*Twenty-five per cent of the 1964 gap has been eliminated.

Source: U. S. Bureau of the Census, 1969b: Tables F, 1, and 14.

In our attempt to determine recent trends we have looked at attainment data for the younger age cohorts and at enrollment data. We have seen that Negroes seem to be gaining on whites in the very recent past, but that they still remain far behind. However, most of the data either focus on the first year of college or make no specification about how far along the students were in their college program.* It obviously makes a difference

*College graduation rates of younger cohorts varied so erratically that the data seemed to be unreliable to the point that no conclusions could be reached.

whether Negroes and whites are equal only with respect to the number who enroll in college or whether they also progress through the system at similar rates. Therefore, data concerning recent rates of attrition and the distribution of students by year in college can help to suggest whether recent increases in the proportion of Negroes enrolling in college will result in increases in the proportion receiving college degrees--and how this compares to whites. Table 5.16 shows the percentage of college students, by race, at various levels in the higher education system.

TABLE 5.16

COLLEGE ENROLLEES AGES 16-34 AT VARIOUS LEVELS OF HIGHER EDUCATION, BY RACE
(In Percentages)

Level	1967		1968	
	White	Negro	White	Negro
1-2 years	52.5	61.2	51.0	64.6
3-4 years	32.4	30.4	34.4	27.4
5 years or above	15.1	8.4	14.0	7.8
Total %	100.0	100.0	100.0	100.0
N*	(5,906)	(369)	(6,255)	(434)

*Thousands.

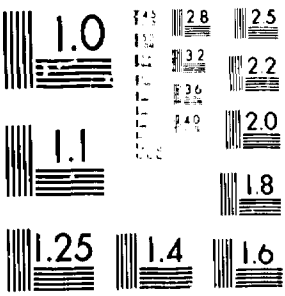
Source: U. S. Bureau of the Census, 1969b: Tables 1 and 14.

We see that for both groups the bulk of students are in their first or second year. However, Negroes are even more concentrated in this category, and this concentration seems to have increased between 1967 and 1968.*

*As noted above several times, relatively little confidence can be put in small changes over short time periods.

This can result from two things. First, Negroes may drop out of college at significantly higher rates than whites. On the other hand, because the proportion of Negro high school graduates going on to college has increased in recent years at a faster rate than whites, a "temporary" concentration at the lower levels may have resulted. Both of these factors probably play a role, but the data available make it impossible to measure their relative influence. It is possible, however, to establish that at least some of the difference is due to the first factor: higher drop out rates for recent cohorts of Negroes. Table 5.17 shows the percentage enrolled of those 14-24 years old who had attained various levels of education, by race for 1967 and 1968. (Some examples may help to explain how the table is to be read: 20.2 per cent of the whites ages 14-24 who had completed four years of high school by October 1967 were still enrolled in school--presumably in college--at that time. Of those whites who had completed one year of college by this date 61.4 were still enrolled, etc.) What the table shows is that in 10 out of the possible 12 comparisons between whites and Negroes over the two year period, Negroes have a lower persistence or transition rate than whites. (One of the exceptions--Negroes with five or more years in 1967--involves so few cases that the reversal is probably due to sampling error.) This is hardly surprising. Rather, what is surprising is how close together the whites and the blacks are.

OF 4
ED
46363



ERIC

Moreover, the changes between 1967 and 1968 seem to indicate that they are moving closer.

TABLE 5.17

EDUCATIONAL PERSISTANCE RATES, I.E., PER CENT CURRENTLY ENROLLED, OF NEGROES AND WHITES BY LEVEL OF EDUCATION ALREADY ATTAINED: 1967 AND 1968

Years of School Already Attained	1967		1968	
	White	Negro	White	Negro
High school				
4	20.2	15.5	20.4	16.2
College				
1	61.4	50.1	59.9	54.4
2	63.1	57.5	59.2	62.5
3	76.9	72.0	81.6	76.9
4	29.8	29.0	28.4	20.0
5+	58.6	100.0	61.4	50.0

Source: U. S. Bureau of the Census, 1969b: Tables 8 and 21.

Therefore, the trends observed for the early and middle 1968's,*

*That is, the trends observed from the data on the 25-29 age cohort. See Tables 5.10, 5.11, and related discussion.

namely increasing enrollments but higher drop out rates for Negroes, may have been reversed to some extent in recent years. However, any conclusions about recent trends must be very tentative because the enrollment and attainment data on which such conclusions are based can only be suggestive.

e. Summary and conclusion.--The question this chapter attempts to answer is whether the gap is closing between black and white levels of income, occupation, and education--with special reference to higher education. In the realm of education Negroes have been able to make significant strides in achieving equality, especially those in the younger age cohorts. Such gains, however, are just now beginning to occur at the level of higher education. Similar but more modest gains seem to be occurring with respect to occupations and incomes. In sum, there has been considerable success in the past in reducing racial inequalities with respect to education--compared to the lack of success in reducing class inequality. Consequently we conclude that it is probable that student aid programs will help to reduce such inequities further. Now we turn to a consideration of the interrelationships between education, occupation, and income and their consequences for racial equality.

6. Interrelationships: To What Extent Will More Education Improve Jobs and Income?

The next question is whether Negroes are able to translate gains they make in education into gains in occupational status and income. More specifically: (1) to what degree does a Negro receive a lower status job than a white man with the same educational qualifications; and (2) to what degree does a Negro get paid less when he has the same educational qualifications and job as a white man.

a. The efficacy of education: conventional wisdom and research findings.--A great deal of emphasis has been placed in recent years upon the importance of minority group members raising their level of education. Television commericals and bus and subway posters frequently emphasize the importance of "staying in school" and "getting a good education." The

conventional wisdom advises the minority group members who wants to advance himself to "learn, baby, learn."

But an increasing amount of sociological research raises questions about the effectiveness of such a strategy for "getting ahead." Moreover, if raising a black man's level of education does not help him to raise his occupational status and income, equalizing educational attainment will not effectively reduce racial inequality with respect to occupation and income.

Such questions are definitely raised by an analysis of census data carried out by Siegel (1965). He analyzed the relationship between color, education, occupation, income, and region using 1950 and 1960 census data. With respect to the relationship between color, education and occupation, he found that occupation segregation seemed to have decreased slightly between 1950 and 1960 for both intra- and inter-cohort comparisons. However, this was not true for the subpopulation we are most interested in, the younger age cohorts with four or more years of college. For these groups there was about a one per cent increase in the index of dissimilarity between 1950 and 1960. Of primary interest to our concerns was his finding that as the level of education increased the amount of occupational segregation also increased. That is, there was less difference in the occupational distribution of whites and nonwhites with low levels of education than those with high levels except--and here is the important point for us--for those with four or more years of college. The significance of this finding will be elaborated later.

When Siegel compared white and nonwhite incomes, controlling for education, occupation and region, he found that about three-fifths of the income gap was due to differences in education, occupation and region, while two-fifths was apparently due to less pay because of nonwhite

status. Here too, however, the gap was greater among those with higher levels of education.

Duncan (1969) has recently attempted to estimate the relative weight of factors contributing to the inferior social status generally held by Negroes. He does this by an explicit causal model derived from path analysis. The results of his analysis are summarized in Table 6.1 which can probably be explained most easily by an example.

TABLE 6.1

THE DIFFERENCES BETWEEN WHITES AND NEGROES FOR SEVERAL BACKGROUND AND ACHIEVEMENT CHARACTERISTICS AND THE SOURCE OF THESE DIFFERENCES--NATIVE MEN 25-64, WITH NONFARM BACKGROUND, AND THE EXPERIENCED CIVILIAN LABOR FORCE

	"Dependent Variables"			
	Number of Siblings	Education Years of Schooling	Status Score* of 1962 Occupation	1961 Income (dollars)
Mean for Whites	3.85	11.7	43.5	7,070
Mean for Negroes	4.86	9.4	19.7	3,280
Total Difference	1.01	2.3	23.8	3,790
"Independent Variables," i.e., the amount of total difference due to:				
Occupation	--	--	--	830
Education	--	--	4.8	520
Number of siblings	--	0.1	0.6	70
Family Background+	.54	1.0	6.6	940
Residual Difference	.47	1.2	11.8	1,430

*On a scale ranging from 0-96.

+Based on father's education and occupation.

Source: Duncan, 1969: 98.

The far right hand column shows that the mean income is $7,070 for whites and $3,280 for Negroes with a difference or gap of $3,790. What the other figures in the column show is how much of this $3,790 difference is due to each of the "independent variables" indicated. That is, $830 of the difference can be "explained" by differences in the occupations of Negroes and whites, $520 by differences in educational level, $70 by the tendency of Negroes to grow up with more siblings, and $940 by the fact that Negroes tend to have parents with lower levels of education and occupation. Yet when all of these factors have been controlled there still remains a gap or residual difference of $1,430. The obvious--and probably correct--interpretation of this residual is that for the most part it is due to discrimination *because of race per se*. The sources of the white-Negro differences in the other "dependent variables" are shown in a similar manner.*

*Occupation is assumed to be affected by education, number of siblings, and family background; education by number of siblings and family background; and number of siblings by family background.

There are of course several reasons why Duncan's estimate of the effects of the education (and the other factors measured) might not be completely accurate. First, there could be error factors in the data itself. Second, the introduction of additional variables, e.g., region, would probably produce a somewhat different set of estimates. Third, the model on which the estimates are based involves sets of assumptions which necessarily simplify reality and may subsequently affect the estimates. But even if the "true" effect of education varies from Duncan's estimate by 100 per cent, e.g., it accounted for $1,040 of the $3,790 difference instead of $520, the effect of education would still account for only about a third of the total gap in ...pation and income. On the other hand, the residual differences account

for 11.8 (50%) of the 23.8 point difference in occupation and $1,430 (39%) of the $3,790 difference in income. Now if the residuals are due to "pure" racial discrimination* then it means that elimination of discrimination in

*That is, when blacks are treated differently even when they have the same social characteristics as whites. For example, when a Negro is paid less than a white man, even though they both come from the same socioeconomic background, have the same level of education, are performing identical work, etc.

hiring and promotion practices and of lower pay to blacks for the same work would have a much larger impact on job and income equality than equalizing educational attainment. The same conclusion is suggested by Siegel's (1965) finding that two-fifths of the black-white income differential was apparently due to "pure" racial discrimination.

These findings could be used to conclude that the attempt to reduce racial inequality through expansion of educational opportunities for Negroes is a relatively poor investment which is likely to yield only small improvements. In general, such a conclusion is probably warranted. As in the case of class inequality, and despite the prevalent "learn, baby, learn" ideology, expanded educational opportunity is probably not the factor that should be given top priority in the effort toward greater equality.

While greater skepticism is required about the efficacy of "education in general" producing racial equality, nonetheless there is reason to believe that higher education can play a significant role in reducing racial inequality. In this sense, the "general" policy conclusions suggested by the findings of Siegal and Duncan are not entirely applicable for the specific problem upon which we are focused, i.e., the effects of higher education. We will now review data which show why the general conclusion needs to be qualified.

Before this is done, however, it should be made clear that the concern has not been to set up "straw men" and then demolish them. Rather, the works of Duncan and Siegel have been discussed because they are two of the more sophisticated analyses of the relationship between education and racial equality, and because they clearly raise questions about the wisdom of placing too much confidence in the power of education. Consequently, the approach has been to outline this general conclusion and then show how it needs to be qualified when applied to higher education. An analogy is the process of finding a strong first order relationship, and then discovering that it does not hold for a particular conditional relationship.

b. Why more higher education may be of significant help.--The thesis of this section is that more higher education for Negroes will help significantly to reduce racial inequality because (1) the relationship between race, education, occupation and income has changed considerably in recent years,* and (2) the relationship between these variables is, in most

*More specifically, since 1960, the last year for which Siegel had data, and 1962, the year the data were collected for the Duncan study.

respects, especially favorable at the highest levels of education, i.e., for those who receive a college degree. Our first task will be to examine trends in the relationship between education and occupation. More specifically we will attempt to determine whether in recent years there has been any change in the relative effect of education compared to job discrimination on the occupational status of Negroes. Later we will review these trends more briefly for the relationship between education and income.

(1) Lower levels of education vs. job discrimination: recent trends.--We saw earlier that the index of occupational dissimilarity has

steadily decreased since 1960 (Table 5.6). The question we are asking now is how much of that decrease has been due to Negroes raising their level of education and how much is due to an actual decrease in discriminatory hiring and promoting practices. If the latter factor plays a significant role it means that additional investments in higher education will produce greater returns--in the form of equality--than has been the case in the past. That is, each increment of increase in education will bring a correspondingly larger increment in occupational status than it has in the past.

The nature of the data available does not permit regression techniques such as those used by Duncan. We can, however, make a rough estimate of the relative impact of these two factors. This can be done by taking the actual number of nonwhites at a given level of education and then distributing them among the occupational categories according to the percentages for the whites with that level of education. When this is done for all levels of education and the results are summed, we have the occupational distribution of nonwhites that would be expected if their treatment in the job market were the same as whites with comparable levels of education. When an index of dissimilarity is calculated between this expected distribution for the nonwhites and the actual distribution for the whites, the result is the amount of occupational dissimilarity that is due solely to differences in the educational level of the two groups. When compared to the original index of dissimilarity (actual white compared to actual nonwhite) the approximate amount of difference that was due to factors other than education is indicated. As in the case of the "residual differences" in Table 6.1 the most plausible interpretation is that the great majority is due to outright racial discrimination in hiring and promotion practices.

The results of these calculations for the years since 1960 for which reliable data are available are shown in Table 6.2.

TABLE 6.2

ACTUAL INDICES OF OCCUPATIONAL DISSIMILARITY BETWEEN WHITES AND NONWHITES COMPARED TO INDICES OBTAINED WHEN POPULATIONS ARE STANDARDIZED FOR EDUCATION: SELECTED YEARS SINCE 1960

	1960	1962	1965	1966	1967	1968
Actual	36.4	39.0	36.0	37.6	33.4	34.5
Standardized	12.3	11.4	10.9	12.6	12.8	11.1
Ratio	33.8	29.2	30.3	33.5	38.3	32.2

Source: U. S. Department of Labor, 1963, 1966, 1967, 1968, 1969b, (Table J.); and U. S. Bureau of the Census, 1963a: Table 8.

