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ABSTRACT

Research was conducted to re-emphasize the importance of functional differences among jobs by showing how they help to better explain the income and status differences that are the main concern of recent stratification research. Status attainment, social class, and vocational psychological approaches to occupational and social differences were integrated into a multiple-market model, which suggests that the value of a determinant varies considerably by kind of work. Also the model's simultaneous use of situs as well as status of work provides a new perspective for developing a more comprehensive theory of social differentiation, for assessing social inequality more accurately, and for reducing inequality more effectively. A subsample of white men (black men, women, and men in artistic work were excluded) taken from a 1/1000 sample of the 1970 census was used to test the value of the multiple-market model in predicting income as opposed to the traditional one-market model. Results showed that the multiple-market model predicts statistical interactions between situs and other determinants of income. In contrast, the one-market predicts no interactions and no situs differences. (Author/TA)

# A MULTIPLE-LABOR MARKET MODEL OF OCCUPATIONAL ACHIEVEMENT

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## Introductory Statement

The Center for Social Organization of Schools has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school practices and organization.

The Center works through three programs to achieve its objectives. The Schools and Maturity program is studying the effects of school, family, and peer group experiences on the development of attitudes consistent with psychosocial maturity. The objectives are to formulate, assess, and research important educational goals other than traditional academic achievement. The program has developed the Psychosocial Maturity (PSM) Inventory for the assessment of adolescent social, individual, and interpersonal adequacy. The School Organization program investigates the authority-control structures, task structures, reward systems, and peer group poocesses in schools. It has produced a large scale study of the effects of open schools on students, has developed the Teams-Games-Tournament (TGT) insturctional process for teaching various subjects in elementary and secondary schools, and has produced a computerized system for school-wide attendance monitoring. The School Process and Career Development program is studying transitions from high school to post-secondary institutions and the role of schooling in the development of career plans and the actualization of labor market outcomes.

This report, prepared by the School Organization program, examines how education and other determinants of occupational achievement may have different influences on income and status due to functional differences among occupations.

A Multiple-Labor Market Model

of Occupational Achievement


## Abstract

For lack of a clear alternative, much work on occupational inequality has assumed that the same process of achievement characterizes all fields of work. Analyses of income differences among white men imply, in contrast, that reward structures vary considerably by type of work, and that occupational achievement depends jointly on the characteristics of workers (such as education) and of occupations (such as functions performed). In this paper, status attainment, social class, and vocational psychological approaches to occupational and social differences are integrated, and the practical implications of this broader perspective for measuring and reducing racial inequality are discussed.

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A worker's occupation is important in determining the quality of life that both the worker and the worker's family experience or can hope to experience. For example, we know that social workers, engineers, laborers, artists, real estate agents, and farmers live in different types of homes, have different friends and possessions, have different interests and values, and adhere to divergent political and religious beliefs. And we have strong preferences about which of these people we would want to trade lives with--or have as friends.

Sociologists have long been interested in the specialization and differentiation of work and its consequences for social solidarity and individual opportunity. The division of labor has been particularly important in stratification and mobility theory, the study of social inequality. The major stratification theories agree that economic and honorific differences among workers depend on the function of the jobs they perform within society, but these theories disagree about why the relation between job function and rewards exists. Functional theorists (Davis and Moore 1945) have assumed that some jobs are more highly rewarded because their functions are more important to society. In contrast, conflict theorists (Marx 1893/1967) have assumed that the functions of some occupations afford their incumbents greater power to control and obtain social and economic benefits. Some stratification theorists have emphasized that the division of labor is intimately associated not only with honorific and economic differences but also with many facets of social relations and style of life (Weber 1946).

Over the last few decades, stratification and mobility research has come to focus on measuring the desirability of different occupations and explaining why some people get good jobs whereas others do not. Sociologists now generally assume that there is a shared public standard for determining what is a good job, and they cite the high correlations between occupational prestige ratings made at different times and by different social groups as evidence of a shared standard (Hodge, Treiman, and Rossi 1966; Hodge, Siegel, and Rossi 1966). All people are assumed to compete to rise on this occupational ladder, but only those workers with the best resources are likely to reach the highest rungs. Research on occupational inequality has therefore focused on discovering which resources--such as education, intelligence, and social background--are most important and just how people convert their resources into occupational status and income (Duncan, Featherman, and Duncan 1972; Sewell and Hauser 1975).

This focus on the income and status attainment of individuals has been accompanied by increasingly sophisticated methods of analysis, but it has promoted a one-dimensional view of jobs and workers. Functional differences among jobs no longer occupy the attention of stratification researchers, but have instead become the province of other disciplines such as vocational and industrial psychology. Furthermore, this stream of attainment research has become divorced from the more traditional stratification work on social class formation, class consciousness, and the behavioral and attitudinal correlates of social class.

The object of this paper is to reemphasize the importance of

functional differences among jobs by showing how they help to better explain the income and status differences that are the main concern of recent stratification research. The object is also to show how disparate approaches to social and occupational differences can be integrated. Classifications of occupations according to situs[1] or functional similarity of work have received much attention from vocational psychologists (Roe 1956; Strong 1943; Holland 1973). They differentiate jobs not only by level of skills required but also by job activities, worker competencies, interests, and values required. The literature of vocational psychology implies that income is determined differently in different situses of work such as sales and management, science, skilled trades, and the arts.

In contrast, most current sociological research on income differences assumes that income is determined in the same way in all kinds of work, that all employers rank potential employees according to the same standards of desirability and that they reward workers according to the same criteria of competency and productivity. In other words, current sociological work implicitly assumes a one-labor-market model of occupational achievement--all workers and employers compete for jobs and employees within a single labor market. Functional differences among jobs imply that a fundamentally different approach--a multiple-market model of occupational achievement--is more appropriate.

Rejection of the one-market model of attainment in favor of a multiple-market model has important consequences for both social theory and social practice. For example, it questions the usefulness of the current quest for the best single estimate of the income-producing

value of determinants such as years of education and vocational training, because the multiple-market model suggests that the value of a determinant varies considerably by kind of work. The simultaneous use of situs as well as status of work also provides a new perspective for developing a more comprehensive theory of social differentiation, for assessing social inequality more accurately, and for reducing inequality more effectively.

## Research on Income

Research on income differences has shifted from measuring the size of income differences and finding the correlates of those differences to estimating the relative importance of various income determinants--for example, years of education, social background, academic aptitude, and work experience. Judgments about the relative importance of different income determinants are generally made from the coefficients of regression equations used to model income processes. The variables included in those models have varied by discipline and over time--sociologists have focused primarily on pre-labor market experiences, and economists have focused on experiences after entering the labor market. But the models have generally shared one important characteristic: they are one-market models (cf. Gordon 1972). This means that the regression equations are not estimated separately for different groups of occupations. Using a single regression equation for all occupations means that only a single estimate of the value of a particular determinant such as years of education is obtained for divergent fields of work--skilled trades, sales work, arts, and science. Although the value of different skills and qualifications could be expected to differ considerably by field of

work, models are routinely estimated separately only by race and sex (e.g. Hout and Morgan 1975).

The one-market model seems to be used by researchers not because it has been shown superior to others, but because researchers have not perceived any clear alternative. Sociological theory provides no compelling way to organize functional differences among jobs, and the situs classifications proposed by sociologists (Hatt 1950; Morris and Murphy 1959) have seldom received attention by anyone but their authors. Instead, sociologists have devoted their efforts to refining occupational status and prestige scales. Economists are more likely to stress the importance of differences among labor markets--the segmentation of the labor market. But they have not developed any satisfactory classification of occupations or markets. As Osterman (1975) notes, the interesting question is not whether the labor market is segmented but how it is segmented. Dual labor market economists have provided a theoretical basis for classifying occupations, but they have found no useful way of classifying occupations independently of the income differences they predict they will find among different hypothetical labor markets. Census categories are occasionally used by other researchers (Stolzenberg 1975) to develop income models for different occupational groups, but the census categories have long been criticized because they lack explicit principles for defining categories and because they are an unclear mixture of situs and status of work (Caplow 1954; Parnes 1954).

## A Multiple-Market Model

Vocational psychology provides both a theoretical base and an empirical means for developing a classification of occupational labor

markets. Vocational psychologists have attended to situs of work, although they do not use the term situs, and they have developed both theories and classifications to summarize the major differences between kinds of occupations and types of people. At this time Holland's (1973) theory and classification appears to be the most influential, the most developed, and the best researched. The major categories of his classification of occupations are used here to approximate six broad situses of work in the U.S. occupational structure.

Holland's classification groups occupations according to their resemblance to six ideal types of work: Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (C). Table 1 provides a brief description of the types. Each type of occupation is characterized by the kind of activities involved, the competencies required and rewarded, and the kind of interpersonal relations prevailing. A Realistic occupation, for example, is characterized by demands and opportunities for the concrete or systematic manipulation of objects, tools, machines, or animals. In contrast, a Social occupation is an environment characterized by demands and opportunities for the manipulation of people to inform, train, develop, cure, or enlighten.

Insert Table 1 About Here

The theory also postulates that people can be classified according to their resemblance to six personality types: Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (C). Each personality type has a distinctive pattern of self-perceptions, interests, and competencies, and each shows a preference for different

kinds of occupations. The six types of personality are parallel to the six kinds of work and are also described in Table 1.

The classification was empirically developed from data on personality, aptitudes, worker traits, and job duties for people in different occupations (Holland 1962, 1966, 1973, 1975). A fuller description of the types and a description of other major theoretical constructs not discussed here are provided by Holland (1973). Walsh (1973) and Osipow (1973) provide other reviews of the theory.

Holland's classification should not be considered a replacement for socioeconomic scales of occupations; it should be used together with such scales. Table 2 summarizes the distribution of workers according to both prestige and Holland category of work. This table shows that although type of work is not independent of level of work, there is nevertheless considerable diversity in the kinds of work performed at most levels, particularly at the higher prestige levels.

Insert Table 2 About Here

Income, status, and educational achievement are only a peripheral concern of Holland's theory of careers, but the theory does suggest that the six major occupational types are situses characterized by different income determination processes. Two ways in which the theory suggests a multiple-market model of income determination are discussed below.

First, the different kinds of work require different skills. Consequently, resources which bring high returns in one type of work will not necessarily bring high income or prestige in other types. For example, education may be highly rewarded in scientific (Investigative)

or educational (Social) occupations and experience or specialized aptitudes may be highly rewarded in manual (Realistic) or Artistic work, but not vice versa.