What we see is that while the percentage of occupational differences due to educational differences has fluctuated up and down since 1960, there is no clearly discernible trend. The effect of education did increase (and supposedly the effect of discrimination decreased) from 1962 through 1967, but it dropped off again in 1968. It should be kept in mind that, like the estimates by Siegel and Duncan, these figures are averages for all levels of education.

Consequently, the next question which needs to be considered is whether for Negroes the differential effect of lower education and discriminatory practices relative to each other varies for different levels of education. That is when differences in the occupational distribution of nonwhites and whites having a college education were compared to

differences for those with, e.g., a high school education, is the amount of discrimination greater, less or the same? One way of estimating this is to calculate a separate dissimilarity index for each level of education. The results of these calculations are shown in Table 6.3

TABLE 6.3

INDEX OF DISSIMILARITY FOR MAJOR OCCUPATIONS FOR WHITES AND NONWHITES BY LEVEL OF EDUCATION FOR EMPLOYED MALES AGED 18 AND OVER: SELECTED YEARS SINCE 1960

Level of Education	1960	1962	1965	1966	1967	1968
College						
4 or more	14.7	16.3	29.3	20.7	17.7	14.0
1 to 3	27.3	29.1	43.0	33.9	24.2	22.7
High School						
4	31.9	35.4	34.1	34.8	28.1	34.0
1 to 3	32.2	34.6	30.5	31.5	30.2	28.5
Elementary						
8	31.0	32.9	31.4	28.4	26.2	27.8
Less than 8	27.4	31.0	28.9	26.7	22.4	24.1

Source: U. S. Department of Labor, 1963, 1966, 1967, 1968, 1969b, (Table J.); and U. S. Bureau of the Census, 1963a: Table 8.

The general pattern of change over time is very similar to the pattern found in Table 6.2, since these are two different ways of looking at the same data. Of more interest are the variations that occur between

levels of education. Siegel found that the amount of discrimination*

*That is, the gap between whites and blacks with the same amount of education.

increased as the level of education rose until Negroes had a college degree at which point it decreased significantly. (This is not to say that Negroes with higher levels of education were worse off than those with less education, only that they were farther behind whites with comparable education.)

If this situation still existed it would mean that each increment of increase in education would bring an increasingly smaller increment in occupational status, at least up to the point of receiving a college degree. In this sense, investments in education would produce a decreasing rate of return at the higher levels. However, this pattern seems to have changed significantly. Since 1960, with the exception of 1965, the greatest amount of dissimilarity has occurred not at the level of "some college," i.e., one to three years, but for high school graduates or high school dropouts. Consequently, not only do Negroes who complete one or more years of college receive better jobs than those with less education, but they also come closer to having jobs similar to whites with the same levels of education. That is, they not only have more education, they get more <u>for</u> their education. This is even more true for nonwhites who receive college degrees.

In addition to this survey and census data there is a significant amount of qualitative data that indicates that not only is discrimination against Negro college graduates continuing to decrease, but that there is great demand for such individuals in the job market. Most of the evidence is derived from interviews with college placement officers. For example, in a recent article in <u>Occupational Outlook Quarterly</u>, a publication of

the Bureau of Labor Statistics, the following note appeared concerning opportunities in the Southeast:*

*Because of the extremely impressionistic and qualitative nature of these data, the original sources are reproduced verbatim where their length makes this feasible in order to allow the reader to estimate better the reliability of these reports.

> For Negroes, 1969 is proving to be the most open year yet--more offers are coming from the South. This progress was attributed variously to Federal enforcement of the Equal Employment Opportunity Act, general shortage of graduates, and growing recognition that color does not determine ability.
>
> Although the pattern is breaking, black students tend to prepare for teaching careers or at least to have a minor in education as a hedge against possible discrimination in other fields. In contrast to last year, when virtually all job offers to Negro graduates were for out-of-region openings, schools in each of the States reported increasing inquiries from southern and local firms for Negro applicants in all job areas--not just teaching. The Negro graduate of 1969 who has reasonably good grades will have no trouble finding a job.*
>
> *[Quoted footnote]: This section was prepared by Charles Bullock, Region IV, Bureau of Labor Statistics, U.S. Department of Labor. Region IV includes Alabama, Florida, Georgia, Mississippi, South Carolina, and Tennessee. Interviews were held with placement officers and others responsible for placement work on 43 campuses in Region IV. Enrollments ranged from 635 to 15,000. Two colleges enrolled only women students; 12 were predominantly Negro. Only two schools were not accredited--a Negro college with 700 enrollees and a church-operated school of 4,000 white students.

What is probably an even more optimistic estimate of the situation was made concerning the North Central Region in sections of a Labor Department mimeographed news release in June of 1969:

> Outlook for Negro graduates--Negro college graduates could look forward to extremely favorable employment opportunities in 1969. Without exception, placement officers said black graduates were readily hired for all kinds of positions. Some companies specifically requested Negro graduates and were willing to hire those with only marginal grades and to pay premium salaries. Suburban school systems were reported to desire black teachers in order to integrate their faculties. The major difficulty, directors of placement said, was the extremely small number of black graduates available. For example, a school of Nursing reported very few black girls enrolled, and a school of Journalism reported no

Negro enrollees. An additional factor cutting down the number of Negroes actively seeking employment was the large number of scholarships available to black students wishing to do graduate study.

The few black graduates who were being interviewed experienced an astonishing change in company hiring policies toward minorities which has occurred over the last few years. One school reported the only Negro graduate looking for a job had thirty-two interviews and twenty-six job offers. As a result of this happy situation counselors were encouraging black students to branch out from the traditional "safe" employment fields such as education and sociology into any major in which they are interested.

The following item from a syndicated newspaper column suggests that some departments of the federal government are making special efforts to hire and promote Negroes:

Opening for Negroes. Secretary of Transportation John Volpe is making an exhaustive effort to recruit and advance Negroes in his department.

He has ordered a survey of all Negroes in the top grades who haven't been promoted for two years to find out whether they are under-employed and to boost them up the government ladder.

He has also put special emphasis on conducting talent hunts at colleges with a high Negro enrollment.

In a directive to subordinates, Volpe has declared flatly: "Before filling any supergrade position or any professional level position with a non-minority group person, the selecting official in OST (Office, Secretary of Transportation) must report on the affirmative efforts made to consider minority candidates qualitifed for the particular position."

Note: This has caused some whites to complain that it is discrimination in reverse. (Pearson and Anderson, 1969.)

A lengthy article appeared in the New York Times (Nordheimer; 1969) on Monday, June 15, 1969, "based on a spot check by the New York Times of Negro campus placement officers and black talent recruiters for major industries." The main tone of the article was the same as those already cited: the headlines of the article read, "Recruitment of Negro Graduates by Business Sets Record in Small Colleges in South." However, the article notes that some of the people they interviewed (1) expressed concern about

"tokenism," (2) were skeptical about the Nixon administration's willingness to push and enforce fair hiring provisions, (3) noted that there had been little recruitment by Southern based businesses, (4) suggested that Negroes hired by large companies often "found ceilings placed upon their advancement." On the other hand, the Florida A & M Placement Director, "reported that until recently only 18 to 24 concerns regularly recruited on the Tallahassee campus. 'Now some 500 firms make contact here and they are looking for graduates who can fill jobs right across the board in business and industry.'" At Morehouse College "until recently the great majority of . . . graduates went into 'teaching and preaching,' the 'safe' black professions." Of the 131 in the spring class of 1969, 3 plan to enter the ministry, 6 plan to work in education, 15 will enter law school. "Sixty percent . . . will go on to graduate school or enter different professional fields."

In an interview with Mrs. Pearl Baily of the Howard University Placement Office the following figures were obtained. In 1968 there were 679 liberal arts graduates. The placement office had reports on 461. Of these, 223 planned to enter graduate programs, 71 "planned" to enter "business or industry" and the rest planned to enter teaching or be employed by the federal government. Fifty-nine had definitely been offered and had accepted jobs with business and industry. Only this latter figure is available for both 1968 and 1969 and it had risen from 59 to 98.

In summary, on the basis of the recent qualitative data just presented it would seem that the trend indicated by the quantitative data is likely to continue and probably accelerate--at least for the next several years. Therefore, increasing the number of Negroes who enter college, especially the number of Negroes who receive college degrees, should have

a significant effect on raising the occupational status of blacks to a level closer to that of whites, if the current trend holds.

(2) A note on why college makes a "difference."--A comment is in order about the curvilinear relationships between discrimination and level of education (Table 6.3). Two possible interpretations come to mind and it is likely that both are partially true. The first interpretation is based on the observation that entering college--especially obtaining the college degree--is an important symbol of middle class respectability. If a Negro has obtained this and, especially from the point of view of whites, made a qualitative increment in his social status, the black man is not only made more acceptable to prejudiced whites, but they are given a rationale for treating that Negro as "an exception." Such Negroes can no longer be screened on the basis of social class criteria since they have the appropriate class credentials. Consequently, if discrimination continues, race instead of "merit" becomes the explicit reason. Rather than suffer the full impact of such an obvious conflict between ideology and actions, whites find it easier to accept such blacks at least on a somewhat more equal basis.

The second interpretation is related to the first and hinges on the distribution of blacks according to level of education. The modal categories are high school dropouts and graduates, depending on age, and these are the categories which suffer the greatest discrimination. As the number of Negroes at higher levels of education increases, the level of discrimination may tend to increase to cope with the competition such educational change poses for the white population. In light of the pressures toward greater equality it seems unlikely that any such tendency would fully offset gains based on other social processes, such as the "middle-class respectability" phenomenon suggested in the first interpretation.

(3) The relationship of education and income.--We have just finished examining some aspects of the relationship between level of schooling and occupational status for white and nonwhite men. We now need to take the analysis a step farther and examine the differences in income for whites and Negroes, controlling not only for education and sex, but also for occupation.* Unfortunately, there are no data available which permit such complex multivariate analysis. We are, however, able to examine the relationship between race and income, controlling for education. This will allow us to determine how Negro increases in education are likely to affect the gap between black and white income. We can not, however, determine how much of the remaining difference is due to poorer jobs for the same level of education or to lower pay for the same job. With these limitations in mind let us examine the ratio of white to nonwhite income by level of education for five of the years since 1961 (Table 6.4).

Approximately the same two patterns that were noted for the relationship between education and occupation are found here. First of all, nonwhites have made small but steady gains on whites at most levels of education. Secondly, there is a curvilinear pattern between level of education and the gap between white and nonwhite incomes. That is, the ratio of nonwhite to white income tends to decrease as education increases, with a very sharp drop for high school dropouts. It then begins to increase as the higher levels of education are reached, with the gap being narrowest for those with a college education. Another point of significance for our concerns is that while the gap is narrowest for those with degrees, the extent of this gap has remained quite constant over the last three years for which data are available.

TABLE 6.4

THE RATIO* OF NONWHITE TO WHITE MEDIAN INCOME FOR HEADS OF FAMILIES** BY LEVEL OF EDUCATION: SELECTED YEARS 1961-1967

Level of Education	1961	1963	1965	1966	1967
College:					
4 or more	NA	75.1	82.0	81.3	82.1
1 to 3	75.2	64.6	73.6	76.1	79.7
High School:					
4	71.3	66.2	81.9	71.6	74.3
1 to 3	58.6	59.2	57.6	60.8	63.8
Lower:					
8	68.0	68.3	69.5	72.1	74.1
Less than 8	62.7	73.7	70.8	74.8	74.4
Total	53.4	55.4	55.4	59.9	61.8

*Percentage that nonwhite medians are of comparable white medians.

**For 1961-66 the population includes all heads of families. For 1967 the population includes only those heads of families 25 years old or over.

Source: U. S Bureau of the Census, 1963b, 1964, 1967a, 1967b (in all of the preceding see Table 7) and 1969a: Table 14.

In order to make these ratios a little more empirically and intuitively meaningful, the actual dollar figures are shown for 1967 in Table 6.5. There are also data on Negroes available for that year, which allow us to estimate how much the gap is understated by the use of figures for nonwhites. While the gap is larger, we see that at least for this year the pattern of

relationship is very similar whether we compare whites and nonwhites or whites and Negroes.

TABLE 6.5

MEDIAN INCOMES OF WHITE, NONWHITE AND NEGRO HEADS OF FAMILIES 25 YEARS OLD AND OVER, AND RATIO OF NONWHITE TO WHITE AND NEGRO TO WHITE MEDIANS, BY LEVEL OF EDUCATION: 1967

Level of Education	Median Incomes				
	White	Nonwhite	Negro	Nonwhite to White	Negro to White
College					
4 years or more	$12,770	$10,485	$9,979	82.1	78.1
1 to 3	10,277	8,189	8,027	79.7	78.1
High School					
4 years	8,962	6,665	6,403	74.3	71.4
1 to 3	7,971	5,083	4,920	63.8	61.7
Lower					
8 years	6,608	4,897	4,876	74.1	73.8
Less than 8	4,932	3,670	3,565	74.4	72.3
Total	8,471	5,232	4,993	61.8	58.9

Source: U. S. Bureau of the Census, 1969a: Table 14.

Up to this point the picture seems fairly clear: job and pay discrinination has been decreasing in recent years with the least discrimination occurring at the highest levels of education. Unfortunately things are not this clear cut, for the picture becomes quite confusing when we look at the relationship between education, income, and race (or color) for all individuals rather than just heads of families. These data are shown in Table 6.6

TABLE 6.6

RATIO OF NONWHITE TO WHITE MEDIAN INCOMES FOR MALE INDIVIDUALS BY LEVEL OF EDUCATION: SELECTED YEARS SINCE 1961

Level of Education	1961	1963	1965	1966	1967*
College					
4 years or more	NA	NA	NA	NA	67.0
1 to 3	NA	NA	NA	NA	75.0
1 or more	66.4	59.6	66.5	65.7	69.0
High School					
4 years	65.6	68.2	69.1	73.4	72.0
1 to 3	59.3	59.2	67.2	69.1	69.0
Lower					
8 years	69.2	73.1	70.9	79.8	77.0
Less than 8	67.5	71.8	78.7	80.7	81.0
Total	51.7	52.0	55.4	57.4	58.0

*Nonwhite data are not available for 1967 and the ratios for that year are Negro to white ratios.

Source: U. S. Bureau of the Census, 1963b: Table 28, 1964: Table 21, [illegible]: Table 21, 1967b: Table 21, and 1969f: Table 4.

Between 1961 and 1966 the gap between white and nonwhite men was reduced considerably at all levels of education except for those with college tra'ning. Here the gap remained constant or even increased slightly. Between 1966 and 1967 the trend seems to be about the same for all those with less than college training, taking into account that the ratio for 1967 is based on data for Negroes rather than nonwhites. While the higher education categories are not strictly comparable for 1967 and earlier years, there seems to have been a relatively dramatic increase in the ratio between black and white income from 1966 to 1967 for those with college training. Such a change over only one year could easily be due to sampling error, however.

Even more puzzling than the trend over time for those with one or more years of college is the pattern of variation between levels of education. As noted before, for heads of families the pattern was clearly curvilinear. That is, the differences in income were least for those with the lowest and highest levels of education and most for those with the middle levels of schooling. For individuals, however, the pattern of income differences is "bimodal"--at least in more recent years. Those with the lowest levels of education suffer the least discrimination. Then discrimination increases through the level of high school dropouts until we reach high school graduates where it drops significantly, only to increase for those with college training to about the same level that existed for high school dropouts.

The above comments for the most part simply describe the table rather than interpret it. Moreover, when we focus on the difference between heads of families and individuals with respect to the relationship between education, income and color, interpretation becomes even more difficult. There are several obvious differences in the nature of the two populations

which might account, in part, for the different findings. For example, some of the family heads are women. This is especially true for Negroes. Secondly, the two populations probably differ considerably with respect to age distribution, with family heads tending to be noticeably more middle-aged than individuals in general. Yet even with these differences taken into account, no meaningful interpretation of the quite different patterns is suggested. At this point, while there does seem to be a decrease in "pay discrimination" over time, the data concerning how this discrimination varies by educational level are contradictory, and no clear conclusion can be drawn about the matter.

c. Summary of the argument.--The thesis is that expansion of federal aid to higher education is likely to help reduce racial inequality, although probably not class inequality. This conclusion is based primarily on two findings. First, Negroes have been successful in increasing their level of educational attainment at significantly higher rates than whites so that the average educational gap between younger blacks and whites has been reduced considerably while the gap between lower and upper class whites has been reduced very little. That is, attempts to reduce racial inequality by raising the level of Negro education are not entirely offset by comparable increases in white attainment, i.e., offset by what was labeled in the first chapters as "educational inflation." From this observation--based primarily on processes occurring at the high school level--it seems reasonable that similar results will occur at the college level as higher education becomes more accessible.

The second basis of the conclusion is that the primary barrier to equality of occupational status--discriminatory hiring and promotion practices--seems to be lessening significantly in recent years, especially

for Negroes with college training. Whether this also holds for income is not clear, but it seems unlikely that employers will be able to maintain pay discrimination (less money for the identical work) where job discrimination is significantly reduced since the former by itself is highly visible. At any rate, Negroes who are able to obtain a college education during the next decade will probably be able to move much closer to occupational and income equality with whites than has been possible in the past or will be possible for Negroes with lower levels of education.

On the basis of these findings it is concluded that increases in the number of Negroes who attend and graduate from college will make a significant contribution to the general reduction of racial inequality. This conclusion is based on the assumption that job and pay discrimination will continue to decrease. Consequently, the argument is not that higher education is the single "key" to equality. Rather, the conclusion is that if other types of efforts such as fair employment programs are more or less maintained,* increasing the number of Negro college graduates will, relative

*Obviously increasing their impact would in turn increase the impact of expanded higher education.

to other alternatives, produce a high payoff in a short time with a minimum of political resistance. This is in contrast to programs at lower levels of schooling which obviously will require longer to produce a payoff in the stratification structure per se. Similarly attempts to require employers to hire and promote Negroes immediately on a quota based on their representation in the population are likely to encounter extreme political resistance.

In short, the conclusion is that the "larger societal processes" will permit the expansion of Negro higher education which will have a significant impact on reducing racial inequality in the society as a whole.

Before turning to the question of whether expanded student aid will be successful in increasing the proportion of Negroes who attend and graduate from college, we will attempt to outline the theoretical basis of resolving the paradox presented at the beginning of Chapter 5.

d. Resolving the paradox: class equality vs racial equality.--

In the preceding chapter and the earlier sections of this one, racial inequality has been discussed in terms of differences in education, occupation and income. These are the same indicators that were used to measure (and in a sense define) SES when we discussed class inequality. Therefore, to show that blacks rank low on these indicators is to show that a larger percentage of these individuals are from the lower socio-economic strata. Since the argument is that financial aid to college students would have relatively little impact on social mobility or equality with respect to SES it may intuitively seem contradictory to argue that federal aid can have a significant effect on improving the SES of Negroes--even though the data presented support the argument.

But the contradiction is more apparent than real, for there is a basic difference in the social processes that are involved. Complete equality of opportunity for all social classes would require that all the individuals in each generation be provided the same life chances as all other individuals of that generation. Those who start on the bottom must have the same probabilities of eventually attaining high status as those who start at the top and those who start at the top must have the same chance of ending up on the bottom as those who were born into the lower

class. For a society to even approximate these conditions it must maintain extremely high rates of mobility. To the extent that there is significant inequality, i.e., the social distance between the top and the bottom is great, many individuals will have to move long social distances each generation. To put it another way, the mobility* of one generation is not

*More accurately, circulation or net mobility. Intergenerational mobility can be broken down into two components: structural mobility and circulation mobility. Structural mobility refers to the intergenerational changes that occur because of changes in the structure of the stratification systems, e.g., occupational structure. If white collar workers constitute a much higher percentage of the total work force in the sons' generation than they did in their fathers' time, many sons will necessarily be upwardly mobile. Such intergenerational changes are referred to as structural mobility. Circulation mobility refers to intergenerational changes above and beyond the structural changes. Structural changes are not related to the question of equality of opportunity. The focus of this latter concept is not on how many sons' have higher status jobs than their fathers, but whether the sons from low origins have the same life chances as the sons from high origins. This latter question is dependent not on total mobility or structural mobility, but on the rates and patterns of circulation mobility.

cumulative to the mobility of the next generation since by definition there is always someone on the bottom (at least unless perfect equality is attained).

Attaining complete racial equality is much less demanding with respect to the amount of social mobility required since the effects are cumulative from generation to generation. What is involved is a process of moving enough blacks up and enough whites down so that the two groups are equally distributed over the stratification structure. But this can be done by accumulating movements over relatively short social distances for several generations until the association between race and low SES is eliminated. This is not to say that it will be easy to reduce racial inequality, only that reducing class differences and their effects on the opportunities of each succeeding generation is much more difficult.

Consequently, expansion of higher education is much more likely to be effective in producing the former than the latter.

7. The Effect of Student Aid on Black Educational Attainment

Up to this point we have focused on whether attempts to make both college entrance and graduation more accessible to Negroes would significantly improve their relative socioeconomic status, and thereby reduce racial inequality. Now we turn to the question of whether federal aid to higher education is likely to accomplish this. The essence of the argument here is that the effects of aid on college attendance are expected to be about the same for Negroes as for whites. However, this requires qualification. There is some evidence to indicate that money is more of a bottleneck for blacks than for whites and consequently expanded financial aid may have a greater impact on increasing Negro enrollments than white enrollments. Furthermore, the evidence is clear that Negroes are less academically prepared for college and therefore can be expected to have more difficulty completing current types of degree requirements.

In Section A we saw that the data concerning the effects of student aid were very ambiguous. Earlier studies indicated that motivation and poor academic preparation were the main bottleneck to increasing lower class enrollment, with money being a significant but considerably less important factor. One recent study gave much more weight to financial problems. The data concerning Negro students are even more inadequate. Relatively few studies have been conducted on the effects of financial assistance on Negro students per se. Those that have been conducted rely for the most part on samples that are not representative of the total population (e.g., Burgdorf, 1969).

There are, however, data suggesting that the processes which determine relative educational attainment among Negroes are approximately the same as those that determine white attainment. (Another way of saying this is that once there has been control for racial discrimination, attainment of Negroes is determined by the same factors as attainment of whites.) Beverly Duncan (1967: 363-367) has studied the influence of family background factors on the educational attainment of whites and nonwhites. The four independent variables studied are: (1) family type, i.e., either a broken or intact family; (2) the education of the head of the household; (3) occupational status of the head of the household; and (4) number of siblings. The dependent variable is, of course, years of schooling. The essential findings are presented in the form of coefficients in Figure 7.1.

In one sense some of the relationships are significantly different for the white and nonwhite populations. For example, the effect of having an intact family on increasing the number of siblings is about six times as high for nonwhites as for whites. The effect of higher education on reducing the number of siblings is over twice as high for whites as for nonwhites. The direct effect of fathers' education is considerably stronger for nonwhites while the effect of fathers' occupation is weaker. Other smaller differences are also apparent.

But these differences must be seen in the context of the relatively small amount of variance that is accounted for by the model as a whole. All of the linkages are relatively weak so that the differences that do exist are small relative to the amount of variation possible. Consequently, it is probably more accurate to stress the general similarity between the processes which determine white and nonwhite educational attainment--once the differences due to color as such have been held constant. To put things

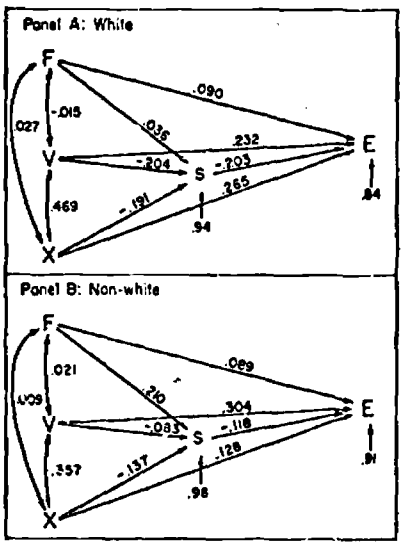


Figure 7.1.--Path diagram of the influence of family type (F), head's education (V), head's occupation (X), and siblings (S) on educational attainment (E) for native civilian males aged 27 to 61, by color: United States, 1962.

Source: Beverly Duncan, 1967.

another way, the vast majority of the differences in the educational level of whites and nonwhites is not due to differences in the way their educational career is affected by the background factors considered in the Duncan model. Moreover, the overall effect of these background factors is weaker for nonwhites, so that in a certain sense nonwhites are less affected by their social backgrounds than whites--once the factor of color as such is taken into account.

Jaffe and Adams (1969) use quite different variables, but also find that the processes influencing educational attainment are quite similar for both whites and Negroes. They focus on the noneconomic factors that determine whether or not high school students plan to attend college. More specifically, they conclude that the primary noneconomic deterrents to high school seniors making plans to attend college are negative high school counseling, failure to take a college preparatory curriculum, and a relatively negative self-image. For our purposes the important finding is that these factors operated within each racial group. "Minority and majority students plan or do not plan on college largely in terms of identical predictive variables, but they do so relative to the distribution of these variables within the racial groups (Jaffe and Adams, 1969: 131)." That is, black students decide on whether they are "college material" by reference to their relative performance within their own racial group. Moreover, the factors, and relationships between the factors, which influence their decision are essentially the same as those influencing whites.

The Duncan and Jaffe-Adams studies have been cited to illustrate the thesis that the processes which influence college attendance are quite similar for whites and blacks. To the extent that this is so these processes

would presumably be affected in similar ways by the further expansion of student financial aid.

Now we must qualify this thesis in several respects. First, if lack of financial resources is in any sense a significant deterrent to college attendance or completion, it obviously has more impact on Negroes than whites--as groups--simply because blacks are poorer. The most recent data relevant to this point are shown in Table 7.1.

TABLE 7.1

INCOME DISTRIBUTION FOR PARENTS OF BLACK AND NONBLACK COLLEGE FRESHMEN: 1968 (In Percentages)

	Black	Nonblack
Less than $4,000	30.7	4.8
$4,000 - $5,999	24.8	9.4
$6,000 - $7,999	17.0	15.4
$8,000 - $9,999	10.5	17.3
$10,000 - $14,999	10.7	28.2
$15,000 - $19,999	3.8	11.7
$20,000 - $24,999	1.4	5.5
$25,000 - $29,999	0.5	2.7
$30,000 or more	0.6	5.0

Source: American Council on Education, 1969: 45.

That the families of Negro freshmen are concentrated in the lower income groups is not surprising, but to find such a high concentration is unexpected. The index of dissimilarity for the parents of white and Negro

1968 college freshmen is 42.9, compared to an index of about 20.5 for all heads of families in 1967. Therefore lack of money would appear to be more of a bottleneck or critical factor for Negroes than for whites.

In a study of 1,519 Negro students who sought some type of aid from the National Scholarship Service Fund for Negro Students to enter integrated colleges, Clark and Plotkin found that financial reasons were clearly the primary reason for dropping out of college. They claim that their findings are supported by a number of other studies which show that unlike whites--who seem to drop out for other reasons--the primary reason for Negro attrition is lack of money (Clark and Plotkin, 1963: 20ff). Two factors must be considered in interpreting their findings: first, their sample was a select group of relatively able students; secondly, the study focuses on the 1952-1956 period and therefore is somewhat out of date.

More recent data, however, confirm that Negroes still perceive financial problems as more of a barrier to college completion than do whites. ACE data on the 1968 freshmen relevant to this point are shown in Table 7.2.

Nearly three times as many Negroes as whites consider finances a "major concern." Nonetheless it is still somewhat surprising that only about 21 per cent of the Negro freshmen consider finances as a major concern. This greater concern is paralleled by a greater tendency for blacks to depend on loans or scholarships as a major source of financial support. For 1968 freshmen, 61.7 per cent of the blacks compared to 29.9 per cent of the nonblacks relied on such sources (American Council on Education, 1969: 45). These figures, of course, do not say anything about whether Negroes receive more or less than whites relative to their financial needs.