Second, occupations are populated primarily by people with personalities congruent with that type of work. Social environments are populated primarily by Social people; Enterprising environments are populated by Enterprising people, and so on. The clustering of different personality types--who have different values, goals, and interests--in different occupations might lead to the creation of structurally different systems, each with its own institutionalized rules governing occupational success (cf. Kerr 1954). For example, Enterprising people dominate Enterprising environments, so Enterprising values such as economic achievement are likely to be informally enforced in those environments. These values are also the ones most likely to be formalized by members of that occupational group. As Durkheim (1893/1964) suggested, different occupational groups may create different moral communities. Also, the incentives most effective for Enterprising people are likely to differ from the incentives effective for Social, Artistic, or Investigative people. Consequently, employers are likely to have created different reward structures for the different occupational groups. For example, many jobs in the Social category, such as teaching, have fixed salaries with no provision for overtime pay, but provide non-monetary incentives (for instance, community recognition) for long hours and high quality performance. In contrast, many Enterprising jobs pay people by commission or according to hours worked, so that the more ambitious or persuasive can earn more money. The income prospects of individual workers whose values

differ from those of the people dominating an environment may therefore be determined by the way a job is structured by employers or other employees regardless of their own personal values or preferences. Consequently, taking account of differences in personal characteristics may not completely account for the association of type of work with income.

There may be many other sources of institutionalized differences in socioeconomic returns for the same skills. The point here is that Holland's theory implies that the different situses are different occupational markets. To use a familiar analogy in stratification and mobility work, different situses may be different occupational ladders. These ladders may reach to different heights in the occupational world, and the rules for climbing them may differ. It is expected, therefore, that regression models of income determination will differ if they are estimated separately by Holland situs of work.

## The Data

A subsample of men was taken from a 1/1000 sample of the 1970 census of population. It was chosen to decrease the chances of finding income determination differences by situs, that is, to provide a strong test of one-market versus multiple-market models. Blacks and women were excluded because income may be determined differently for these populations than it is for white men. Men in military, farming, or part time jobs (less than 35 hours per week) were excluded for the same reason. The final sample consisted of 27,067 white men. Men in Artistic work were excluded from most of the analyses because there were few such men in the sample.

The data impose three main limitations upon the analyses. First, occupational title and hours worked per week were obtained for the year 1970 but income and weeks worked refer to 1969. I have assumed that the 1969 occupation is the same as the 1970 occupation. This is a reasonable assumption, because Byrne (1975) has shown that only 12.4% of 25-34 year old to 2.6% of 55-64 year old white men changed occupations during a one-year period. In any case, discrepancies cannot be expected to favorably bias the results, that is, to increase situs differences.

Second, the assumptions necessary for performing tests of significance are not met because the sample was constructed according to a stratified cluster design. There is no clear way of overcoming this limitation, nor of easily assessing its impact on research results. Many researchers use samples that are not simple random samples, the most widely used being the 1960 and 1970 census data, the Occupational Changes in a Generation data (Blau and Duncan 1967), and the National Longitudinal Surveys (Parnes et al. 1970). The few researchers who mention the sampling problem (for example, Blau and Duncan 1967) suggest no solution. However, Frankel (1971) concludes from empirical investigations of the effects of cluster designs on first- and second- order statistics that the sampling problem may not be serious.

The samples used here are large, so statistically significant results would be expected even for small differences and therefore would be of little interest. The best evidence for the substantive significance of differences among the different situses of work is the consistent and interpretable variation across the groups.

Third, some important variables are not available in the census data. Including social background and ability variables would enable better comparisons with status attainment research. Fringe benefits and other income-related characteristics probably vary considerably by labor market but such information is not available in the census data. Also, without including workers' aspirations for category of work, it is not possible to say conclusively whether income differences by situs result from differences in workers or from differences in occupational systems.

A simple model of income attainment was used to test the superiority of a multiple-market versus a one-market model of attainment. Years of education, weeks worked in 1969, hours worked during the survey week, occupational prestige (Temme 1975), and Holland occupational situs were used to predict total 1969 income. (See Appendix A for a list of Holland codes for detailed occupational titles.) This model includes variables known to be important in accounting for income differences among individuals.

Income attainment models typically include more variables such as marital status, potential work experience, age, and vocational training. When these variables were included in the regression analyses, they did not alter the main conclusions. Therefore, the simpler model is used here to simplify presentation of the results.

## Testing the One- and Multiple-Market Models

The usefulness of one-market versus multiple-market models was tested using regression analysis because this method has been traditional among status attainment and human capital researchers during the last decade for analyzing education, status, and income differences among

individuals. The multiple-market model predicts that separate regressions for each situs of work account for more of the income variation than does a single model. In other words, the multiple-market model predicts statistical interactions between situs and the other determinants of income. More basically, it predicts that the relations among variables in the model--for example, education, prestige, and income--differ by situs. Education might be correlated differently with income in Investigative (e.g. scientific) work than in Enterprising (e.g. sales and management) work. In contrast, the one-market model predicts no interactions and no situs differences in the patterns of correlations among income determinants.

Tests for Interactions

Table 3 compares the usefulness of five different models for predicting income in each of four age groups--26-35, 36-45, 46-55 and 56-65. Models 1 through 4 are all one-market models because only one regression equation was used to characterize all men within an age group. These four models differ only according to the specific variables used to predict income. Model 5 is a multiple-market model because separate regression equations were used for men in each situs.

Insert Table 3 About Here

Models 4 and 5 are used here to test the superiority of a multiple-market over a one-market model of achievement. Both use hours, weeks, prestige, and years of education of men to predict income and both take account of situs of work. Model 4, a one-market model, assumes that there is some constant advantage to being in some situses rather than

others and incorporates situs by adding dummy variables for situs. Model 5 assumes that processes of income determination differ by situs and so includes situs by calculating separate regressions for each situs. If the multiple-market model is superior, the errors of prediction for model 5 should be significantly smaller than those of model 4.

The results indicate that the multiple-market model predicts income substantially better than does the one-market model. Model 5 accounts for about one-third of the variance in income in the three oldest age groups, and accounts for 1.6 to 4.4% more variance than does model 4. F-tests for homogeneity of regression (Tatsuoka 1971) indicate that the multiple-market model is significantly better than the one-market model in all four age groups.

The squared multiple correlations ($R^2$) for three other one-market models are also presented in Table 3 to illustrate the relative usefulness of the multiple-market model. A comparison of models 1, 2, and 5 to model 3 indicates that using a multiple-market rather than a one-market model which does not incorporate situs in any way is as useful as adding prestige or years of education to a one-market model. Model 3 is a one-market model using hours, weeks, occupational prestige, and years of education as predictors of income. Comparing the percentage of income variance accounted for by the multiple-market model using the same four predictors in each situs--model 5--shows that situs interactions increase variance accounted for by 4.3 to 7.6%. This increase is comparable to that gained by adding prestige to the one-market model. A comparison of model 3 to model 2 shows that prestige adds from 3.1 to 8.5%. Adding education to the one-market model--that is, comparing model 3 to

model 1--adds only 1.8 to 3.6%. This is just half as much as is added by situs. These are conservative comparisons because situs is taken into account only after prestige and education have been added to the regression of income and these two variables therefore are credited with the variance they predict jointly with situs.

Differences among Situses

The tests for interactions provide evidence that income determination processes differ by situs, but they do not indicate what those differences are. The following analyses detail the size and pattern of some of those differences. The analyses focus primarily on the relations between the three measures of achievement--years of education, occupational prestige, and income.

Means, standard deviations, correlations, and regression coefficients are used to describe situs differences. Situs differences in mean income or other characteristics are not necessarily inconsistent with a one-market model. A one-market model does predict, however, that the patterns of means, standard deviations, and correlations should be the same in all situses. For example, we might expect men in one situs to have higher mean education, prestige, and income than men in another situs. We would not expect men in a third situs to be high in prestige and education but low in income. But the analyses reveal that the patterns of relations among variables do differ by situs and that these differences are found for all age groups. The following discussion focuses on men presumably established in their careers--ages 36-45, 46-55, and 56-65--because situs differences are most pronounced for these groups.

Table 4 shows that mean education, prestige, and income are low for all age groups in Realistic work (about 10 years of education, 34 prestige points, and $9,000), intermediate for men in Conventional work (about 13 years, 47 prestige points, and $11,000), and high for men in Investigative work (14 years, 59 prestige points, and $16,000).[2] However, the pattern shifts with Social and Enterprising work. On the average, men in the Social situs are high in both education and prestige but only intermediate in income. In contrast, men in Enterprising work are intermediate in education and prestige, but relatively high in income. Men in the Social situs have higher prestige on the average than do men in Enterprising work, but they earn only three-fourths as much money.

Insert Table 4 About Here

These mean differences accord with our general impressions of the occupational world. Almost all laborers, factory operatives, and other manual workers are found in Realistic work. Many of these jobs require little ability, education, or experience, and they yield little income or prestige. In contrast, Investigative work includes most scientific, medical, and technical work. The Investigative jobs of physician, mathematician, or physicist epitomize occupational success in the eyes of many people. The work requires considerable skill and education and yields considerable income or prestige. The deviations from the expected pattern also accord with our impressions of the occupational structure. Many workers in the Social situs, such as teachers and social workers, have a college education but earn relatively low salaries. Also, many salesmen and businessmen (Enterprising workers) with high incomes do not

seem to be accorded the social esteem that might be expected on the basis of their incomes.

Table 5 shows the correlations between education, prestige, and income and Table 6 shows the standard deviations of these variables for men in each situs. Differences among Realistic, Conventional, and Investigative work are consistent with a one-market model but the data for Social and Enterprising work present quite a different pattern.

Correlations among education, prestige, and income are somewhat higher in Conventional than in Realistic work. The correlations are even higher in Investigative work, but the patterns of correlations are similar in the three situses. Education and income are correlated in the .30's in Realistic and Conventional work, but in the .50's in Investigative work. The correlations of prestige with education are about .40 in Realistic and Conventional work, but .70 in Investigative work; the correlations of prestige with income are .40 versus .60.

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Insert Table 5 About Here

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These correlational differences are partly a function of the differences in standard deviations among situses of work. Table 6 shows that the variation in the three variables in question is much higher in Investigative work than in Realistic or Conventional work. These situses could therefore be conceptualized as groups subject to the same income determination processes but with different ranges of education, prestige, and income. In other words, a one-market model for Realistic, Conventional, and Investigative work cannot be rejected simply on the

basis of correlational differences. However, other data presented later do provide an explicit reason to question the appropriateness of a one-market model for these situses.