TABLE 7.2

PERCENTAGE OF BLACK AND NONBLACK COLLEGE FRESHMEN WHO EXPRESS VARYING DEGREES OF CONCERN ABOUT FINANCING THEIR EDUCATION, BY TYPE OF INSTITUTION: 1968

Type of Institution and Race	Degree of Concern			Total
	None	Some Concern	Major Concern	
All institutions				
Black	21.0	58.4	20.6	100.0
Nonblack	36.1	56.2	7.7	100.0
Predominantly white 2 year colleges				
Black	27.3	55.9	16.9	100.0
Nonblack	38.8	53.8	7.4	100.0
Predominantly white 4 year colleges				
Black	18.1	60.1	21.8	100.0
Nonblack	34.3	57.7	8.0	100.0
Predominantly Negro 4 year colleges				
Black	19.2	57.9	23.0	100.0
Nonblack	29.1	56.5	14.3	100.0
Predominantly white universities				
Black	20.1	61.6	18.4	100.0
Nonblack	35.5	56.8	7.7	100.0

Source: American Council on Education, 1969: 45.

The second qualification--equally obvious--is that Negroes as a group are less academically prepared than whites.* The factors involved

*For comparisons of grade distributions see American Council on Education, 1969; for comparisons of SAT scores, see Doerman, 1968; for comparisons of the average achievement test scores for predominantly white and predominantly black colleges see College Entrance Examination Board, biannual.

in this poorer preparation and their relative importance are much in debate. But even if blacks receive significant amounts of compensatory education, the current generation of blacks will be unlikely to progress through and graduate from college at rates as high as those of whites--assuming equal academic standards.

What can be concluded about the probable effects of increasing the amount of student aid available for blacks? First, it seems that at the level of the individual the weights of the various factors which determine whether a person will attend college are about the same for blacks and whites, once race is controlled. For example, the relative weight of money, academic, and motivational factors is the same for black and white individuals. However, since a much larger percentage of blacks are in the low income groups, supposedly money is a critical bottleneck for a much higher proportion of the blacks than whites. Consequently, aid would supposedly make a significant difference for a relatively high proportion of black high school seniors and consequently raise black enrollments at a higher rate than for whites. However, the lower academic preparedness of blacks is likely to produce a high dropout rate, which will partially offset the gains in enrollment. Overall, however, expanded student aid will probably have a significant impact on the educational attainment of blacks.

Concluding that student aid will help to increase the number of blacks entering and progressing through the higher education system is little comfort in itself. But this must be related to the two other "optimistic" findings. First, Negroes have been able in the past to increase their educational attainment rates fast enough so that they have been able to significantly close the gap between blacks and whites; it has not been simply an "inflationary spiral" with everybody getting more schooling, but whites staying far ahead. Second, in the recent past Negroes have been increasingly successful in translating their gains in education into better jobs and higher income and it appears that this trend will accelerate in the future--especially for those blacks who have a college education. Consequently, expansion of opportunities for higher education through federal aid can probably make a significant contribution to reducing social inequality.

C. Educational Inflation: The Prospects and Problems of Expanding the Availability of Educational Credentials

8. Planned Educational Inflation

a. Introduction.--In the previous chapters it was assumed that efforts to reduce the inequality in educational attainments would involve helping the underprivileged to acquire the types of academic skills and knowledge similar to those held by individuals with higher levels of formal schooling. In this chapter we will disregard this assumption and ask what would happen if the levels of college certification were increased faster than any gains in "real" academic skills and knowledge. Another way of posing the same question is to ask what would happen if educational standards were lowered in order to decrease the time and effort required to

obtain the credentials of higher education, e.g., a college degree.* Would

*As used here "certification" and "credentials" means any socially reorganized and formalized measures of academic achievement, whether a bachelor's degree, an associate degree, or simply a transcript showing the completion of a certain number of courses with a certain average grade. However, the discussion will be focused at the level of the college degree in order to simplify the analysis.

this be likely to increase or decrease the degree of inequality with respect to educational credentials and occupational status?

Such a procedure would be analogous in many ways to planned economic inflation in which the government meets its obligations by deficit financing or by printing additional money. Economic inflation of this type frequently has a significant effect on redistributing the wealth of a society. For example, the prices of consumer goods and unionized labor usually increase faster than salaries, with merchants and organized labor gaining at the expense of government officials, teachers, etc., debtors gain and creditors lose.

This question of whether planned educational inflation will reduce inequality must be broken into two parts. The first concerns how different types and rates of inflation will influence the distribution of educational credentials among those from different class and racial backgrounds. For example, will the gap between the percentages of whites and Negroes with college degrees be increased or decreased?

The second part concerns how changes in the distribution of educational credentials will influence the distribution of occupational status and income.* This is largely dependent on how the labor market would

*For our purposes it can be assumed that the latter is determined primarily by the former.

respond to educational inflation. As the number of people holding degrees increased, would employers raise or change their educational requirements? Would they clearly distinguish between those with "easy degrees" and those with "regular degrees?" How quickly would such responses develop and what would be the effect of a temporary lag?

b. The distribution of educational attainment.--A major determinant of the effects of educational inflation on the distribution of credentials is whether the inflationary process is general or selective. General inflation will be defined here as expanding the number of individuals with higher education credentials by easing the academic requirements for everyone. By selective inflation we mean easing the requirements primarily for those from underprivileged backgrounds while maintaining academic standards for most students.

(1) The effects of generalized inflation.--The effect of generalized inflation on educational equality is obviously dependent upon whether the additional ("easy") credentials go primarily to the privileged or the underprivileged.

Taking into account the current rates of college enrollment and completion, it seems very likely that under generalized inflation most of the additional degrees would go to those from relatively privileged backgrounds. While part of this material was covered in Section A, let us briefly review some of the more relevant information. In 1966 about 70 per cent of the students came from families who had incomes above $7,500 (U. S. Bureau of the Census, 1969d). This seems to hold for more recent cohorts also. In the fall of 1968, 53 per cent of the freshmen came from families with incomes above $10,000 while 68 per cent came from families with incomes above $8,000 (American Council on Education, 1968: 39). Data

showing the proportion of 1965 high school graduates who enrolled in college by 1967 illustrate the same thing from a slightly different perspective (U. S. Bureau of the Census, 1969c). Eighty-two per cent of those whose fathers had four years of college had enrolled by February 1967. With respect to income, 61 per cent of those whose families earned between $10,000 and $14,999 had attended college, while 87 per cent of those with family incomes in excess of $15,000 had enrolled.

These data indicate two things. First, if credentials were made easier for all attending college, those from underprivileged backgrounds would initially benefit very little simply because they make up such a small proportion of the college population. Secondly, if entrance requirements were eased for all there is still room for additional enrollments by members of the middle and upper classes. For example, nearly 40 per cent of 1965 high school graduates from families making between $10,000 and $15,000 had not enrolled two years after high school.

While little information is available, academic standards are probably the main barrier to increased upper class enrollments, while those from the lower class are also influenced at least as strongly by lack of financial support, family encouragement, etc. Consequently, it seems reasonable to assume that lowering entrance requirements across the board would, at least initially, stimulate upper class enrollments as much or more than enrollments from the lower classes.

The same situation holds with respect to college completion. No recent data on graduation rates by socioeconomic status are available, but the attainment figures for the total population show that in 1968 only 14.7 per cent of those between 25 and 29 had completed four or more years of college. The rate for this age group is supposed to reach 15.2 per cent

in 1970 and 16.2 per cent by 1975 (U. S. Bureau of the Census, 1969g). If we assume that all of these individuals were from families with above median incomes it would mean a completion rate of only 30 per cent for this group. Even if we assumed that they were all from the upper income quartile it would mean a completion rate of only 60 per cent--which is too low to produce any significant ceiling effect.

Moreover, academic factors appear to be the main impediment to the completion of college degrees among this group. Consequently, reducing the academic requirements would probably enable nearly all of those from upper class backgrounds to obtain degrees.

In conclusion, a general lowering of academic standards would probably increase the gap between the level of educational credentials held by the privileged and those held by the underprivileged.

(2) The effects of selective inflation.--As indicated above, selective inflation means lowering educational requirements only for those from underprivileged backgrounds. Data are not available to illustrate the effects of lowering standards for those from low SES backgrounds per se. It is possible, however, to estimate what would happen at the bachelor's degree level if race were used as the selective criterion and all of the "easy degrees" were given to Negroes. (This is not to say that all college educated Negroes would receive "easy degrees." Degrees awarded through planned inflation would be in addition to the degrees earned by blacks in the normal course of events.) Consequently, we shall attempt to estimate what would happen to the Negro and white college attainment rates if various numbers of "easy degrees" were awarded to Negroes. The focus will be on 1968, measured by the Census Bureau's Current Population Survey in March of that year (U. S. Bureau of the Census, 1969f). The question asked will

be what the actual attainment rates for those 20-24 years old were as compared to what the rates might have been for this cohort if additional degrees had been given to Negroes in the preceding three years. The results of this hypothetical exercise are shown in Table 8.1.

TABLE 8.1

THE HYPOTHETICAL IMPACT OF VARIOUS LEVELS OF EDUCATIONAL INFLATION ON THE PERCENTAGE OF NEGROES WITH FOUR OR MORE YEARS OF COLLEGE: 1968

Actual Situation--1968

1. Number of degrees actually granted:

1964-65	535,000
1965-66	551,000
1966-67	584,000
3 year total	1,670,000

2. Actual attainment rates for 1968--percentage of those 20-24 with four or more years of college:

Total population	8.4
White	8.8
Negroes	4.2

Hypothetical Situation--1968

1. "Additional" degrees granted if three year total had been inflated (i.e., increased) by various percentages:

2.5 X 1,670,000	41,750
5.0 X 1,670,000	83,500
10.0 X 1,670,000	167,000

2. Estimated Negro attainment rates--percentage with four or more years of college--if all the "additional" degrees had been given to Negroes:

Level of Inflation	Attainment Rate
2.5	5.7
5.0	8.6
10.0	12.9

The methodology involved in making these estimates is explained in the appendix at the end of this chapter.

The significant finding is that a 5 per cent rate of inflation would have almost eliminated the difference in formal credentials. That is, if the total number of degrees normally granted was expanded by 5 per cent and all of these were awarded to Negroes, the percentage of each age cohort receiving degrees would be about equal.

It is important, however, to view this finding--which would probably be characterized by some as surprisingly encouraging--in relationship to several other considerations. First, the measure of attainment used was the percentage of the 20-24 age group with 4 or more years of college. Clearly, however, significantly larger proportions of whites than Negroes continue into graduate school. For example, of the 1,703,000 whites 25-29 with at least 4 years of college in 1968, 571,000 had 5 years or more. That is, about 33 per cent of the white graduates had at least a year of graduate work.* Of the Negroes, 60,000 had 4 years of college while 9,000 had

*For a small percentage of these, the fifth year may be advanced or extended baccalaureate work.

5 or more years, i.e., about 13 per cent had done graduate work. Moreover, the key feature of an inflationary program is to give out degrees that are less intellectually demanding. If these degrees are given out primarily to Negroes it is very likely that the percentage of Negro college graduates going on to graduate school will actually decrease. However, the percentage of the total Negro population going to graduate school will probably increase.

There is also a possibility that the figures in Table 8.1 overstate the impact of planned inflation because of the age cohort used in the estimation procedures. While most of those in the 20-24 age cohort who will obtain college degrees will have done so, a significant number will receive degrees after age 24* and many will do graduate work later. The data

*A study of 1958 graduates showed that 31 per cent were above age 24 (Sharp, 1963: 11).

available seem to indicate that during these later years the whites increase their advantage over the blacks. The percentages of those 20-24 years of age who were graduates* in 1968 were 8.8 per cent for whites and 4.2 per

*Actually, those with 4 or more years of college.

cent for Negroes (Table 8.1), or a ratio of .46, while for the 25-29 cohort the figures were 15.7 for whites and 5.7 for Negroes, or a ratio of .36.

Third, admittedly the assumption that all of the "additional" degrees will be given to blacks may be an unrealistic one. Such a specification would probably be difficult to instigate from a political point of view. Secondly, if all of the "additional" or "easy" degrees were granted to blacks, the job market would be more likely to differentiate between "easy" and "regular" degrees. Consequently, a more realistic approach might be to assume that some proportion of the easy degrees would be given to disadvantaged whites. For example, half might be given to blacks and half to whites.* In that case, the rate of inflation would have

*The half and half proportions are only used for purposes of illustration. What the "proper" proportion would be is largely a political and ethical question which we have not attempted to resolve.

to be doubled in order to have the same magnitude of effect on equalizing black and white attainment rates.

Despite these qualifications it does seem reasonable to conclude that educational inflation in the range of two and one-half to ten per cent could have a significant effect on equalizing--between blacks and whites--the distribution of higher education credentials if the "easy degrees" were reserved specifically for those from disadvantaged backgrounds. Whether such a redistribution of educational status symbols could be translated into significant gains in occupational status and income is the question to which we now turn.

c. The response of the job market

(1) The interaction between attainments and requirements.--Will the new easy degrees which would be used to equalize the distribution of educational credentials be honored in the job market? This is the critical factor in determining whether planned educational inflation will have an effect on the distribution of occupational status and income.

Essential to answering this question is some understanding of the role of education and educational credentials in occupational screening, i.e., the process by which employees are hired and promoted. It seems to be part of the conventional wisdom that not only are higher levels of education required by employers, but that education now has more effect on one's achievement--relative to other factors--than in the past.

Considering how generally the proposition is accepted, there is surprisingly little reliable quantitative data concerning the question.*

*Probably the best supportive data available is found in Peter Blau and Otis Dudley Duncan's The American Occupational Structure (1967: 178-180). They conclude that the influence of education on careers (but not on first jobs) has become more pronounced over time, but the magnitude of the increases is rather modest.

There is even less knowledge about the dynamics of the processes which produce such a trend. Some relevant questions are: to what extent do the jobs which make up the occupational structure actually require a higher level of knowledge and skill than in earlier periods? Do people with more schooling usually perform better? Or, as more people receive more schooling, do employers raise their educational requirements even when they are not relevant to job performance? As the service sector of the economy expands--where production is frequently difficult to measure--do employers depend more heavily on schooling as a criterion in both employment and promotion simply because it is easily quantified? To deal with all of these issues is neither necessary nor possible, but we must examine selected aspects of the societal dynamics of the occupational screening process in order to clarify the actual importance of academic certification to the job.

Since our concern is with how the job market is likely to respond to planned educational inflation, the interaction between requirements and attainments is the focus rather than simply the separate trends. This problem has two aspects. The first concerns how employers react to increases in the general level of education--whether its source is planned inflation or some other social process. For example, when the percentage of people with a college education increases, how quickly do employers raise their educational requirements? The second problem concerns the extent to which employers would distinguish between easy degrees and regular degrees. For lack of a better terminology we shall refer to these as non-discriminant and discriminant responses.*

*A note on terminology may be useful here. The categories of nondiscriminant and discriminant responses cut across the categories of general and selective inflation. The types of inflation focus on which socioeconomic or racial groups receive the easy degrees. The types of response deal with

how employers are likely to respond to the effects of planned educational inflation. Nondiscriminant response deals with how the job market--more specifically the occupational screening process--is likely to respond to any large increase in the level of educational attainment. Planned educational inflation--and it could be either general or selective--is one of several possible causes of such an increase. Later in the discussion, nondiscriminant response is described in terms of two ideal types which are further subcategories of nondiscriminant response and not by definition related to any of the other categories. Discriminant response deals with the job markets' response to easy degrees, per se. Do employers seek to distinguish between easy and regular degrees, are they able to do so, and what is their response?

---

(2) Nondiscriminant response

(a) Conceptualizing the nature of the problem.--Here we are dealing with three attributes or variables, each one related to a different unit of analysis. The first unit is the occupation structure. The relevant attribute is the distribution of occupational status with respect to the socioeconomic origin of those who make up the structure. The second unit of analysis is the screening procedure used by employers, and the related variable is the number of years of formal schooling that are generally required to obtain specified jobs. The third unit of analysis is a series of age cohorts whose members pass through the screening procedures and take up positions in the occupational structure. The relevant attribute is the distribution of formal educational credentials by race and socioeconomic background. The question posed is how changes in the distribution of formal credentials within subsequent cohorts (variable 3) will effect the educational screening criteria (variable 2) and how the subsequent screening process that occurs over a period of time will influence the subsequent distribution of occupational status within the occupation structure (variable 1).

(b) Nondiscriminant responses: types of variation and their consequences.--Since our independent variable is change in the distribution

of educational credentials (variable 3), the first step is to examine the types of changes that can occur in it. This is most conveniently handled by formulating two ideal types.

The first type is one in which both the privileged and the underprivileged increase their level of credentials, but the gap between them remains more or less the same. It is possible for the underprivileged to increase their relative share of the occupational status if the screening requirements are not raised a proportionate amount. This can probably be illustrated best by assuming that the shape of the frequency distribution of the years of schooling is approximately the same for both privileged and underprivileged, e.g., whites compared to Negroes.* Figure 8.1A shows

*In the discussion that follows the distributions are shown as more or less normal in order to simplify the illustrations and calculations involved. While the actual distributions are not normal, they are approximately the same shape for both races. The figures used are hypothetical.

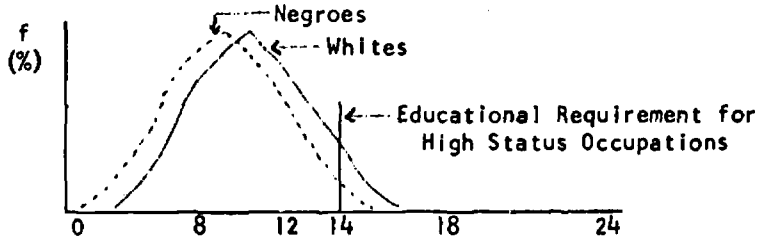
a hypothetical distribution of each group at t_1. Here the "education requirement for the average high status job"--an artificial hypothetical concept--is shown as 14 years of schooling. In this situation, about 6.7 percent of the whites and 2.3 per cent of the blacks* have the necessary

*That is, the percentage of each population falling above the points which are approximately 1.5 and 2.0 standard deviations above their respective means. By comparing the percentages or proportions of each race, differences in the absolute size of the two populations have been controlled or standardized.

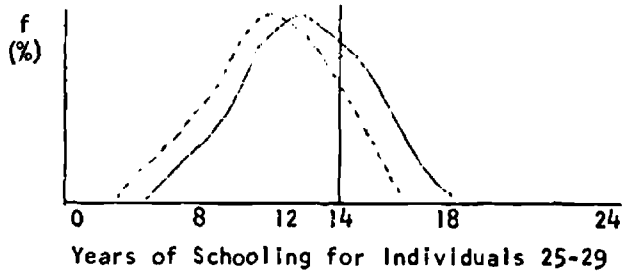
educational qualifications for high status jobs.

In Figure 8.1B both groups have raised the level of their educational attainment a proportionate amount, and the educational requirement for high status jobs has remained unchanged. In this situation, 30.8

8.1A: t_1



8.1B: t_2



8.1C: t_3

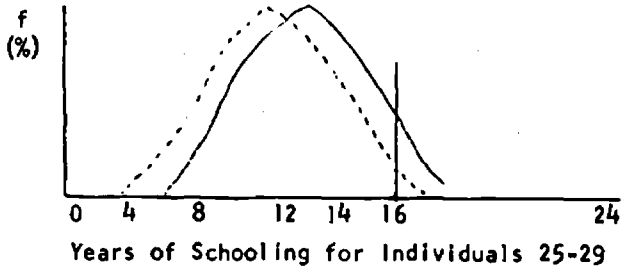


Figure 8.1.--The effects of general increases in educational attainment, followed by increases in educational requirements for high status jobs, on the distribution of occupational status among whites and Negroes--hypothetical data.

per cent of the whites and 15.9 per cent* of the blacks fall above the

*Percentage above 0.5 and 1.0 standard deviations.

critical point. Now, however, the ratio between the proportions of whites to blacks has been reduced from 3:1 to 2:1 (6.7 ÷ 2.3 compared to 30.8 ÷ 15.9). In Figure 8.1C the educational requirements have been increased to 16 years and the old ratio of 3:1 has been restored.

The most optimistic statement that can be made about such a sequence is that if the educational requirements were not raised for about 50 years, the new cohorts would eventually make up the total population, and instead of the proportion of whites being 3 times as high as the proportion of blacks (the 3:1 ratio of proportions) the 2 to 1 ratio would eventually apply to the whole population. If within 2 to 5 years the educational requirement was adjusted upward so that the ratio was again 3:1, there would be a measurable but slight effect on the distribution within the total population. This would be true for the same reason that a parallel shift in the ratio of black and white infant mortality rates for a similar period of time would not appreciably affect the proportion of whites to Negroes in the total population or differences in the age distribution of each population: there is too little change for too short a time in the social process for significant change in the social structures.

Finally, the most important thing to note about this type of change is that it is <u>not</u> the envisioned result of planned inflation. The whole purpose of such a program would be to increase the level of credentials of the underprivileged at a faster rate than those of the privileged, so that the gap between the two distribution curves would be narrowed and eventually equalized. In such a situation, the interaction between increases in attainment by the underprivileged and adjustment in the level of education required

for high status jobs is controlled by a different set of parameters and consequently produces significantly different results. We are now ready to explore these alternative possibilities.

The second ideal type of change would produce a faster rate of increase for the underprivileged, thereby changing the shape of the distribution rather than simply shifting it to a slightly higher point. A smoothed out and simplified version of the 1968 percentage frequency distribution of whites and Negroes, aged 25-29, by years of schooling, is shown by the solid lines in Figure 8.2.

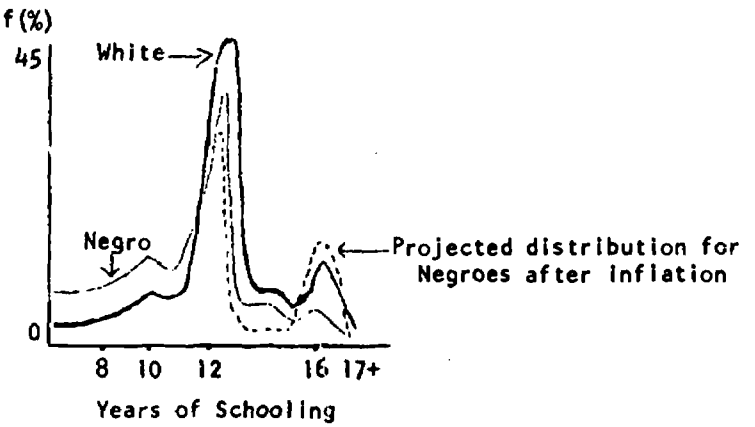


Figure 8.2.--Percentage frequency distribution for years of schooling for whites and Negroes, aged 25-29.

As conceptualized here, a program of higher educational inflation for Negroes would leave the two distributions just as they are below the twelfth year of schooling.* Its effect would be twofold: (i) to take some

*This is true by definition in the sense that lowering the academic requirements for Negroes at the higher educational level does not necessarily affect rates of attainments by Negroes at lower levels. It is possible,

however, that the increased ease with which blacks would receive higher education credentials might motivate higher proportions of those at the lower levels to stay in school and therefore indirectly affect the shape of the distribution at the lower level. This would, however, be an empirical, rather than a logical consequence.

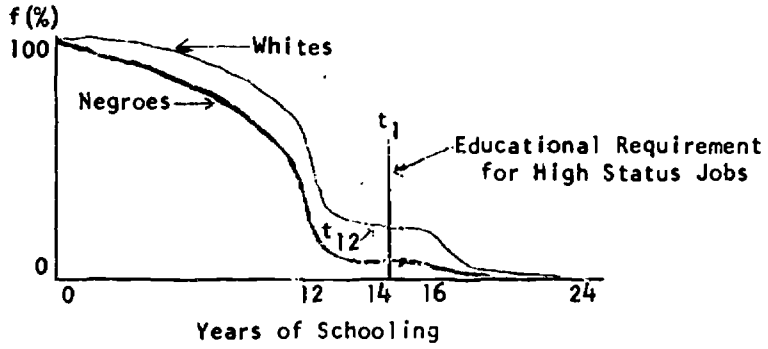
---

of the high school graduates and shift them into college, and (2) to cut the attrition rate of those who enter college, thereby reducing the percentage of Negroes with 13-15 years of schooling and increasing proportionately the number with 16 years, i.e., a college degree. The first would be accomplished by lowered entrance requirements and the second by a more or less automatic pass system. An approximation of the resulting change in the distribution is shown in Figure 8.2 by the broken line.

This form of presentation is useful in showing precisely what changes occur, but in certain respects it can be misinterpreted. For example, in the projected distribution shown by the broken line the impression may be gained that the percentage of Negroes graduating from college is higher than the percentage of whites. They are the same, however, because those with 17 or more years of schooling must be added to the number with 16 years--and the percentage of whites with 17 years or more of schooling is about 6 times that of Negroes.

For this reason, when we shift to a consideration of the changes employers might make in the educational requirements for jobs in response to these changes in the distribution of educational credentials, it is useful to plot the distribution in terms of accumulative percentages. This distribution is shown in Figure 8.3A. Any given point on the horizontal axis indicates the percentage of people that have a certain level of education or more.

8.3A



8.3B

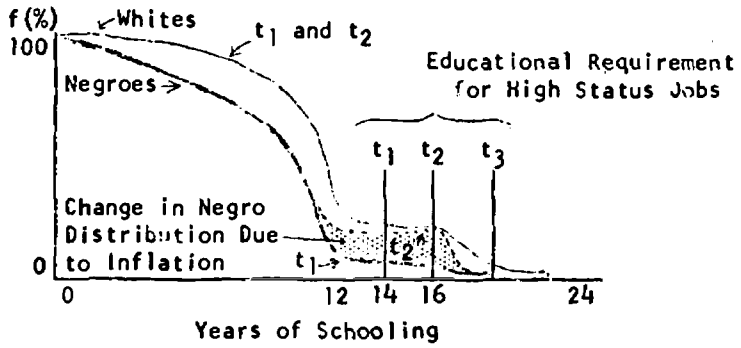


Figure 8.3.--Accumulative percentage distribution of years of schooling before and after inflation and showing shifts in the "education requirements for high status jobs."

In Figure 8.3B the relation of the two distributions is shown if the percentage of Negroes graduating from college were made equal with that of whites. If the educational requirement for high status jobs were left at 14 years of schooling (t_1), the percentage of Negroes qualifying for jobs would nearly equal that of whites and this ratio would eventually be characteristic of the entire population as the older cohorts were replaced. If the educational requirement was raised to 16 years (t_2) this would actually be of advantage to Negroes over the long run since at this level their achievement rates are equal to that of whites because of lower college

attrition rates. It would produce less short run effect, however, because the absolute number of Negroes qualifying for high status jobs would be smaller and consequently the old inequalities would be "diluted" at a slower rate. If the educational requirement were raised to 18 or so (t_3) the status of Negroes would improve relative to past conditions, but would never become equal to that of the whites. But, here, an important intervening factor comes into play. Raising the educational requirements higher quickly decreases the absolute number of individuals that are able to qualify for high status jobs. Therefore, it is unlikely that the requirements would be raised high enough to significantly reduce the gains made by Negroes.

All of this is predicated upon the assumption that whites will not increase their levels of certification proportionately by additional graduate work, or if they do an equal percentage of Negroes will also make such gains. To the extent that this assumption does not hold, the situation and outcomes will approach those discussed under the condition of generalized increases in attainment, the first ideal-type.

What would probably occur in reality is something between the first and the second ideal-types. To the extent that the second type is reached there will be reductions in the degree of inequality. However, complete equality will be obtained--even in the very long run--only if the conditions of the second ideal-type are closely approximated.

At this point several elaborations are required. The first one concerns an important intervening variable: the general state of the economy. Up to this point we have implicitly assumed that the general relation between supply and demand for labor has remained more or less stable. The focus of the analysis has been changes that would result from increasing the proportion of the labor supply that have college degrees. An obviously

critical mediating factor is demand for labor. If it is high the number of jobs available for college graduates might expand enough to absorb easily all the additional degrees created by planned educational inflation. Under such conditions the educational requirements would probably not be raised, and consequently inequality would be eliminated even faster. On the other hand when demand is slack employers usually attempt to upgrade the level of those they employ, and the prospects of absorbing the increased supply of degree holders would be reduced considerably.

The second specification involves the way the job market operates. Up to now the analysis implicitly assumed that there was a single job market with a single total demand for college graduates and a supply of homogeneously trained college graduates. In actuality there are, of course, a number of separate though partially overlapping job markets for a variety of separate but overlapping occupations. Consequently, the adjustment of educational requirements varies by specific occupation and would be dependent upon the extent to which the increased number of degrees were concentrated in specialties related to such occupations. This is a serious limitation to a program of degree inflation since most of the "easy degrees" would probably be in nontechnical "soft" majors: agriculture, business, education, social work, etc.*--where the demand is usually low relative to

*Many of the undergraduate social science and humanity majors would fall under this category, but even without inflation there are limited job opportunities for such majors without extensive graduate training.