Insert Table 6 About Here

Other differences in correlations are not consistent with a one-market model. Table 5 shows that education and prestige are as highly correlated in Social as in Investigative work, and Table 6 shows that the variation in these two variables is also relatively high in both situses. At the same time, there is surprisingly little variation in income in the Social situs, and the correlations of income with education and prestige are much lower--about .30--than in Investigative work. In other words, there is considerable variation in both education and prestige in Investigative and Social occupations, but this variation is associated with high variation in income and a high mean income in the first situs but with relatively little variation and low income in the second.

The results for men in Enterprising work are different. Variation in education and prestige is lower than in Investigative work--and is similar instead to that in Realistic and Conventional work--but the variation in income is comparable to that of men in Investigative work. As would be expected from the lower variation of education and prestige in Enterprising work, the correlations among the three variables are not high--about .30 to .40.

In summary, the means, standard deviations, and correlations of

education, prestige, and income are progressively higher in Realistic, Conventional, and Investigative work. The means, variation, and correlations of prestige and education are high for men in the Social situs but their income is relatively low, homogeneous and only weakly correlated with education and prestige. On the other hand, the high level and variation of income in Enterprising work is accompanied by only moderate means and variation in education and prestige.

These differences in patterns among the variables suggest that the same variables may play different roles in determining income in the different situses. For example, education seems to make less difference for income in the Social than in the Investigative situs because the high level and variation in education is matched by a correspondingly high level and variation of income in the latter but not the former situs. Regression coefficients are often used to estimate the effects of different income determinants, so they were also examined. The simple model used here is not a comprehensive representation of income determination processes, so the regression coefficients are not intended to be accurate estimates of the causal importance of each variable. Instead, my objective is to show that variation by situs in regression coefficients is more dramatic than variations obtained by adding more variables to one-market models.

Table 7 shows the unstandardized regression coefficients and the proportion of variance (squared multiple correlation or $R^2$) accounted for by regression equations in the 20 age and situs groups. The table shows that an additional year of education generally is associated with an additional $200 to $300 per year in Realistic and Social

occupations, $400 to $600 in Conventional and Investigative work, and about $1000 in Enterprising work. When a single model is used for all situses, a year of education is associated with an additional $400 to $600, depending on age. The coefficients for prestige also differ, indicating that the relation of income to prestige differs by situs. These regression coefficients indicate that the relation ranges from $300 per point of prestige in Investigative work to under $100 in the Social situs.

Insert Table 7 About Here

Note how large these differences are. The coefficients for education are generally twice as large in Investigative and Conventional work and four times as large in Enterprising work as they are in Realistic and Social occupations. These large differences are replicated across the three oldest age groups. Other studies on the returns to education parallel the present results for all men; they often find that an additional year of education is associated with an additional $400-$500 in earnings or a 4-6% increase in income (Osterman 1975). These estimates generally vary by 10-40% when theoretically important variables such as ability and social background are omitted from income determination models (Griffin 1976; Wolfe 1972). The difference in coefficients among situses indicates that omitting occupational situses or markets has a much stronger bias on such estimates than does omission of the variables typically studied.

The severity of this apparent bias has important policy implications. For example, it would be misleading to say that a year of education is worth $500 if it is worth $200 in some lines of work but $1000 in others. Regression results from men in all occupations pooled together might indicate that job training is more useful than additional years of schooling for increasing income. However, it would be unwise for manpower training policies--say, for minorities--to routinely emphasize job training rather than formal education if job training is less important than staying in school for advancement in some occupational situses. It would be particularly unwise if these were also the best-paying situses.

Pattern of Situs Differences

Income and prestige differences among groups of men at different educational levels were also examined. These comparisons reveal a striking pattern of situs differences not evident in regression analyses. The major differences among the situses are illustrated in Figure 1. This figure includes education, prestige, income, and situs so that it shows relations among all four variables. Differences among men in the three oldest groups are relatively small so data for men 36-65 have been pooled to simplify presentation.

Insert Figure 1 About Here

Figure 1 shows the mean prestige and income of 20 subgroups of

men: four educational groups (9-11, 12, 13-15, and 16 or more years) within each of the five situses. The means for the four educational groups within each situs are connected by a line--one line for each situs. The mean years of education completed is about 10.1 in each of the five 9-11 year educational groups and about 13.9 in each of the 13-15 year groups. Men with 16 or more years (presumably college graduates), however, vary in mean years of education from 16.4 in Conventional work to 17.4 in the Social situs. Therefore a broken circle is shown for the three situses where the mean differs considerably from 16.4 years of education. This circle represents an estimate of what the mean income and prestige would be for men with 16.4 years of education.

The slope of the line for each situs can be conceived of as depicting the mixture of increased income and prestige associated with an increase in education. The figure illustrates one particularly important situs difference--the mixture of prestige and income associated with higher education varies markedly by situs. For example, more education in the Enterprising situs is associated with large increases in mean income but not in occupational prestige. In contrast, more education in the Social situs is associated with large increases in mean prestige but not in income. The ratio of increases in mean income to prestige from one educational level to another is approximately $150, $300, $500, $600, and $1200, respectively, for men in Social, Realistic, Investigative, Conventional and Enterprising work. Figure 1 also suggests that this mixture (the ratio of increases in mean income relative to mean prestige) does not

change much with increasing education. This can be seen in Figure 1, for the slopes of the lines are fairly constant in all but the Investigative situs.

These results illustrate some of the problems of comparing the effects of education on occupational achievement in different populations. Education may appear to have the same effect on prestige (or income) in different situses, but a different effect on income (or prestige). For example, men with a college education (for this example, men with 16.4 years of education) are on the average 10 points higher in prestige than men with 13-15 years of education (14 years on the average) in Realistic, Social, and Investigative work. But these differences in education and prestige are associated with average income differences of $4000, $2000 and $6000 in the same situses.

The foregoing results are based on conventional measures of achievement and methods of analysis in status attainment research. They indicate that situs differences do exist, that the differences are large and consistent, and that they make sense intuitively. The exact nature of situs differences can be determined only by further analyses which take account of measurement error and additional measures of monetary benefits and job characteristics. However, these preliminary results suggest that such research would be a rewarding next step in stratification and mobility research.

## Implications

The one-market model of occupational achievement is a one-dimensional model of man and a one-dimensional model of the occupational structure; workers are ordered in a single queue by their desirability to "employers" and jobs by their desirability to "workers." Researchers using the model acknowledge that it is a simplified model of reality. The value of the present analyses is not that they demonstrate the obvious multi-dimensionality of the real world, but that they demonstrate how the one-market model is deficient and suggest a more useful and comprehensive perspective. Some theoretical and practical social implications of the research are discussed in the following sections.

### An Alternative Paradigm

The change in conceptualization of occupational inequality suggested here is not another extension or amplification of the Blau-Duncan (1967) status attainment model; it does not involve adding situs variables to current one-market models. It is a restructuring of thought: the assumptions about people and jobs are different, new questions are raised, current research techniques are challenged, data are interpreted differently, and some previous anomolies are clarified. Some common assumptions of research on occupational inequality are reviewed to illustrate that a shift in approach is involved.

Despite admissions that a one-market model is too simple, the basic assumptions of that model are ingrained in much thinking about occupational achievement. Two such assumptions are that people can be ordered on a single scale of ability or intelligence, and that a single value can be assigned to the usefulness of social resources such as

education for securing income and prestige.

Research on occupational inequality generally ranks people along a single scale of intellectual ability, this dimension being referred to as intelligence or ability. The most heated recent debates about the measurement of intelligence have not been whether people should be ranked along a single continuum, but whether different methods are fair measures of that one ability continuum. Intelligence as usually measured reflects competencies valuable for succeeding in the reading, writing, and reasoning required for academic, scientific, or clerical pursuits, but it does not adequately reflect other domains of talent that are necessary for superior performance in managerial, leadership, sales, ministerial, social service, or artistic occupations. It is precisely those situses requiring talents for dealing with people rather than with data or things--Enterprising and Social--that deviate most dramatically from a one-market model of occupational achievement that incorporates academic achievement (years of education completed). Although Jencks (1972) has been widely quoted for his hypothesis that luck accounts for much difference in achievement, his suggestion that non-cognitive abilities are important (chapter 4) has been ignored. Earlier studies by psychologists (Baird 1976; Munday and Davis 1974; Richards 1970) have identified a variety of non-cognitive and non-academic abilities and so can provide valuable information for studies of differential occupational achievement.

Related to this one-dimensional treatment of human talents are continued efforts to provide the most accurate single estimate of the value of education and of other social resources for obtaining and

advancing within occupations. My analyses imply that there is no single value (cf. Eckaus, Safty, and Norman 1974)--the value varies by a factor of two to four depending on the occupational context. Therefore, questions about the relation of education to work should take account of the diversity of talents and labor markets. For example, which skills do schools foster or select? Do colleges and secondary schools vary considerably in the types of skills they foster or certify? Do particular schools, or schools in general, orient and train people for some labor markets but not for others? Has increased college attendance increased competition for jobs in some situses but not in others--for example, in Investigative but not Enterprising work? In short, analyses of the value of education or any other social advantage should take account of differences in the occupational settings in which workers are attempting to convert their advantages into desired outcomes.

Social Class

Most research on occupational inequality assesses an individual's socioeconomic status by assigning a score from some scale of prestige, income, education, or some combination of these variables. An alternative approach has been to characterize individuals according to their membership in different social classes, these classes being ordered hierarchically. Theories of social class assume that people who share the same socioeconomic fate may actually constitute a group because of their associations with one another or through their similar role in the productive system (Marx 1893/1967; Weber 1946). These theories therefore emphasize the growth, development, and interactions of social groups rather than the attributes of individuals.

The following assumptions about situses are consistent with concepts of social class. People in the different situses perform different functions in the productive system; they have different values and world views; and they associate more with people in the same situs than with workers in other situses. They socialize their children to have different values, interests, and competencies, and they expose their children to different job information and opportunities. So not only do the adults tend to be mobile within rather than between situses, but their children are also likely to enter work within the same situs as the parents. In brief, situs may be a barrier to horizontal mobility over careers or over generations of workers. It also helps to explain the apparent social distance between white-collar workers such as clerks (Conventional) and salesmen (Enterprising) and blue-collar workers (Realistic) despite their similar socioeconomic status.

The situses are not hierarchically ordered to the degree usually assumed for social classes. The situses overlap considerably in income, education, and prestige. Nevertheless, Investigative, Social, Artistic, and some Enterprising workers can be considered four social elites, with Realistic and Conventional workers constituting the bulk of the labor force. The situses are to some extent competing interest groups with different bases of influence. For example, in our society the power of the Enterprising situs is based on money and the control of most production, that of the Investigative situs on the mystery and practical usefulness of higher knowledge, and that of the Social situs on its maintenance of education, health, and the socialization of the young.

The comparison of situses with social classes is made to demonstrate that divergent theories of stratification can be integrated. Both functionalist and conflict theories, for example, are consistent with the discussion of situs differences. The comparison was also made to show how studies of group processes both inside and outside sociology--networks, interest groups, socialization, the development of elites--can contribute to a broad theory of socioeconomic differentiation.

Assessing Inequality and Discrimination

The multiple-market model implies that two sources of occupational differences must be clearly distinguished: (a) differences in what happens to people within a situs, and (b) differences in how people are distributed by situs. This distinction is probably important in explaining racial differences in income. Blacks may be channeled not only into the poorer-paying jobs within a situs, but also into situses with poor income prospects regardless of education or occupational prestige.

Different one-market status attainment models have been found appropriate for black and white men, and this occurrence has been taken as evidence that the processes of income determination differ by race. A multiple-market model of attainment shows why different one-market models might be found for blacks and whites even though income determination processes might not actually differ by race. Table 8 shows that blacks are distributed differently than whites among the situses. To illustrate, one half of the full time black workers aged 36-65 with 16 or more years of education, in contrast to only a fifth of the whites, are in the prestigous but low-paying Social occupations. Income deter-

mination also differs by situs, so we would expect a comparison of all white and all black workers to reveal differences in income determination by race. However, if we compared workers separately by situs, income determination processes might be similar for blacks and whites within some but not all situses. For example, income determination might be similar for men of both races in Realistic, Conventional, and Social work, but not in Enterprising or Investigative work. Special attention could then be devoted to the latter situses.

Insert Table 8 About Here

The multiple-market model also implies that some income and prestige differences are voluntary. Some people prefer Social occupations despite the low pay; others would not enter Enterprising jobs despite obvious income advantages. Aspirations differ by sex and race, both women and blacks more often preferring the Social situs of work than do white men (Nafziger et al. 1974; Gottfredson, Holland and Gottfredson 1975). If blacks and women differ from white men in the jobs they want, then we cannot say that all differences in the jobs they actually get reflect social inequality or discrimination. Certainly many race and sex differences in occupational achievement are not by choice. But neither should we reflexively equate social differences with inequality or discrimination. If some occupational differences are voluntary, then it is important to evaluate differences in aspirations for situs of work of people entering the labor force and to examine when and how these differences in aspirations develop. Differences in aspirations

not only present technical problems for measuring discrimination by sex or race, but as the following discussion makes clear, they also present ethical problems in reducing inequality.

Reducing Inequality

The multiple-market model has implications for changing occupational inequality. The model suggests that if the occupational structure remains constant, income differences between blacks and whites and between men and women will not be eliminated unless the distributions of these groups across situses are equalized. The differences in distribution by sex and race are probably the result both of choices by job applicants and by employers. Therefore, both hiring practices and the aspirations of job seekers would have to be changed. Employers are under pressure to change hiring practices and to increase recruitment of minorities. But efforts to change aspirations of potential applicants are infrequent and controversial. For example, efforts to manipulate scores to eliminate differences in the mean profiles of men and women taking vocational interest inventories have aroused considerable debate (G. Gottfredson 1976). Any attempts to change--or ignore--differences in the socialization of men and women and of blacks and whites involve the ethics of manipulating people in ways to which they or their families might rightfully object. Some interventions would be less objectionable. For example, black high school students might be exposed more often than they now are to work experience, job information, and role models in management and sales work, and so be more likely to enter and prosper in Enterprising work at all levels.

Although changing the distribution of women and blacks by situs

may be useful in the short run for reducing income differences by race and sex, it would not modify the overall occupational structure and so would not modify the great differences in material well being experienced by people in our society. Incomes would still vary considerably both within and between situses.

However, the discussion of situs differences suggests that the elimination of all differences in income, prestige, or other occupational rewards is not necessary for a fair society. A comfortable level of well being should be available to all workers, but beyond that level people should be able to pursue different goals. Jobs might differ in the mixture of rewards they provide--money, prestige, autonomy, interests and competencies fostered--and they might differ in the life styles and world views they encompass.

## Origins of Situs Differences

The apparent situs differences in income determination probably cannot be accounted for by more extensive one-market models. Instead, situs differences may originate from variations in occupational reward systems, such as in criteria of evaluation, source of funds, and competencies required on the job. The present data do not allow a test of the following speculations, but they are offered to restructure thinking and promote research about the relation of job and personal characteristics to income. They are also offered as examples of labor market characteristics which should be examined in future research on income differences. These speculations are all based on the observation that workers in different situses perform different activities or functions.

Criteria for Evaluating Job Performance

The contributions that managers and salesmen (Enterprising workers) make to their organizations are quite variable but often easily quantifiable. One salesman or manager may commit a company to unprofitable transactions whereas another may bring enormous profits to the company--both seriously influencing the viability of the company. Income for these Enterprising workers is often based on the dollars that they bring to their organizations. Because the variation in effects of workers is great, the variation in income is also high. In contrast, the effects of workers in Realistic, Social, and Conventional work are less variable or more difficult to evaluate. For example, most accountants and clerical personnel probably have less variable effects upon their organizations, and one consequence of this fact is that incomes do not vary much either. In the Social situs outcomes or marginal productivity may be quite variable but hard to evaluate. Administrators, researchers, and public officials all attest to the difficulty of evaluating social service programs. Unable to discern variability in effects, employers may pay fairly uniform salaries.

Source of Funds

Enterprising workers probably are found largely in private businesses which derive their income directly from individual or organizational consumers. These businesses to some extent are able to modify their activities to produce goods and services to suit the preferences of current or potential customers, and therefore to maintain profits and provide high pay to motivate their managers and sales staff. In contrast, most workers in the Social situs provide services which are designated

by professionals and public officials as necessary for the health and welfare of citizens. These are the services for which consumers either will not pay (public health services), cannot pay (welfare and rehabilitation services), or are not expected to pay directly (primary and secondary education). Revenues for these services are not directly related to public demand and the activities are generally funded by non-profit or voluntary organizations or by government. These funding agencies are not likely to raise much more money than absolutely necessary to maintain services. Furthermore, an increase in demand for goods and services means increased revenues in the private sector but it means a strain on already limited budgets in the public sector. As a result, the general level of income for providers of social services is low and fluctuates little if at all with changes in demand for services.

Abilities Required

Different competencies may be important in the different situses so that the same level of a particular competency may be rewarded differently. For example, income variation is great within both Investigative and Enterprising work, but the four income predictors--including years of education--account much better for this variation in Investigative than in Enterprising work (see Table 7). Mathematical competencies, writing abilities, abstract reasoning, and other competencies important for academic success are probably less important for Enterprising work. Conversely, interpersonal skills such as speaking skills, persuasiveness, and assertiveness may be valuable traits for

managers and salespeople (Enterprising work) but less so for scientists and other Investigative workers. These speculations are consistent with evidence (Ghiselli 1949) about the differential validity of various aptitude tests in different occupations. The validity of academic aptitudes for predicting occupational success differs consistently and substantially among occupations.

Both occupational and personal characteristics are important in explaining income differences. My analyses do not reveal the degree to which each set of characteristics produces the observed situs differences in income. The evidence does suggest, however, that job attributes are important and should receive more attention in the future. The evidence also implies that income differences depend upon the particular combinations (or interactions) of person and job characteristics, and that thorough studies of occupational achievement must look not only at the nature of the competitors for jobs but also at the nature of the competitions they enter.

## Footnotes

1. The term situs has been used inconsistently so a definition is necessary. Benoit-Smullyan (1944) advocated measuring social position in three different ways: status (position in a hierarchy), situs (membership in a group), and locus (socially defined function in an organized group). Benoit-Smullyan's original use of the words situs and locus is not now common. Situs is often used more or less vaguely to imply any non-hierarchical aspect of social position. In this paper I will use situs to specify the kind of work or job activities performed on a job, and status to refer to the position of a job or occupation within an occupational hierarchy. Situs will refer to the function of an occupation or set of occupations within the division of labor.

2. More extensive tables of results are provided in Appendix B and in Gottfredson (1976).

TABLE 1

Description of Personality Types and Work Environments

| Personality | Work Environment | Sample Occupations | Related Categories |
|---|---|---|---|
| **Realistic** | | | |
| Has mechanical ability and lacks social ability; values concrete things, power, money, status. Is asocial, conforming, frank, materialistic, practical, stable, and uninsightful. | Fosters technical competencies and achievements, and manipulation of objects, machines, or animals; rewards the display of such values as money, power, and possessions. Encourages people to see the world in simple, tangible and traditional terms. | Mechanical engineer<br>Plumber<br>Auto Mechanic<br>Fork lift operator | Manual<br>Skilled<br>trades<br>Mechanical |
| **Investigative** | | | |
| Has mathematical and scientific ability and lacks leadership ability; values science. Is analytical, cautious, critical, independent, methodical, rational, reserved, and unpopular. | Fosters scientific competencies and achievements, and observation and systematic investigation of phenomena; rewards the display of scientific values. Encourages people to see the world in complex, abstract, independent, and original ways. | Physicist<br>Weather observer<br>Laboratory assistant<br>TV repairperson | Scientific<br>Intellectual |

TABLE 1 continued

| | | | |
|---|---|---|---|
| Artistic | | | |
| Has artistic and musical ability; values aesthetic qualities. Is complicated disorderly, emotional, impulsive, intuitive, nonconforming, and original. | Fosters artistic competencies and achievements, and ambiguous, free or unsystematized work; rewards display of artistic values. Encourages people to see the world in complex, independent, unconventional, and flexible ways. | Editor<br>Decorator<br>Garment designer<br>Fashion model | Aesthetic<br>Cultural<br>Intellectual |
| Social | | | |
| Understands others and has teaching ability; values social and ethical activities and problems. Is cooperative, friendly, insightful, responsible, tactful, and understanding. | Fosters interpersonal competencies, and informing, training, curing, or enlightening others; rewards the display of social or humanitarian values. Encourages people to see the world in flexible ways. | Minister<br>Elementary teacher<br>Physical therapist<br>Ward Attendant | Education<br>Social Service |