"hard" technical majors.

Finally it is essential to remember that the above discussion assumes nondiscriminant response: that the holders of "easy degrees" will be treated approximately the same as the holders of "regular degrees." Now

we turn to the question of the conditions under which this assumption is likely to be approximated, and the probable consequences if it is not.

(3) Discriminant response

(a) Its results and determining conditions.--If employers clearly distinguished between "easy degrees" and "regular degrees"--attributing little status to the former--then obviously very little if anything will have been gained by a program of planned inflation even of the selective type. On the other hand it is by no means necessary that the holders of easy degrees be treated like honor graduates from Ivy League schools. There are currently great variations in the amount of status accorded to different degrees--both in terms of the subject of specialization, but especially in terms of the prestige of the school. The important thing, for our concerns, is that the status differences are informal, continuous, and ambiguous rather than discrete and explicit. Consequently, those from lower quality schools are not treated in a completely different manner from others. (This is not to deny that they have a lower probability of obtaining a job of the same status as graduates from a prestige school.) In contrast, there is a fairly distinct status schism between degree holders and nondegree holders. Some nondegree holders may obtain high status jobs but they usually do so through different channels than those used by degree holders.

Therefore, if educational inflation is to have any effect on reducing inequality it is essential that the holders of easy degrees be assimilated into this diffuse system rather than being clearly differentiated. The rest of this chapter will focus on the conditions which are likely to determine the degree of differentiation.

(b) The degree of inflation and generic visibility.--A key determinant of whether "easy degrees" are treated differently is how socially visible they are as a generic category--that is, the extent to which employers are aware that programs with easier academic requirements are in operation and might be a significant source of some of their potential employees. The latter requirement is very important. Employers will be unlikely to re-examine their hiring criteria if they read in the newspaper that "some college back east" is lowering admission standards for 500 black students. It is quite another thing if he is aware that 20 per cent of the students graduating from the colleges at which he generally recruits were admitted on this basis.

One of the factors that would influence such visibility is the proportion that such degree holders would constitute of the total: how big an influx would be possible without drawing the attention and raising concern among employers? Here, data on past increases are relevant. From 1960 to 1968 the number of degrees granted increased by 72 per cent, or an average annual increase of 9 per cent. In the most recent years for which data are available the annual increase was 17 per cent. Therefore, we can reasonably expect that a combined annual increase of 10 to 15 per cent for both natural expansion and a program of inflation would not in itself cause employers to re-examine their basic assumptions about educational criteria. This presupposes that the demand for college graduates continues to grow at about the same rate as in the past. A significant decline in demand probably always triggers more rigorous screening.

The other factor that is likely to be a critical determinant of generic visibility is how well the holders of easy degrees perform after

they are employed. Consequently we now turn to a consideration of the relationship between education and job performance.

(c) Educational attainment and job performance.--The reason we are examining this relationship needs to be kept clearly in mind. If job performance is intricately related to "real" educational attainment, then people who have been granted "easy degrees" will probably not be able to perform higher status jobs adequately. If the holders of "easy degrees" consistently perform poorly it seems likely that employers would soon use additional criteria to screen these individuals. On the other hand, if current educational certification procedures do not accurately predict job performance then many of those who received "easy degrees" would be able to acquire high status jobs and to perform them adequately.

Data relevant to this question are indeed scarce. Ivar Berg (1968: 124-134) has recently studied this issue. A surprising finding in itself is that while nearly all of the employers he studied used education as a criterion in selecting employees, apparently none of them had attempted to correlate their data on job performance with data on educational background. He does not state the exact number of employers studied but notes that one survey--and this was by no means the only source of data--included those from the rubber, steel, packaging, textile, and hospital supply industries.

More important, he found little correlation between education and a variety of job performance and morale measures. In some cases he found a negative correlation. His description of the data is very abbreviated, but only one of the cases seems to involve significant numbers of college graduates. This was the case of a major weekly news magazine that hired both high school and college educated girls as secretaries. It was found that there was little difference in the number of merit pay raises awarded

each category. The personnel administrator argued that college girls could be promoted to editorial jobs in the future. However, the data available indicated that the college graduates who held editorial jobs had been granted those positions directly and had not been promoted from the secretarial ranks.

Some of the findings of Jaffe and Adams (1965: 23-27) also suggest that education and job performance are not as closely related as generally assumed. They used 1950 and 1960 census data and the findings of one of their earlier studies to estimate the relationship between increases in educational attainment and increases in industrial productivity. They "cross-tabulated number of years of schooling completed by industries, classified by changes in output per worker, and by changes in employment between 1950 and 1960--for white collar and manual workers separately, and for men and women" (Jaffe and Adams, 1965: 24). They concluded that:

> Comparison of educational levels of employed persons in 1950 and 1960 reveals that there is little, if any, relationship between changes in output per worker and changes in educational levels. This generalization holds true for men and women, and for clerical and sales workers as well as manual workers. (Jaffe and Adams, 1965: 28.)

It must be stressed that these studies by no means definitively prove that education has no effect on job performance, but certainly call into question the assumption that it is the primary cause of increasing productivity. Consequently this suggests that the use of educational attainment as the primary employment screening criterion is at least questionable. Moreover, individuals with "easy degrees" may be able to function quite adequately in at least some sections of the current occupational structure.

(d) Administrative and political factors and individual visibility.--In addition to the question of generic visibility (employers'

awareness that some students receive "easy degrees") there is the closely related problem of individual visibility--whether employers can easily identify the specific individuals involved. A very important determinant of this will be the extent to which the academic programs for "special students" are administratively segregated from regular programs.

We hypothesize that the higher the administrative level on which differentiation occurs, the greater the visibility. The most obvious example is that the holders of easy degrees will be highly visible if they all receive their degrees from a few schools especially established to give out such degrees. But there are more subtle variations of this proposition. For example, candidates for special degrees will be more visible if schools and degree programs are established within colleges and universities rather than admitting such students into regular programs and then grading them more leniently.*

*We are not necessarily arguing that differentiated programs should never be established, but only suggesting that one of the consequences of doing so will be to increase the ability of employers to distinguish the participants in such programs.

A variation on this theme is the question of race and ethnic background. Obviously if all of the recipients of easy degrees are black or Puerto Rican, visibility will be high. But it is also true that black or ethnic studies programs restricted to members of one group will have effects on both the educational experience and the visibility of those who participate in such programs when they enter the job market.

Another important determinant of whether employers would discriminate between easy and regular degrees is the political context. For example, the city government of the District of Columbia would probably be under

tremendous pressure to treat graduates from special programs at Federal City College the same as other degree holders. The same would not be true for a small company located in the South. The pressures on national companies with large government contracts or a substantial orientation to urban markets would probably fall in between the two extremes. The same political pressures which caused educational standards to be bent would probably be brought to bear on the employment criterion.

What a program of planned degree inflation does in part is allow the privileged to grant at least some of the demands of the underprivileged for a larger share of the power and wealth without completely abandoning universalistic criteria. This is accomplished by using the manipulation of status symbols, i.e., academic credentials, to quickly remove some of the consequences of past injustices. The implicit assumption which legitimizes such symbol manipulation is that the new distribution of symbols will be given greater authenticity as the academic quality of the special programs is improved in subsequent years.

Finally, it seems worth noting that a great deal of credential inflation is already taking place and will continue in the future. While there are no reliable data, the vast expansion of the higher education system in recent years has almost certainly increased the variations in quality. This is not to say that the best, or even most, schools have lowered academic standards, though they probably have in some cases. However, to assume that the multitude of institutions which have been created or formally upgraded (e.g., from a teachers college to a state university) are academically on a par with good quality, established institutions would seem extremely unreasonable. Yet these institutions regularly award academic

credentials that are formally on a par with those of other institutions. Given the general structure of U. S. society, the continuation of this process is almost inevitable. Consequently, the issue of credential inflation is not whether there will be any--there will. Rather the questions are: (1) whether the process will be deliberately accentuated through planning, and (2) whether it will be selective, i.e., benefitting primarily those from underprivileged backgrounds. On the basis of what has necessarily been an exploratory analysis, we suggest that planned selective educational inflation might constitute an additional tool with which to increase equality of opportunity and reduce social and racial inequality.

9. Status Inflation and Equality

a. Dangers and limits of planned inflation.-- The previous chapter has suggested that it may be possible to reduce inequality through what we have called planned educational inflation. While such a program might produce some relatively immediate gains it is necessarily a stop-gap measure which involves definte dangers to the educational system. Any process which relies on counterfeiting or at least "stretching" social symbols, runs the risk of undercutting the authenticity of those symbols. Many might think that the problem of racial inequality is so acute that the risk is worth running to make relatively rapid short term gains. It is clear, however, if such a program was successful at all, that the amount of inflation would have to be carefully controlled.

To return to the economic analogy, some governments in developing countries have found controlled amounts of planned inflation a useful tool in the developmental process. Far more have found that they have loosed a tiger that they can neither control nor turn loose -- with the result that their currency becomes extremely unstable or even worthless.

Planned educational inflation would be unlikely to turn into runaway inflation, but would to some extent cause a general devaluation of educational credentials. That is, even if the new "easy degrees" were accepted as more or less equal to other degrees, there is a likelihood that all degrees would have less value because there would be more of them; more people would have the credentials of higher education. But this would be true whether the increased percentage

of the population with college degrees were the result of planned credential inflation or the result of more traditional forms of expansion. This rather obvious observation points to a second type or level of educational inflation.

b. Status inflation. -- The type of educational inflation which has been discussed up to this point has been roughly analogous to what the economist calls inflation: an increase in the supply of symbols (money or degrees) without a parallel real increase in what the symbols stand for (goods and services, or well educated men), and consequently a devaluation of the symbols. There is a second level of educational inflation, however, analogous to a decrease in the social status derived from any given absolute income because of the general increase in incomes. For example, in 1900 a man who made $6000 was much richer, i.e., nearer the top of the income distribution, than the man who makes $6000 in 1970--even when the value of the dollar is held constant. The same phenomenon obviously occurs with respect to education: any given level of educational certification has relatively less value in the job market because of the general increase in educational attainment. This is true even if the quality of education is held constant; it is not that college graduates are not as intellectually competent as they used to be--they are probably more so--but that they are both absolutely and proportionately much more common.*

*To some extent such a devaluation of degrees can be offset by an increase in the demand for degree holders. However, increased demand primarily effects the absolute level of reward that degree holders receive, e.g., salary level, not their relative status. For example, engineers are in greater demand than twenty-five years ago

The economist does not refer to this type of phenomenon as inflation because he focuses on the first level (the amount of real goods and services that a given amount of constant dollars will purchase) rather than on the second level (the amount of social status it will "buy"). However, variations in the amount of social status provided by a given level of education, occupation or income are of considerable interest to sociologists. It seems appropriate to label decreases in the status value of given levels of education, occupation, income, etc. as "status inflation."

c. Status inflation and equality of opportunity. -- Now let us return to a theme that was begun in Part I: the failure of expanded public education to have a significant impact on net or circulation mobility. One way of interpreting what has occurred is in terms of the concept of status inflation.*

and receive high absolute rewards, but it is not clear that they have a higher relative status than previously. In some cases certain types of talents are more highly valued relative to other social characteristics than previously, e.g., academicians are much more common as presidential advisers than in earlier periods. But for the most part it is not so much a matter that the job categories which require college degrees have increased in relative status, but rather that the number and size of these categories have increased. Consequently the relative value of a degree is generally less than in previous periods when there were fewer such degrees.

*What follows is an "interpretation" of some observed empirical relationships, and attempts to interpret that data by making some additional empirical assumptions and relating them to the observed findings. Such interpretation is by its very nature speculative, and requires further empirical validation.

What seems to have happened is that while nearly everyone has moved "up" in the stratification structure in absolute levels --they have more"real" education and income, more people are professional and white collar workers, etc.--there has been relatively little change in the probabilities of those who start out on the bottom getting to the top (or vice versa). As public education has raised the educational level of the lower classes, the upper classes have invested additional private resources to see that their children maintain a competitive advantage in the stratification structure in general and the occupational structure in particular. One of the results has been continuing status inflation with respect to education.

Such an interpretation involves an assumption about the motivations which lead individuals to seek higher levels of education. It assumes that the primary motivation for most people is to increase their relative social status, both through the status education itself brings and through a better competitive position in the job market. (Women are probably motivated primarily by the first factor and men by the second.) Obviously, motivations about such matters are complex and in individual cases such generalities will be incorrect. Nonetheless, it seems by far the most reasonable simplifying theoretical assumption.

If this interpretation (and related motivational assumption) is correct there is no reason to think that expansion of the higher education system through public subsidies will do much more (with respect to class equality) than to set off another round of status

inflation. Moreover, it could accentuate the present trend toward the stratification of educational institutions along the lines of two year colleges, four year colleges and universities, and produce distinct tracking channels similar to those that occur in many urban secondary school systems.

The concept of status inflation is also useful in interpreting processes within the occupational structure. The idea of equality of opportunity has been used more or less synonymously with the concept of circulation mobility, and we have concluded that the rate of this type of mobility has been affected very little by the expansion of public education. The United States has, however, had very high rates of upward structural occupational mobility. That is, a considerable majority of the people have higher status jobs than their fathers, e.g., professional and white collar workers constitute a higher proportion of the work force than at earlier periods. While this phenomenon should not be confused with equality of opportunity, there has probably been widespread consensus that this upgrading of the occupational structure is a good thing in itself. But assuming for the minute that expansion of the higher education system would contribute to further upward structural mobility, why is this necessarily desirable? It is highly likely that this produces another form of status inflation: being a white collar worker or even a professional is probably not as prestigious as in earlier periods when these categories constituted a smaller percentage of the work force. More than likely many men do derive a sense of satisfaction from being "better off" occupationally and

financially than their fathers were, but it is also possible that at least on a subconscious level many feel cheated because despite their lifetime of striving to achieve they have made little or no gain relative to others. While they are more affluent, that they are more content, happy or satisfied than their parents were is by no means clear. If rates of mental and anxiety-related diseases are any measure, quite the opposite is probably the case.