TABLE 1 continued

| | | | |
|---|---|---|---|
| Enterprising<br>Has leadership and persuasive abilities and lacks scientific ability; values political and economic achievement. Is acquisitive, ambitious, domineering, energetic, optimistic, self-confident, and talkative. | Fosters persuasive and leadership competencies or achievements, and the manipulation of others for personal or organizational goals; rewards the display of enterprising values and goals such as money, power, and status. Encourages people to see the world in terms of power, status, responsibility, and in stereotyped and simple terms. | Lawyer<br>Contractor<br>Automobile dealer<br>Salesperson | Entrepreneurial<br>Business contact<br>Management<br>Sales<br>Political |
| Conventional<br>Has clerical and numerical ability; values business and economic achievement. Is conforming, conscientious, inflexible, inhibited, orderly, practical, self-controlled, and unimaginative. | Fosters conformity and clerical competencies, and explicit manipulation of data, records, or written material; rewards the display of such values as money, dependability, conformity. Encourages people to see the world in conventional, stereotyped, constricted, simple and dependent ways. | Certified public accountant<br>Secretary<br>Timekeeper<br>Clerk | Clerical<br>Business detail<br>Bureaucratic |

TABLE 2

1970 Employment by Situs of Work and Occupational Prestige

(Thousands of Workers)

| Situs of Work | Occupational Prestige Level | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 0-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70+ |
| Realistic | 433 | 5,187 | 11,081 | 11,613 | 5,265 | 330 | 433 | -- |
| Investigative | -- | -- | -- | 612 | 813 | 210 | 1,446 | 610 |
| Artistic | -- | -- | -- | 22 | 232 | 347 | 277 | 95 |
| Social | 228 | 128 | 296 | 1,738 | 1,018 | 1,546 | 3,199 | 241 |
| Enterprising | 64 | -- | 159 | 3,743 | 4,112 | 1,928 | 1,867 | 280 |
| Conventional | -- | 56 | 1,694 | 4,309 | 5,701 | 173 | 711 | 14 |

Source: Gottfredson (1976)

TABLE 3

Percentage of Variance in Income Accounted for by Different Models of Income Determination

| Age | One-Market Models | | | | Multiple-Market Model[a] | | |
|---|---|---|---|---|---|---|---|
| | (1) Hours Weeks Prestige | (2) Hours Weeks Education | (3) Hours Weeks Education Prestige | (4) Hours Weeks Education Prestige Situs[b] | (5) Hours Weeks Education Prestige | F for (5)-(4)[c] | d.f. |
| 26-35 | 17.3 | 16.0 | 19.1 | 21.8 | 23.4 | 10.2 | 16,7626 |
| 36-45 | 25.6 | 22.1 | 28.2 | 31.4 | 35.8 | 31.8 | 16,7480 |
| 46-55 | 25.2 | 22.3 | 28.8 | 31.0 | 34.1 | 20.8 | 16,7118 |
| 56-65 | 22.9 | 16.9 | 25.4 | 27.8 | 31.2 | 13.1 | 16,4307 |

[a]Obtaining the percentage of variance in income accounted for by this multiple-market model involves adding together the sum of squared errors for the five regressions, dividing by the total sum of squares for income, and subtracting this ratio from 1:

$$\frac{s^2_{\hat{Y}}}{s^2_Y} = 1 - \frac{SSE_R + SSE_I + SSE_S + SSE_E + SSE_C}{SST_{\text{All men}}}$$

[b]Situs measured using four dummy variables.

[c]All F significant $p < .001$.

TABLE 4

Mean Years of Education, Prestige, and Income: By Age and Situs of Work

| Situs of Work | Education | | | | Prestige | | | | Income | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Age | | | | Age | | | | Age | | | |
| | 26-35 | 36-45 | 46-55 | 56-65 | 26-35 | 36-45 | 46-55 | 56-65 | 26-35 | 36-45 | 46-55 | 56-65 |
| Real | 11.2 | 10.5 | 10.1 | 9.4 | 34.7 | 34.9 | 34.3 | 33.3 | 8,348 | 8,992 | 8,779 | 8,009 |
| Inv | 14.6 | 14.5 | 13.7 | 13.0 | 59.5 | 61.2 | 58.6 | 57.7 | 11,515 | 15,855 | 16,025 | 14,758 |
| Soc | 15.5 | 15.2 | 14.2 | 13.7 | 57.0 | 56.2 | 52.7 | 53.0 | 8,925 | 10,580 | 11,265 | 10,783 |
| Ent | 13.5 | 13.2 | 12.8 | 12.1 | 49.3 | 49.8 | 49.4 | 48.7 | 11,357 | 14,346 | 15,100 | 14,296 |
| Conv | 13.7 | 13.1 | 12.7 | 12.2 | 48.0 | 47.7 | 46.6 | 45.9 | 8,935 | 10,837 | 11,386 | 10,331 |

TABLE 5

Correlations Among Years of Education, Prestige, and Income: By Age and Situs of Work

| Situs of Work | Education and Income | | | | Education and Prestige | | | | Prestige and Income | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Age | | | | Age | | | | Age | | | |
| | 26-35 | 36-45 | 46-55 | 56-65 | 26-35 | 36-45 | 46-55 | 56-65 | 26-35 | 36-45 | 46-55 | 56-65 |
| Realistic | .29 | .31 | .33 | .23 | .35 | .38 | .35 | .27 | .36 | .38 | .39 | .39 |
| Investigative | .33 | .54 | .59 | .52 | .74 | .77 | .75 | .76 | .37 | .63 | .65 | .59 |
| Social | .09 | .22 | .35 | .28 | .68 | .73 | .67 | .74 | .10 | .22 | .29 | .31 |
| Enterprising | .28 | .39 | .36 | .35 | .42 | .39 | .39 | .34 | .24 | .33 | .29 | .31 |
| Conventional | .38 | .36 | .35 | .37 | .55 | .40 | .38 | .44 | .31 | .29 | .38 | .37 |

TABLE 6.

Standard Deviation of Years of Education, Prestige, and Income: By Age and Situs of Work

| Situs of Work | Education | | | | Prestige | | | | Income | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Age | | | | Age | | | | Age | | | |
| | 26-35 | 36-45 | 46-55 | 56-65 | 26-35 | 36-45 | 46-55 | 56-65 | 26-35 | 36-45 | 46-55 | 56-65 |
| Real | 2.4 | 2.8 | 2.8 | 2.9 | 9.5 | 9.8 | 9.5 | 9.5 | 3,654 | 4,182 | 4,315 | 3,995 |
| Inv | 2.8 | 3.2 | 3.7 | 4.1 | 14.3 | 15.3 | 15.6 | 17.0 | 6,549 | 10,366 | 10,844 | 11,644 |
| Soc | 2.5 | 3.1 | 3.6 | 3.9 | 10.9 | 12.1 | 12.9 | 13.3 | 4,265 | 5,102 | 7,227 | 7,028 |
| Ent | 2.5 | 2.8 | 2.8 | 3.1 | 10.3 | 9.6 | 9.8 | 10.0 | 6,843 | 9,239 | 10,564 | 11,092 |
| Conv | 2.5 | 2.7 | 2.5 | 2.6 | 10.3 | 9.4 | 9.6 | 9.7 | 4,006 | 6,099 | 6,216 | 6,003 |

TABLE 7. Unstandardized Regression Coefficients (b) from Predicting Income in Different Situs and Age Groups

| | 26-35 | 36-45 | 46-55 | 56-65 | 26-35 | 36-45 | 46-55 | 56-65 |
|---|---|---|---|---|---|---|---|---|
| | Realistic | | | | Investigative | | | |
| Education | 271 | 274 | 326 | 179 | 393 | 475 | 649 | 454 |
| Prestige | 103 | 126 | 137 | 143 | 118 | 309 | 308 | 307 |
| Hours | 41 | 65 | 56 | -7 | 27 | 313 | 274 | 107 |
| Weeks | 126 | 123 | 124 | 97 | 252 | 178 | -35 | -156 |
| Intercept | -6335 | -7161 | -7758 | -2847 | -14873 | -33001 | -21343 | -5750 |
| $R^2$ | .20 | .22 | .23 | .19 | .20 | .46 | .48 | .36 |
| | Social | | | | Enterprising | | | |
| Education | 102 | 168 | 620 | 246 | 669 | 986 | 1062 | 954 |
| Prestige | 39 | 66 | 47 | 112 | 98 | 204 | 192 | 238 |
| Hours | -20 | -5 | -29 | -90 | 127 | 98 | 86 | -19 |
| Weeks | 158 | 116 | 230 | 181 | 226 | 199 | 270 | 189 |
| Intercept | -1490 | -1070 | -9852 | -3072 | -19769 | -23501 | -25591 | -17359 |
| $R^2$ | .08 | .08 | .17 | .15 | .15 | .20 | .17 | .17 |
| | Conventional | | | | All Men | | | |
| Education | 513 | 661 | 611 | 605 | 314 | 455 | 572 | 426 |
| Prestige | 44 | 97 | 170 | 151 | 84 | 165 | 187 | 203 |
| Hours | 55 | 165 | 104 | 77 | 63 | 106 | 96 | 15 |
| Weeks | 175 | 114 | 124 | 174 | 181 | 154 | 157 | 130 |
| Intercept | -11199 | -15463 | -14913 | -15742 | -9851 | -13823 | -15192 | -9508 |
| $R^2$ | .26 | .19 | .22 | .24 | .19 | .28 | .29 | .25 |