Moreover, there is, according to Porter (1968), evidence to indicate a growing disenchantment with upward mobility. He argues that because of this lack of motivation, industrial societies in general will find it more and more difficult to produce the highly-trained manpower that their economies will increasingly require. He believes there will be more opportunities available than "opportunity minded" individuals motivated and technically prepared for the new high level jobs available. His central thesis may be debatable at some points,* but of primary interest to our concerns is his suggestion that this manpower shortage will develop not primarily because of lack of opportunity, but because of lack of interest and motivation in upward mobility. The research cited in Chapter Three indicating that motivational (and academic) factors rather than financial barriers are the primary reason for reduced rates of college enrollment for the lower class, is a specific example

*There is some recent evidence that he may over-estimate the future manpower needs--at least in the United States (Folger, et al., forthcoming). Moreover, his analysis involved the assumption that the educational system and related institutions should be shaped to fit the needs and demands of the economy. It is possible, however, to shape the economy to meet the needs of non-economic activities such as education and leisure.

of Porter's generalization. If Porter's analysis is correct then it would seem to follow that simply expanding opportunities for higher education will not even maintain high levels of structural mobility. Admittedly, both Porter's analysis and the implications we have suggested for the relationship between higher education and structural mobility are quite speculative.

d. Other consequences of status inflation -- The concept is also useful in placing in context a phenomenon recently identified and labelled by Bennett Berger (1969) as the "juvenilization" of youth.* By this he means the postponement of full adulthood until individuals are well into their twenties or thirties. The paradox is that at the same time youths are increasingly under pressure to make an early decision about their future occupation. One must take the right courses in high school in order to get into the right colleges in order to be able to enter the graduate school which will prepare him for a particular profession. The combination of these tendencies produces a subculture of alienated students, largely isolated from the mainstream of the society, and with tendencies toward extreme moralistic idealism. Berger expects the expansion of this system to produce profound changes in the higher education system or to result in "blood on the quad."

There is at least one other consequence of educational status inflation. The societal cost for education grows at an increasing rate, since the cost per student becomes greater at each higher level

*The process which Berger describes may be one of the factors that has contributed to the lack of interest in upward mobility described by Porter. Given a basic level of affluence, if upward mobility requires that one be "juvenilized," who needs it.

of education. For example, in 1965-66 current per pupil expenditure for public elementary and secondary schools averaged $538 (Office of Education, 1969b: Table 73, 61), while average per student current expenditures for higher education were approximately $2,150.* Moreover, the cost per student for higher education is rising rapidly. Bowen (1968:38) found that expenditures per student at three major private universities increased 125 percent between 1960 and 1966. Not only has the absolute level of expenditures on education increased, but at a much faster rate than other expenditures. In 1945 the U.S. spent two percent of its GNP on education.** By 1968 the figure had more than tripled to about seven percent (Office of Education, 1969b). Of course, increasing costs are certainly not sufficient reason for holding back the expansion of higher education, but is ample reason to raise questions about whether the cost is matched by comparable benefits.

e. Comparative perspectives -- In addition to the U.S.'s experience with the expansion of the secondary level, the experience of Puerto Rico also supports this interpretation. Leila Sussmann (1968:321ff) has studied the application of the U.S. model in Puerto Rico and finds that:

*Estimated from expenditure data in American Council on Education, 1968b:8106, and enrollment data in U.S. Office of Education, 1969b:Table 3,3. Cost figures for higher education are probably too low because enrollment figures used in making the estimate included part time students.

**The 1945 figure is admittedly unusually low due to World War II, and before that the Depression. However, even if we go back to 1929 the figure was only about four percent.

> Puerto Rico's postwar plunge into mass secondary and higher education, in imitation of the U.S. pattern, has had several revealing consequences. First, the rapid expansion with limited resources led to a severe decline in the quality of the public high schools and the State University of Puerto Rico. Second, and surprisingly, the rate of attendance at twelfth grade for urban youths from upper, middle, and working classes was very nearly equal by 1960, even though only a third of the age group was enrolled at the secondary level. The children of the upper social strata had nothing like the disproportionate number of places in secondary education that they had in Europe and the U.S. at an equivalent stage of growth in secondary enrollments. Third, this democratization of access was accomplished by increasing segregation of the socially advantaged and disadvantaged into the private and public sectors respectively, and by a growing divergence of academic achievement between the two sectors. There is evidence that segregation is extending into higher education.
>
> Thus, despite equalization of access to high school, there is very unequal access to high schools of superior quality. Class differentials in educational achievement remain large and significant. The Puerto Rican case also shows that self-segregation into separate schools of the socially and educationally advantaged, for the purpose of maintaining their advantage, has no necessary connection with race. In the Commonwealth, it is a class phenomena, not a racial one.

If the Puerto Rican experience suggests that rapid expansion of the public education system is not a sufficient condition for equality of opportunity, data from Australia suggests that the highest opportunity rates (circulation mobility) are not necessarily associated with the most developed public education systems. In a recent study, Broom and Jones (1969:333) have collected intergenerational mobility data from Australia and compared it with data collected by Blau and Duncan (1967) for the U.S. They found that while the U.S. has a higher rate of total mobility, most of it is due to structural mobility. When changes in the occupational structure are controlled,

Australia clearly has a higher rate of circulation mobility. Forty-two percent of the Australian population was mobile-- one fourth of this was due to structural mobility and three fourths due to circulation mobility. For the U.S. the figure was 49 percent for total mobility, with about half due to structural changes and half due to circulation. Broom and Jones conclude that on the basis of the rate of circulation mobility "Australia emerges as the most egalitarian." Moreover it appears that Australia has this higher equality of opportunity even though it has tended to have a less extensive public education system and lower educational attainment rates than the U.S.* Also about one fifth of the Australian pupils attend private schools compared to about one seventh for the U.S.

We certainly do not want to overemphasize the significance of these two inter-society comparisons. At best they are suggestive. Neither do we want to claim too much for the concept of status inflation. It is certainly not intended as a definitive interpretation, much less a full explanation. Yet the interpretation does seem useful in suggesting why past increases in public support for education have apparently had little effect on circulation mobility.

---

*The competitive data here is very crude, but apparently for some time Australia has continued to have a lower percentage of its school age population enrolled in school. For example, the percentage of the 5-19 year olds enrolled in primary and secondary school in Australia was 80 percent in 1961 and 76 percent in 1966. The comparable U.S. figures for 1960 and 1965 are 84 and 86 percent. These figures are based on calculations derived from Commonwealth of Adstralia, 1959, 1964, and 1968; U.S. Office of Education, 1969b; and U.S. Bureau of the Census, 1968a.

f. Mobility and equality -- Now let us raise an even more basic question than whether the expansion of education contributes to mobility: how important is it to increase rates of social mobility? In large measure this is a normative question, but the answer is usually formulated in reference to other empirical facts or assumptions.

One obvious point of reference is the society's own past. Supposedly, increasing mobility would be viewed as relatively urgent if opportunity were defintely declining and the stratification system becoming more rigid. As indicated earlier the Blau and Duncan data indicated that this is not the case. A second point of reference is the society's degree of openness relative to other societies. We have seen that Australia appears to have higher rates of circulation mobility that the U.S. Australia seems to be an exception, however. When Blau and Duncan compared their data with that available for other developed nations they found that not only does the U.S. have a higher overall rate of mobility, but that the rate from the bottom (working class) into the elite is higher than for any other country (1967:434).* From some value perspectives such information is small consolation, but it does at least raise the question of whether increasing movement from the bottom to the top is our most urgent need.

At the end of their review of higher education, Jencks and Reisman (1968) raise the question of whether we should continue to strive to maintain or increase the rates of social mobility rather than strive for more equality. In the first instance the primary goal would be to increase equality of opportunity so that

*The data from Australia was not available when their analysis was made.

all would have the same life chances even though there might be great differences in the rewards achieved. In the second case the main effort would be to reduce the differences between those on the top and those on the bottom. Jencks and Reisman discuss the issue primarily in terms of value preferences for one type of society compared to the other, but their discussion is based on value premises that are widely shared. Therefore their conclusions that we should consider deemphasizing mobility is certainly relevant to the policy question toward which our analysis is aimed.

Similarly Blau and Duncan (1967) discuss Carlson's hypothesis that social mobility may in fact tend to be a cause of inequality and a means of conserving one particular form of the status quo. They conclude: "High rates of occupational mobility, therefore, do not assure unquestionable fairness in the allocation of rewards, may reinforce the unequal distribution of privileges, and may protect the system of social stratification against change" (Blau and Duncan, 1967:440).

Moreover, there is new evidence that differences in performance and achievement of different SES groups may be related to genetically inherited characteristics more than social scientists have tended to assume (Eckland, 1967). To the extent that this is so then "achievement" characteristics are actually "ascriptive" characteristics, and the usual justification for differential rewards become more difficult to defend.

Finally, it is possible that the attempts to bring the performance of lower SES individuals up to higher standards so that they "earn" adequate rewards may have the cart before the horse. Two recent articles studying the correlates of school enrollments and performance for elementary and secondary students suggest that this may be the case. Conlisk (1969) concludes that most of the correlates of performances and attendance are outside the control of either the children or policy makers.

> The major exception to this would seem to be the parental income variable. The regression predicts that the increase in parent's income will result in significant increases in their children's school enrollment and performance. This suggests a mechanism by which income supplements to poor parents may have desireable second generation effects on poverty (Conlisk, 1969:157).

Masters (1969:159) in a similar study comes to the same, though slightly more pessimistic conclusion. "While the short run effects are likely to be quite small, the long run effects may be important especially for the Negro retardation rate." The relevance of these studies for higher education is admittedly unclear, but they do suggest the feasibility of reconsidering the time order relationship between equality, equality of opportunity and achievement. While it may be logically possible to increase equality of opportunity and equality through first stimulating upward mobility, empirically such efforts have been rather ineffectual. It may be that we need to approach the problem from the opposite direction. It took us many years to learn that economic depressions require government spending, not economy. We may be in a similar process of learning that greater equality must precede rather than follow meaningful equality of opportunity.

BIBLIOGRAPHY: PART I

(Cited References)

Adams, Bert N., and Mile T. Meidan.
1968 "Economics, family structure and college attendance." American Journal of Sociology 74 (November):230-239.

American Council on Education.
1968a National Norms of Entering College Freshmen--Fall 1968. Washington, D. C.: ACE Research Reports 3, No. 1.

1968b A Factbook on Higher Education. Washington, D. C.: Second Issue, 1968.

1969 "The black student in American colleges." ACE Research Reports 4, No. 2.

Barber, Bernard.
1957 Social Stratification, a Comparative Analysis of Structure and Process. New York: Harcourt Brace and Company.

Berdie, Ralph F.
1965 Decisions for Tomorrow, Plans of High School Seniors. Minneapolis: University of Minnesota Press.

Berge, Ivar.
1968 "Education and work." Chapter 5, Manpower Strategies for the Metropolis. Eli Ginzberg and Human Resources Staff, ed.s. New York: Columbia University Press.

Berger, Bennett M.
1969 "The new stage of American man--almost endless adolescence." The New York Times Magazine (November 2):32f.

Blau, Peter M., and Otis Dudley Duncan.
1967 The American Occupational Structure. New York: John Wiley and Sons, Incorporated.

Boyle, Richard P.
1966 "The effect of high school on students' aspirations." American Journal of Sociology 71 (May):628-639.

Bowden, Howard R.
1968 The Finance of Higher Education. Berkeley: Carnegie Commission on Higher Education.

Broom, Leonard, and F. Lancaster Jones.
1969 "Father-to-son mobility: Australia in comparative perspective." The American Journal of Sociology 74, No. 4 (January):333-342.

Burgdorf, Kenneth.
1969 Outstanding Negro High School Students: A One Year Follow-up. National Merit Scholarships Corporation: Research Reports 5, No. 4.

Carnegie Commission on Higher Education.
1968 Quality and Equality: New Levels of Federal Responsibility for Higher Education. New York: McGraw Hill Publishing Company.

The Chronicle of Higher Education.
1969 "Education gain by poor called 'revolutionary.'" Robert L. Jacobson's report of research by Joseph Froomkin. March 10:1f.

Cicourel, Aaron V., and John I. Kitsuse.
1963 The Educational Decision-Makers. New York: Bobbs-Merrill Publishing Company.

Clark, Burton.
1962 Educating the Expert Society. San Francisco: Chandler Publishing Company.

Clark, Kenneth B., and Lawrence Plotkin.
1963 The Negro Student at Integrated Colleges. National Scholarship Service and Fund for Negro Students.

College Entrance Examination Board.
1967 The College Handbook, 1967-69. New York: College Entrance Examination Board.

Commonwealth Bureau of Census and Statistics.
1959 Yearbook of the Commonwealth of Australia, 45. Australia: Canberra.

1964 Yearbook of the Commonwealth of Australia, 50. Australia: Canberra.

1968 Yearbook of the Commonwealth of Australia, 54. Australia: Canberra.

Conlisk, John.
1969 "Determinants of school enrollment and school performance." The Journal of Human Resources 4 (Spring):140-157.

Crane, Diane.
1965 "Scientists at major and minor universities." American Sociological Review 30, No. 5 (October):699-714.

1969 "Social class origin and academic success: the influences of two stratification systems on academic careers." Sociology of Education 42:1-17.

Davis, James.
1964a Career Decisions. Chicago: Aldine Publishing Company.

1964b Great Aspirations. Chicago: Aldine Publishing Company.

1966 "The campus as a frog pond: an application of the theory of relative deprivation to career decisions of college men." American Journal of Sociology 72 (July):17-31.

Doerman, Humphrey.
1968 Cross Currents in College Admissions. New York: Teachers College Press.

Duncan, Beverly.
1967 "Education and social background." American Journal of Sociology 72 (January):363-372.

Duncan, Otis Dudley.
1969 "Inheritance of poverty or inheritance of race?" Understanding Poverty. Daniel P. Moynihan (ed.). New York: Basic Books.

Eckland, Bruce.
1964 "Social class and college graduation: some misconceptions corrected." American Journal of Sociology 72 (July):36-50.

1965 "Ability, education, and occupational mobility." American Sociological Review 30, No. 5 (October):735-746.

1967 "Genetics and sociology: a reconsideration." American Sociological Review 32, No. 2 (April):173-194.

Elder, Glen H., Jr.
1965 "Family structure and educational attainment." American Sociological Review 30, No. 1 (February):81-99.

Ellis, Robert, and W. Clayton Lane.
1967 "Social mobility and social isolation: a test of Sorokin's dissociative hypothesis." American Sociological Review 32 (April):237-252.

Etzioni, Amitai.
1968 The Active Society, a Theory of Societal and Political Processes. London: Collier-MacMillan, Limited, and New York: The Free Press.

Feldman, Paul, and Stephen A. Hoenack.
1969a "Preliminary estimates of demand for higher education." Appendix B, Toward a Long-Range Plan for Federal Financial Support for Higher Education. Washington, D. C.: U. S. Department of Health, Education and Welfare.

1969b "Private demand for higher education in the United States." The Economics and Financing of Higher Education in the United States. Washington, D. C.: U. S. Government Printing Office.

Folger, John, Helen Astin, and Alan Bayer.
1970 Human Resources and Higher Education. New York: Russell Sage Foundation.

Halsey, A. H., Jean Floud, and C. Arnold Anderson.
1961 Education, Economy and Society. New York: The Free Press of Glencoe, Incorporated.

Hargens, Lowell L.
1969 "Patterns of mobility of new PhD's among American academic institutions." Sociology of Education 42 (Winter):18-37.

Hargens, Lowell L., and Warren O. Hagstrom.
1967 "Sponsored and contest mobility of American academic scientists." Sociology of Education 40 (Winter):24f.

Hind, Robert R., and Timothy E. Wirth.
1969 "The effect of university experience on occupational choice among undergraduates." Sociology of Education 42 (Winter):50-70.

Hunter, J. Scott.
1967 The Academic and Financial Status of Graduate Students, Spring, 1965. Washington, D. C.: U. S. Government Printing Office.

Iffert, Robert E., and Betty S. Clarke.
1965 College Applicants. Entrants, Dropouts. Office of Education--54034. Bulletin 1965, No. 29. Washington, D. C.: U. S. Government Printing Office.

Jaffe, A. J., and Walter Adams.
1965 Social and Economic Characteristics of the College Population and Others with College Training. New York: Bureau of Applied Social Research, Columbia University, mimeographed.

1969 American Higher Education in Transition. Unpublished Summary Report for U. S. Department of Health, Education and Welfare, Contract No. OE 6-10-039. New York: Bureau of Applied Social Research, Columbia University.

Jencks, Christopher, and David Riesman.
1968 The Academic Revolution. Garden City, New York: Doubleday and Company.

Kadel, Denise B., and Gerald S. Lesser.
1969 "Parental and peer influences on educational plans of adolescents." American Sociological Review 34 (April):213-223.

Kimball, Roland B.
1968 "Do scholarships help?" Personnel and Guidance Journal 46 (April):782-785.

McDill, Edward L., and James H. S. Coleman.
1963 "High school social status, college plans and academic achievement: a panel analysis." American Sociological Review 28 (December):905-918.

McDill, Edward L., Leo C. Ripley, and Edmund D. Meyers.
1969 "Educational climates of high schools: their effects and sources." American Journal of Sociology 74 (May):567-586.

Masters, Stanley H.
1969 "The effect of family income on children's education: some findings on inequality of opportunity." The Journal of Human Resources 4 (Spring):158-175.

Medalia, Nahum Z.
1968 "Choice of college major by contest mobility." Sociology of Education 41 (Summer):282-290.

Miller, Herman P.
1966 Income Distribution in the United States. Washington, D. C.: U. S. Government Printing Office.

Nash, George.
Forth- "Student financial aid--college and university." Encyclopedia
coming of Educational Research, Fourth Edition. New York: MacMillan Publishing Company.

Nordheimer, Jon
1969 "Recruitment of Negro graduates by business sets record in small colleges in the south." The New York Times, Monday, June 15:51.

Pearson, Drew, and Jack Anderson.
1969 "The Washington Merry-Go-Round," The Washington Post, June 21.

Project TALENT.
1966 One Year Follow-Up Study. Cooperative Research Project No. 2333. Pittsburgh: School of Education, University of Pittsburgh.

Reissman, Leonard.
1959 Class in American Society. New York: Free Press.

Ribicoff, Abraham, and Winston L. Prouty.
1969 Senate bill 835, First Session, 90th Congress.

Samuelson, Paul A.
1967 Economics, an Introductory Analysis, Seventh Edition. New York: McGraw-Hill Book Company.

Schachter, Stanley.
1963 "Birth order, eminence, and higher education." American Sociological Review 28 (October):757-768.

Schoenfeldt, Lyle F.
1968 "Education after high school." Sociology of Education 41 (Fall): 358.

Sexton, Patricia.
1961 Education and Income: Inequality of Opportunity in our Public Schools. New York: Viking Publishing Company.

Sewell, William H.
1964 "Community of residence and college plans." American Sociological Review 29 (February):24-38.

Sewell, William H., and J. Michael Armer.
1966 "Neighborhood context and college plans." American Sociological Review 31, No. 2 (April):159-168.

Sewell, William H., and Vimal P. Shah.
1967 "Socioeconomic status, intelligence, and the attainment of higher education." Sociology of Education 40 (Winter):1-23.

1968a "Society, class, parental encouragement and educational aspirations." American Journal of Sociology 73 (March):559-572.

1968b "Parent's education and children's educational aspirations and achievements." American Sociological Review 33 (April):191-202.

Sharp, Laure.
1963 Two Years After the College Degree. National Science Foundation 63-26. Washington, D. C.: U. S. Government Printing Office.

Sharp, Laure, et al.
1969 Five Years After the College Degree. Washington, D. C.: Bureau of Social Science Research.

Siegal, Paul M.
1965 "On the cost of being Negro." Sociological Inquiry 35 (Winter): 41-57.

Spady, William G.
1967 "Educational mobility and access: growth and paradoxes." American Journal of Sociology 73:273-286.

Spaeth, Joe L.
1968 "The allocation of college graduates to graduate and professional schools." Sociology of Education 41 (Fall):342-349.

Sussmann, Lelia.
1968 "Democratization and class segregation in Puerto Rican schooling: U. S. model transplanted." Sociology of Education (Fall):321-341.

Tucker, Francis.
1969 "White-nonwhite age differences and the accurate assessment of the cost of being Negro." Social Forces 47:343-345.

U. S. Bureau of the Census.
1963a U. S. Census of the Population: 1960. Subject Reports, Educational Attainment. Washington, D. C.: U. S. Government Printing Office.

1963b "Income of families and persons in the United States." Current Population Report P-60, No. 39 (February 28).

1964 "Incomes of families and persons in the United States." Current Population Reports P-60, No. 42 (September 29).

1965 "Educational attainment: March 1964." Current Population Reports P-20, No. 138.

1966 "Educational attainment: March 1966 and 1965." Current Population Reports P-20, No. 158 (December 19).

1967a "Income in 1965 of families and persons in the United States." Current Population Reports P-60, No. 51 (January 12).

1967b "Income in 1966 of families and persons in the United States." Current Population Reports P-60, No. 53 (December 28).

1967c "School enrollments: 1965." Current Population Reports P-20, No. 161 (February 28).

1967d "School enrollments: 1966 (advanced data)." Current Population Reports P-20, No. 162 (March 24).

1968a Statistical Abstract of the United States: 1968. Washington, D. C.: U. S. Government Printing Office.

1968b "Household income in 1967 by selected characteristics of the head." Current Population Reports, P-60, No. 57 (December 17).

1968c "Educational attainment: March 1967." Current Population Reports P-20, No. 169 (February 9).

1969a "Income in 1967 of families in the United States." Current Population Reports P-60, No. 59 (April 18).

1969b "School enrollment: October, 1968 and 1967." Current Population Reports P-20, No. 190, no date.

1969c "Factors related to high school graduation and college attendance: 1967." Current Population Reports P-20, No. 185 (July 11).

1969d "Characteristics of students and their colleges." Current Population Reports P-20, No. 183 (May 22).

1969e "Men with college degrees: March 1967." Current Population Reports P-20, No. 180 (March 24).

1969f "Educational attainment: March 1968." Current Population Reports P-20, No. 182 (April 28).

1969g "Selected characteristics of persons and families: March 1969." Current Population Reports P-20, No. 189 (August 18).

1969h Statistical Abstract of the United States: 1969. Washington, D. C.: U. S. Government Printing Office.

1969i "Income in 1967 of persons in the United States." Current Population Reports P-60, No. 60 (June 30).

U. S. Bureau of Labor Statistics.
1969 "The market for this year's college graduates." Occupational Outlook Quarterly 13, No. 2 (Summer):1-3.

U. S. Department of Health, Education and Welfare.
1969 Toward a Long-Range Plan for Federal Financial Support for Higher Education. Mimeographed. Printed edition, Washington, D. C.: U. S. Government Printing Office.

U. S. Department of Labor.
1963 "Educational attainment of workers, March 1962." Special Labor Force Report 30.

1966 "Educational attainment of workers, March 1965." Special Labor Force Report 65.

1967 "Educational attainment of workers, March 1966." Special Labor Force Report 83.

1968 "Educational attainment of workers, March 1967." Special Labor Force Report 92.

1969a "The Negro job situation: has it improved?" Special Labor Force Report 102.

1969b "Educational attainment of workers, March 1968." Special Labor Force Report 103.

U. S. Office of Education.
1968 Students and Buildings. Washington, D. C.: U. S. Government Printing Office.

1969a Projections of Educational Statistics to 1977-78. Washington, D. C.: U. S. Government Printing Office.

1969b Digest of Educational Statistics, 1968. Washington, D. C.: U. S. Government Printing Office.

Wegner, Eldon L.
1969 "Some factors in obtaining postgraduate education." Sociology of Education 42 (Spring):154-169.

Werts, Charles E.
1966 "Social class and initial career choice of college freshmen." Sociology of Education 39 (Winter):74-85.

1967a "Career choice patterns." Sociology of Education 40 (Fall): 348-358.

1967b "Career changes in college." Sociology of Education 40 (Winter): 90-95.

1968 "A comparison of male vs. female college attendance probabilities." Sociology of Education 41 (Winter):103-110.

1968b "Path analysis: testimony of a proselyte." American Journal of Sociology 73 (January):509-512.

Werts, Charles E., and Donivan J. Watley.
1968 "Determinants of changes in career plans during college." Sociology of Education 41 (Fall):401-405.

Wolk, Ronald
1968 Alternative Methods of Federal Funding for Higher Education. Berkeley: Carnegie Commission on Higher Education.

APPENDIX I-A

Methodology for Estimates in Table 8.1

A major substantive assumption of this methodology is that the reaction of the job market to educational inflation will in large part be determined by (1) the absolute number of new degrees coming into the job market at any one time, and (2) the proportion of these degrees that are "easy" compared to the proportion that are "regular." The reason for these assumptions are elaborated throughout the discussion of section c, "The response of the job market."

Because of this substantive assumption it is desirable to measure inflation in terms of the percentage increase that the additional "easy degrees" constitute over the expected number of "regular degrees."

The most meaningful way of measuring the impact of inflation on the distribution of credentials is to ask: of those just old enough to have completed their formal schooling, what percentage of the whites and what percentage of the Negroes will have obtained a college education. The methodological problem then becomes one of relating the number of degrees awarded in a given year or set of years to the college attainment rate of a relevant age cohort.

The 25-29 age cohort is generally considered the youngest cohort to have completed its formal education. However, it is much easier to relate a slightly younger cohort to the number of degrees awarded in a specific set of years; and the stronger this relationship the greater the

degree of accuracy in predicting attainment from degrees awarded. Consequently, we selected the 20-24 age cohort to measure attainment, gaining in degree of accuracy with respect to immediate projections and sacrificing the degree to which the projections will be valid measures of longer run trends.

Specifically, the number of those from 20 to 24 years of age who had received 4 or more years of college* were related to the number of

*As measured annually in March by the Census Bureau's Current Population Survey, Current Population Reports, Series P-20, Nos. 138, 158, 169, and 182, i.e., U. S. Bureau of the Census, 1965, 1966, 1968c, 1969f.

degrees that had been awarded in the 3 preceding years.* For example, the

*As indicated in the Projections of Educational Statistics to 1977-78, U. S. Office of Education, 1969, p. 31, i.e., U. S. Office of Education, 1969a: 31.

number of those ages 20 to 24 who in March 1968 reported 4 or more years of college was related to the number of degrees awarded during the academic years of 1964-65, 1965-66, and 1966-67.* These 2 sets of figures were

*While the age cohort covers 5 years, only 3 academic years were used because most of the age cohort would have been 20 years old or less during those earlier years and unlikely to have earned a degree.

obtained for the last 5 years and correlated using Pearson's r. The correlation coefficient was surprisingly high, .985, and was significant above the 1 per cent level.

It is true that a fairly high coefficient is to be expected because we are in large part correlating two measures of the same thing. However, the two measures are by no means identical. First, a large number of the degrees awarded each year go to those older than 24. Secondly, the Current

Population Survey would measure degrees earned abroad, while the OE figures do not. Similarly the OE figures include degrees granted to foreign students who may have left the United States by the time of the relevant Current Population Survey. In the third place, the Census Bureau measures educational attainment each year in March while the OE data covers the academic year--leaving a considerable lack of congruence. For example, the January 1968 graduates would be included in the March 1968 survey, but not included in OE's degrees-granted figures for 1966-67. What the very high correlation coefficient indicates is that these factors were proportionately very constant over the five year period measures.

A regression line was fitted and an equation developed to predict the increases in number of people of ages 20 to 24 with 4 or more years of college from the increases in the number of degrees awarded in the 3 preceding years. The increases in the 20-24 age cohort that would have resulted in 1968 from 2.5, 5.0, and 10.0 per cent increases in the number of degrees awarded in 1964-67 were calculated. These were added to the actual number of Negroes who had 4 or more years of college in 1968. From this, the percentages of Negroes that would have had college degrees under the varying assumptions of 2.5, 5.0, and 10.0 per cent increases were calculated. These are the hypothetical figures shown in Table 8.1.

A limitation of this estimation procedure is that it assumes that the age distribution of white and Negro degree recipients is the same. In fact, blacks tend to be a little older. But it seems unlikely that the assumption is violated seriously enough to significantly affect the estimates.