TABLE 8

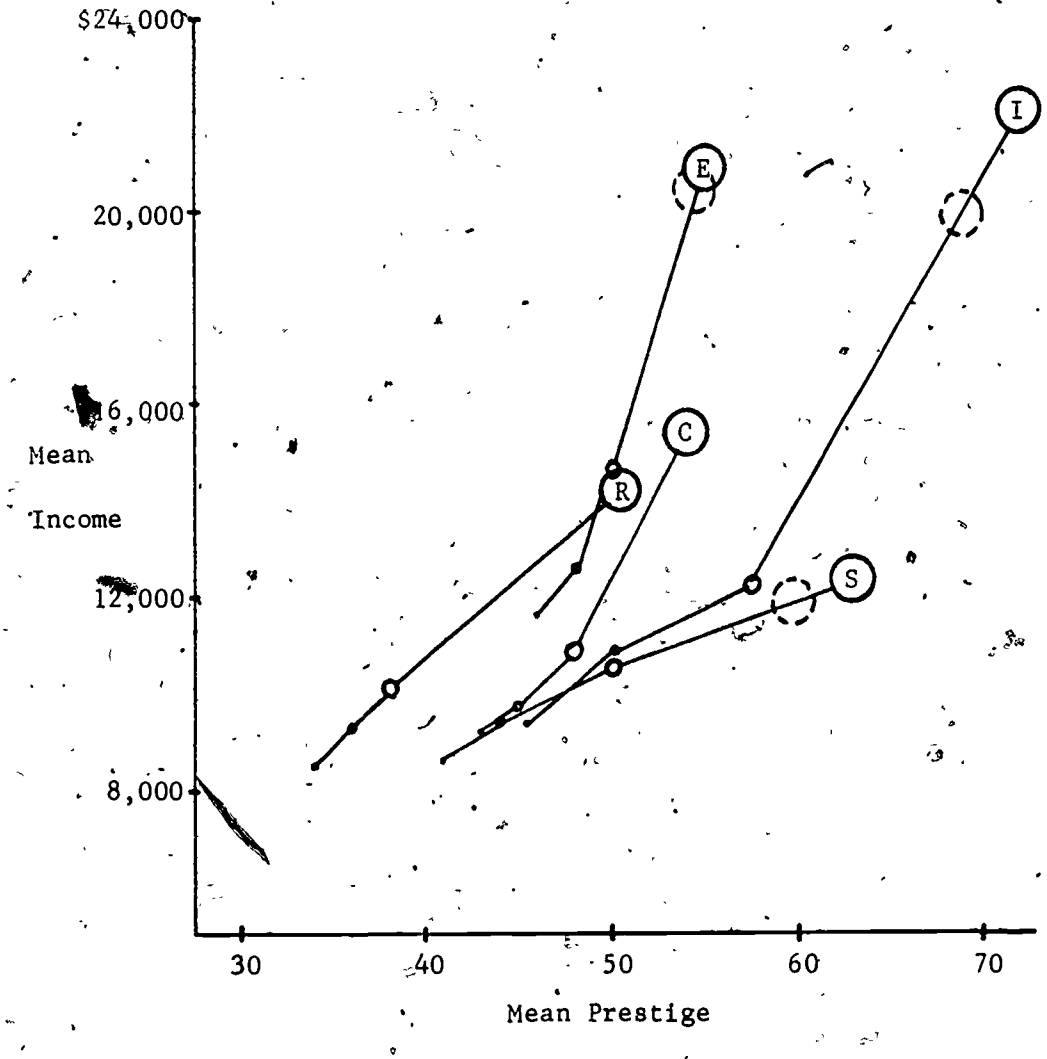
Percentage of Men Aged 36-65 in Each Situs of Work by Race and Educational Level

(Men Employed Full Time in 1970)

| Situs of Work | Years of Education | | | | | |
|---|---|---|---|---|---|---|
| | 8 or fewer | 9-11 | 12 | 13-15 | 16 or more | Total |
| | | | Whites | | | |
| Real | 82.0 | 70.5 | 55.2 | 31.8 | 10.2 | 53.8 |
| Inv | 3.4 | 3.7 | 5.1 | 8.1 | 20.8 | 7.4 |
| Art | 0.2 | 0.6 | 1.4 | 2.8 | 4.0 | 1.6 |
| Soc | 1.9 | 2.7 | 3.7 | 5.1 | 19.2 | 5.8 |
| Ent | 10.6 | 18.4 | 27.6 | 41.8 | 38.6 | 25.6 |
| Conv | 2.0 | 4.0 | 7.0 | 10.4 | 7.2 | 5.8 |
| (N) | (4040) | (3892) | (5951) | (2239) | (3164) | (19286) |
| | | | Blacks | | | |
| Real | 92.0 | 89.2 | 72.9 | 50.0 | 15.6 | 81.0 |
| Inv | 0.8 | 0.6 | 3.8 | 6.4 | 12.2 | 2.3 |
| Art | -- | -- | 0.8 | 2.1 | 4.4 | 0.5 |
| Soc | 2.2 | 2.6 | 6.1 | 13.8 | 46.7 | 6.3 |
| Ent | 3.7 | 3.7 | 8.0 | 10.6 | 12.2 | 5.4 |
| Conv | 1.2 | 4.0 | 8.4 | 17.0 | 8.9 | 4.5 |
| (N) | (727) | (351) | (262) | (94) | (90) | (1524) |

FIGURE 1

Mean Income and Prestige in Different Situses of Work: Men Aged 36-65 at Four Educational Levels




- 9-11 years of education
- 12 " " "
- 13-15 " " "
- 16 or more " "

Estimate of what mean income and prestige would be if the groups with 16 or more years of education had a mean of 16.4 years (for situses where the mean differs from 16.4)

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## Appendix A

### Holland Codes and Prestige of Detailed Occupations in the 1970 Census

Occupations are listed in ascending order according to prestige within each of the six major Holland categories. Prestige codes were obtained from Temme (1975).

Three-letter Holland codes are provided for each detailed occupation because these more detailed codes are useful in some research (for example, Nafziger et al., 1974). Holland (1973) lists empirically derived codes for approximately 450 titles. These were used to recode corresponding detailed census titles. Viernstein (1972) has developed a scheme for estimating Holland codes using the Dictionary of Occupational Titles (U.S. Department of Labor, 1965) codes for occupations. Detailed titles from the census for which no empirical code was already available were given Holland codes by looking up these occupational titles in the Dictionary and then using Viernstein's translation procedure.

| Census Code | Holland Code | Prestige | Occupational Title |
|---|---|---|---|
| Realistic | | | |
| 913 | RSC | 0.0 | Dishwashers |
| 911 | RSC | 0.0 | Busboys |
| 941 | RIC | 1.6 | Bootblacks |
| 983 | REC | 2.0 | Laundresses, private household |
| 953 | RCS | 3.7 | Ushers, recreation and amusement |
| 823 | RSE | 8.5 | Farm laborers, unpaid family workers |
| 750 | RSE | 9.3 | Carpenters helpers |
| 822 | RIC | 10.8 | Farm laborers, wage workers |
| 984 | REC | 11.4 | Maids and servants, private household |
| 754 | RCE | 11.5 | Garbage collectors |
| 764 | RIC | 12.8 | Vehicle washers and equipment cleaners |
| 625 | RCE | 13.8 | Produce graders and packers, except factory and farm |
| 916 | RSE | 13.8 | Food service workers, n.e.c.,* except private household |
| 711 | RSE | 14.1 | Parking attendants |
| 761 | RIE | 14.5 | Lumbermen, raftsmen and woodchoppers |
| 914 | RSE | 14.6 | Food counter and fountain workers |
| 960 | RSC | 15.0 | Crossing guards and bridge tenders |
| 762 | RIC | 15.3 | Stock handlers |
| 755 | RIC | 15.5 | Gardeners and groundskeepers, except farm |

* n.e.c.--not elsewhere classified

| | | | |
|---|---|---|---|
| 901 | REC | 16.9 | Chambermaids and maids, except private household |
| 932 | RCS | 17.2 | Attendants, recreation and amusement |
| 981 | RIS | 17.4 | Cooks, private household |
| 752 | RES | 18.1 | Fishermen and oystermen |
| 902 | REC | 18.2 | Cleaners and charwomen |
| 623 | RIS | 18.3 | Garage workers and gas station attendants |
| 943 | RSC | 18.3 | Elevator operators |
| 630 | RIC | 19.2 | Laundry and drycleaning operatives |
| 780 | RSE | 19.2 | Miscellaneous and not specified laborers |
| 670 | RIE | 19.9 | Carding, lapping and combing operatives |
| 664 | RIE | 20.2 | Shoemaking machine operatives |
| 751 | RSE | 20.5 | Construction laborers, except carpenters helpers |
| 604 | RIS | 21.0 | Bottling and canning operatives |
| 624 | RCE | 21.3 | Graders and sorters, manufacturing |
| 662 | RIC | 21.6 | Sawyers |
| 672 | RCS | 21.7 | Spinners, twisters and winders |
| 763 | RIC | 22.2 | Teamsters |
| 706 | RCE | 22.6 | Fork lift and tow motor operatives |
| 903 | RSE | 22.7 | Janitors and sextons |
| 674 | RIE | 22.9 | Textile operatives, n.e.c. |
| 753 | RSC | 23.0 | Freight and material handlers |

| | | | |
|---|---|---|---|
| 740 | RIC | 23.3 | Animal caretakers, except farm |
| 643 | RES | 23.4 | Packers and wrappers, except meat and produce |
| 915 | RSE | 23.5 | Waiters |
| 620 | RCE | 23.6 | Dyers |
| 621 | RIC | 24.2 | Filers, polishers, sanders and buffers |
| 611 | RIC | 24.2 | Clothing ironers and pressers |
| 714 | RSE | 24.2 | Taxicab drivers and chauffeurs |
| 760 | RSE | 24.8 | Longshoremen and stevedores |
| 642 | RCI | 25.1 | Oilers and greasers, except auto |
| 770 | RSE | 25.3 | Warehousemen, n.e.c. |
| 392 | REI | 25.6 | Weighers |
| 660 | RIC | 25.9 | Riveters and fasteners |
| 962 | RSE | 26.0 | Guards and watchmen |
| 542 | RIC | 26.2 | Shoe repairmen |
| 710 | RSE | 26.4 | Motormen; mine, factory, logging camp, etc. |
| 671 | RSI | 26.4 | Knitters, loopers and toppers |
| 933 | RSE | 26.4 | Attendants, personal service, n.e.c. |
| 501 | RIS | 26.5 | Millers: grain, flour and feed |
| 641 | RIC | 26.8 | Mixing operatives |
| 634 | RSE | 27.3 | Meat wrappers, retail trade |
| 612 | RCS | 27.4 | Cutting operatives, n.e.c. |
| 640 | RCS | 27.6 | Mine operatives, n.e.c. |
| 935 | RSE | 27.9 | Barbers |

| | | | |
|---|---|---|---|
| 633 | RSE | 28.0 | Meat cutters and butchers, manufacturing |
| 563 | RIE | 28.0 | Upholsterers |
| 622 | RCS | 28.3 | Furnacemen, smeltermen and pourers |
| 546 | RIC | 28.4 | Stone cutters and stone carvers |
| 450 | RCI | 28.7 | Inspectors, scalers and graders, log and lumber |
| 661 | RCS | 28.8 | Sailors and deckhands |
| 715 | RCE | 29.1 | Truck drivers |
| 605 | RCI | 29.2 | Chainmen, rodmen and axmen, survey |
| 613 | RCS | 29.3 | Dressmakers and seamstresses, except factory |
| 673 | RSI | 29.3 | Weavers |
| 690 | RIE | 29.3 | Miscellaneous and not specified operatives |
| 412 | RIE | 29.6 | Bulldozer operators |
| 644 | RCI | 29.6 | Painters, manufactured articles |
| 534 | RIE | 29.7 | Roofers and slaters |
| 824 | RSE | 29.8 | Farm service laborers, self employed |
| 703 | RCS | 30.2 | Bus drivers |
| 912 | RIS | 30.2 | Cooks, except private household |
| 533 | RIC | 30.3 | Rollers and finishers, metal |
| 636 | RCS | 30.3 | Milliners |
| 602 | RIC | 30.3 | Assemblers |
| 701 | RCS | 30.8 | Boatmen and canalmen |
| 665 | RIS | 30.8 | Solderers |
| 421 | RCS | 30.9 | Cement and concrete finishers |

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|---|---|---|---|
| 801 | RIE | 30.9 | Farmers, owners and tenants |
| 436 | RIE | 31.2 | Excavating and road machine operatives, except bulldozer |
| 510 | RCI | 31.3 | Painters, construction and maintenance |
| 551 | RCS | 31.7 | Tailors |
| 652 | RIC | 31.7 | Lathe and milling machine operatives |
| 424 | RCE | 31.8 | Cranemen, derrickmen and hoistmen |
| 651 | RIC | 31.8 | Grinding machine operatives |
| 614 | RIC | 32.0 | Drillers, earth |
| 681 | RIE | 32.1 | Winding operatives, n.e.c. |
| 656 | RIE | 32.2 | Punch and stamping operatives |
| 374 | RIC | 32.3 | Shipping and receiving clerks |
| 650 | RIC | 32.3 | Drill press operatives |
| 713 | RES | 32.4 | Railroad switchmen |
| 821 | REI | 32.6 | Farm foremen |
| 443 | RIC | 32.7 | Furniture and wood finishers |
| 483 | RIS | 32.8 | Loom fixers |
| 472 | RIE | 33.2 | Automobile body repairmen |
| 446 | RIS | 33.2 | Heat treaters, annealers and temperers |
| 680 | RIS | 33.4 | Welders and flamecutters |
| 635 | RIE | 33.5 | Metal platers |
| 381 | RES | 33.6 | Stock clerks and storekeepers |
| 420 | RCS | 33.7 | Carpet installers |
| 963 | RSE | 33.7 | Marshals and constables |
| 402 | RIS | 33.9 | Bakers |

| | | | |
|---|---|---|---|
| 512 | RCI | 34.0 | Paperhangers |
| 334 | RCS | 34.1 | Meter readers, utilities |
| 440 | RCS | 34.1 | Floor layers, except tile setters |
| 575 | RIS | 34.1 | Craftsmen and kindred workers, n.e.c. |
| 666 | RIC | 34.1 | Stationary firemen |
| 413 | RCI | 34.4 | Cabinetmakers |
| 610 | RIC | 34.4 | Checkers, examiners and inspectors, manufacturing |
| 331 | RCS | 34.5 | Mail carriers, post office |
| 503 | RSE | 34.5 | Molders, metal |
| 401 | RIE | 34.8 | Automobile accessories installers |
| 313 | RSC | 34.9 | Collectors, bill and account |
| 442 | RIE | 35.0 | Forgemen and hammermen |
| 965 | RSE | 35.1 | Sheriffs and bailiffs |
| 603 | RCS | 35.2 | Blasters and powdermen |
| 560 | RCS | 35.4 | Tile setters |
| 410 | RCS | 35.5 | Brickmasons and stonemasons |
| 520 | RCS | 35.5 | Plasterers |
| 704 | RSE | 35.5 | Conductors and motormen, urban rail transit |
| 653 | RIC | 35.6 | Precision machine operatives, n.e.c. |
| 403 | RSE | 35.7 | Blacksmiths |
| 712 | RES | 35.7 | Railroad brakemen |
| 645 | RIC | 36.0 | Photographic process workers |
| 405 | RAI | 36.2 | Bookbinders |

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|---|---|---|---|
| 631 | RSE | 36.2 | Meat cutters and butchers, except manufacturing |
| 435 | RIE | 36.3 | Engravers, except photoengravers |
| 506 | RIS | 36.6 | Opticians, lens grinders and polishers |
| 473 | RIE | 36.6 | Automobile mechanics |
| 445 | RIS | 36.7 | Glaziers |
| 626 | RCS | 37.3 | Heaters, metal |
| 964 | RSE | 37.3 | Policemen and detectives |
| 601 | RIC | 37.4 | Asbestos and insulation workers |
| 516 | RIC | 37.5 | Piano and organ tuners and repairmen |
| 482 | RSI | 37.5 | Household appliance installers and mechanics |
| 615 | RCS | 37.7 | Dry wall installers and lathers |
| 505 | RCI | 37.9 | Motion picture projectionists |
| 486 | RIE | 38.2 | Railroad and carshop repairmen |
| 492 | RIE | 38.4 | Miscellaneous mechanics and repairmen |
| 415 | RCI | 38.7 | Carpenters |
| 495 | RIE | 38.8 | Not specified mechanics and repairmen |
| 171 | RIS | 39.0 | Radio operators |
| 454 | RIE | 39.4 | Job and die setters, metal |
| 550 | RIC | 39.5 | Structural metal craftsmen |
| 404 | RIE | 40.4 | Boilermakers |
| 452 | RIC | 40.7 | Inspectors, n.e.c. |
| 552 | RCS | 41.0 | Telephone installers and repairmen |

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|---|---|---|---|
| 453 | RIS | 41.2 | Jewelers and watchmakers |
| 961 | RSE | 41.2 | Firemen, fire protection |
| 554 | RIE | 41.3 | Telephone linemen and splicers |
| 470 | REI | 41.4 | Air conditioning, heat and refrigeration mechanics |
| 461 | RIE | 41.5 | Machinists |
| 150 | RIC | 42.1 | Agricultural and biological technicians, except health |
| 535 | RIE | 42.4 | Sheetmetal workers and tinsmiths |
| 545 | RIS | 42.4 | Stationary engineers |
| 434 | RIC | 42.6 | Electrotypers and stereotypers |
| 484 | RCI | 42.6 | Office machine repairmen |
| 502 | RIE | 43.0 | Millwrights |
| 221 | REI | 43.2 | Officers, pilots and pursers, ship |
| 530 | RIC | 43.2 | Pressmen and plate printers, printing |
| 540 | RIE | 43.2 | Shipfitters |
| 522 | RIE | 43.4 | Plumbers and pipe fitters |
| 471 | RIE | 43.4 | Aircraft mechanics |
| 433 | RIE | 43.6 | Electric power linemen and cablemen |
| 422 | RAI | 43.6 | Compositors and typesetters |
| 430 | RIS | 43.8 | Electricians |
| 561 | RIS | 44.4 | Tool and die makers |
| 173 | RIE | 44.5 | Technicians, n.e.c. |
| 515 | RSC | 44.7 | Photoengravers and lithographers |
| 426 | RIA | 44.9 | Dental laboratory technicians |
| 441 | REI | 44.9 | Foremen, n.e.c. |

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|---|---|---|---|
| 025 | RIS | 45.3 | Foresters and conservationists |
| 456 | RSE | 45.7 | Locomotive firemen |
| 226 | RSE | 45.9 | Railroad conductors |
| 154 | RIE | 46.0 | Industrial engineering technicians |
| 525 | RIS | 46.8 | Power station operators |
| 455 | RES | 47.5 | Locomotive engineers |
| 475 | RIE | 47.6 | Data processing machine repairmen |
| 155 | RIE | 47.7 | Mechanical engineering technicians |
| 161 | RCI | 49.4 | Surveyors |
| 152 | RIE | 50.4 | Draftsmen |
| 170 | RIE | 51.2 | Flight engineers |
| 164 | RIE | 52.2 | Air traffic controllers |
| 172 | RIE | 55.5 | Tool programmers, numerical control |
| 134 | RIS | 58.0 | Trade, industrial, and technical college teachers |
| 022 | RIE | 62.0 | Sales engineers |
| 011 | RIE | 62.6 | Civil engineers |
| 020 | RIE | 64.5 | Mining engineers |
| 021 | RIE | 67.0 | Petroleum engineers |
| 014 | RIE | 67.1 | Mechanical engineers |
| Investigative | | | |
| 480 | ICR | 36.6 | Farm implement repairmen |
| 481 | ICR | 39.8 | Heavy equipment mechanics, including diesel |
| 485 | ISC | 41.0 | Radio and television repairmen |
| 514 | IRC | 44.1 | Pattern and model makers, except paper |

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|---|---|---|---|
| 343 | ICR | 44.4 | Computer and peripheral equipment operators |
| 151 | IRE | 45.5 | Chemical technicians |
| 162 | IRC | 46.4 | Engineering and science technicians, n.e.c. |
| 085 | ISR | 46.7 | Health technicians, n.e.c. |
| 083 | IRS | 47.1 | Radiologic technicians |
| 153 | IRE | 47.9 | Electrical and electronic engineering technicians |
| 080 | ISC | 52.4 | Clinical lab technicians |
| 156 | IRA | 56.5 | Mathematical technicians |
| 042 | IRS | 58.5 | Agricultural scientists |
| 055 | IRA | 59.5 | Operations and systems researchers and analysts |
| 064 | IES | 61.4 | Pharmacists |
| 073 | ISR | 61.4 | Health practitioners, n.e.c. |
| 061 | ISR | 61.8 | Chiropractors |
| 003 | IRC | 62.5 | Computer programmers |
| 195 | ICR | 62.7 | Research workers, not specified |
| 163 | IRC | 62.9 | Airplane pilots |
| 036 | IRA | 64.1 | Statisticians |
| 043 | IRA | 65.2 | Atmospheric and space scientists |
| 005 | IRC | 65.3 | Computer specialists, n.e.c. |
| 004 | IRE | 66.0 | Computer systems analysts |
| 023 | IRE | 66.0 | Engineers, n.e.c. |
| 063 | ISR | 67.0 | Optometrists |
| 095 | ICR | 67.6 | Urban and regional planners |

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|---|---|---|---|
| 012 | IRE | 67.9 | Engineers, electrical and electronic |
| 044 | ISR | 68.0 | Biological scientists |
| 045 | IAR | 68.1 | Chemists |
| 091 | IAS | 68.2 | Economists |
| 015 | IRE | 68.4 | Engineers, metallurgical and materials |
| 072 | IRS | 68.8 | Veterinarians |
| 034 | IEC | 68.9 | Actuaries |
| 006 | IRE | 69.0 | Aeronautical and astronautical engineers |
| 010 | IRE | 69.7 | Chemical engineers |
| 112 | ISR | 71.0 | Mathematics college teachers |
| 052 | IRS | 71.3 | Marine scientists |
| 103 | IRA | 71.4 | Atmospheric, earth, marine and space college teachers |
| 051 | IRA | 71.8 | Geologists |
| 110 | IAR | 72.0 | Physics college teachers |
| 102 | IRS | 72.1 | Agriculture college teachers |
| 105 | IAR | 72.8 | Chemistry college teachers |
| 104 | ISR | 72.8 | Biology college teachers |
| 093 | ISA | 73.0 | Psychologists |
| 116 | IAS | 73.2 | Economics college teachers |
| 111 | IRE | 73.2 | Engineering college teachers |
| 053 | IAR | 73.6 | Physicists and astronomers |
| 054 | IRS | 74.2 | Life and physical scientists, n.e.c. |
| 035 | IRA | 74.7 | Mathematicians |

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|---|---|---|---|
| 113 | ISA | 75.3 | Health specialities college teachers |
| 114 | ISA | 75.3 | Psychology college teachers |
| 062 | IRE | 76.7 | Dentists |
| 065 | ISA | 88.4 | Physicians, medical and osteopathic |

Artistic

| | | | |
|---|---|---|---|
| 543 | AIR | 39.2 | Sign painters and letterers |
| 444 | AIS | 39.3 | Furriers |
| 182 | AES | 40.4 | Dancers |
| 191 | AIR | 42.9 | Photographers |
| 425 | AIE | 43.5 | Decorators and window dressers |
| 185 | ASI | 45.0 | Musicians and composers |
| 175 | AIS | 51.8 | Actors |
| 190 | AIR | 52.5 | Painters and sculptors |
| 260 | AES | 53.5 | Advertising agents and salesmen |
| 194 | AIS | 53.7 | Writers, artists and entertainers, n.e.c. |
| 183 | AIS | 55.5 | Designers |
| 192 | AES | 62.0 | Public relations men and publicity writers |
| 184 | ASE | 65.3 | Editors and reporters |
| 123 | ASI | 68.1 | Art, drama, and music college teachers |
| 181 | AIS | 68.5 | Authors |
| 126 | ASE | 70.3 | English college teachers |
| 002 | AIR | 70.9 | Architects |

Social

| | | | |
|---|---|---|---|
| 980 | SRE | 9.8 | Child care workers, private household |
| 982 | SRE | 15.8 | Housekeepers, private household |
| 952 | SCE | 19.0 | School monitors |
| 934 | SCE | 20.9 | Baggage porters and bellhops |
| 942 | SRE | 23.0 | Child care workers, except private household |
| 923 | SRI | 27.0 | Health trainees |
| 382 | SCE | 29.1 | Teacher aides, except school monitors |
| 320 | SEC | 30.3 | Enumerators and interviewers |
| 910 | SEC | 31.0 | Bartenders |
| 924 | SAI | 33.3 | Lay midwives |
| 925 | SRI | 33.6 | Nursing aides, orderlies and attendants |
| 950 | SRE | 36.6 | Housekeepers, except private household |
| 084 | SRI | 37.2 | Therapy assistants |
| 922 | SRI | 38.5 | Health aides, except nursing |
| 944 | SAC | 38.5 | Hairdressers and cosmetologists |
| 180 | SRE | 38.9 | Athletes and kindred workers |
| 216 | SRE | 41.5 | Managers and superintendents, building |
| 954 | SRE | 43.2 | Welfare service aides |
| 926 | SAI | 43.3 | Practical nurses |
| 323 | SER | 43.6 | Expediters and production controllers |
| 921 | SAI | 43.9 | Dental assistants |
| 390 | SCE | 44.2 | Ticket, station and express agents |

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|---|---|---|---|
| 215 | SIE | 45.8 | Inspectors, except construction; public administration |
| 074 | SIE | 47.2 | Dieticians |
| 145 | SAE | 49.1 | Teachers, except college and university, n.e.c. |
| 213 | SIE | 49.[illegible] | Construction inspectors, public administration |
| 165 | SEC | 50.3 | Embalmers |
| 143 | SAI | 50.9 | Prekindergarten and kindergarten teachers |
| 101 | SCE | 51.9 | Recreation workers |
| 201 | SCE | 51.9 | Assessors, controllers and treasurers; local public administration |
| 075 | SIA | 53.8 | Registered nurses |
| 090 | SAI | 53.9 | Religious workers, n.e.c. |
| 211 | SEC | 54.2 | Funeral directors |
| 081 | SAI | 55.3 | Dental hygienists |
| 082 | SAI | 55.5 | Health record technicians |
| 076 | SIR | 56.0 | Therapists |
| 223 | SCE | 56.0 | Officers of lodges, societies and unions |
| 033 | SAI | 56.4 | Archivists and curators |
| 141 | SIA | 58.0 | Adult education teachers |
| 086 | SAI | 59.6 | Clergymen |
| 100 | SIA | 60.7 | Social workers |
| 024 | SRI | 60.8 | Farm management advisors |
| 212 | SCE | 60.9 | Health administrators |

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|---|---|---|---|
| 026 | SAE | 61.9 | Home management advisors |
| 144 | SAE | 62.7 | Secondary school teachers |
| 142 | SAI | 63.6 | Elementary school teachers |
| 032 | SAI | 63.7 | Librarians |
| 174 | SEA | 64.6 | Vocational and educational counselors |
| 071 | SIR | 64.7 | Podiatrists |
| 092 | SIA | 66.8 | Political scientists |
| 140 | SIA | 67.4 | Teachers, college and university, subject not specified |
| 124 | SRE | 68.8 | Coaches and physical education college teachers |
| 235 | SEI | 68.8 | School administrators, college |
| 096 | SIA | 69.0 | Social scientists, n.e.c. |
| 133 | SAI | 69.2 | Theology college teachers |
| 130 | SAE | 69.3 | Foreign language college teachers |
| 120 | SEI | 70.4 | History college teachers |
| 094 | SIA | 71.1 | Sociologists |
| 240 | SEI | 71.2 | School administrators, elementary and secondary |
| 135 | SIA | 71.9 | Miscellaneous teachers, college and university |
| 121 | SIA | 72.0 | Sociology college teachers |
| 131 | SAE | 73.4 | Home economics college teachers |
| 122 | SIA | 73.7 | Social science teachers, n.e.c. |
| 125 | SAE | 74.9 | Education college teachers |

Enterprising

| | | | |
|---|---|---|---|
| 266 | ESC | 5.3 | Newsboys |
| 264 | ESC | 25.2 | Hucksters and peddlers |
| 262 | ESC | 27.5 | Demonstrators |
| 705 | ESR | 30.5 | Deliverymen and routemen |
| 283 | ESC | 30.7 | Sales clerks, retail trade |
| 940 | ESC | 33.4 | Boarding and lodging house keepers |
| 315 | ESC | 38.2 | Dispatchers and starters, vehicle |
| 261 | ESC | 38.4 | Auctioneers |
| 245 | ESI | 38.5 | Retail managers, gas station; salaried |
| 245 | ESI | 38.6 | Retail managers, gas stations; self employed |
| 802 | ERI | 39.1 | Farm managers |
| 245 | ESI | 39.6 | Retail managers, food stores; self employed |
| 284 | ESC | 39.7 | Salesmen, retail trade |
| 285 | ECS | 41.0 | Salesmen of services and construction |
| 245 | ESC | 42.7 | Personal services managers |
| 245 | ESC | 42.7 | Communications, utilities, and sanitary services managers; self employed |
| 282 | ESC | 43.4 | Sales representatives, wholesale trade |
| 230 | ESC | 43.7 | Restaurant, cafe, and bar managers |
| 245 | ESI | 44.5 | Retail managers, other retail; self employed |
| 931 | ESA | 44.7 | Airline stewardesses |
| 245 | ESC | 44.9 | Transportation managers, self employed |

| | | | |
|---|---|---|---|
| 245 | ESC | 45.4 | Construction managers, salaried |
| 245 | ESI | 45.6 | Retail managers, general merchandise; self employed |
| 245 | ESI | 45.9 | Retail managers, hardware; self employed |
| 245 | ESC | 46.1 | Personal services managers; salaried |
| 245 | ESI | 46.2 | Retail managers, food stores; salaried |
| 245 | ESI | 46.3 | Retail managers, furniture; self employed |
| 245 | ESC | 46.4 | Business and repair services managers; self employed |
| 245 | ESI | 46.5 | Retail managers, motor vehicles; self employed |
| 281 | ESC | 47.1 | Sales representatives, manufacturing industries |
| 245 | ESI | 47.6 | Retail managers, apparel; self employed |
| 245 | ESI | 47.7 | Retail managers, other retail; salaried |
| 270 | ECS | 47.8 | Real estate agents and brokers |
| 245 | ESI | 47.9 | Retail managers, motor vehicles; salaried |
| 231 | ESC | 48.0 | Sales managers and department heads, retail trade |
| 245 | ESI | 48.0 | Retail managers, hardware; salaried |
| 245 | ESC | 48.3 | Managers, all other industries; self employed |
| 245 | ESI | 48.4 | Retail managers, general merchandise; salaried |
| 193 | EAR | 48.8 | Radio and TV announcers |

| | | | |
|---|---|---|---|
| 203 | ECS | 49.0 | Buyers and shippers, farm products |
| 224 | ERC | 49.0 | Postmasters and mail superintendants |
| 245 | ESC | 49.1 | Managers, durable goods manufacturing |
| 245 | ESI | 49.1 | Retail managers, apparel; salaried |
| 245 | ESC | 49.3 | Managers, nondurable goods manufacturing; self employed |
| 225 | ECS | 49.5 | Purchasing agents and buyers, n.e.c. |
| 265 | ECS | 49.7 | Insurance agents, brokers and underwriters |
| 245 | ESI | 49.7 | Wholesale trade managers; self employed |
| 245 | ESI | 50.4 | Retail managers, furniture; salaried |
| 205 | ECS | 50.7 | Buyers, wholesale and retail trade |
| 245 | ESC | 52.8 | Transportation managers; salaried |
| 245 | ESC | 54.6 | Construction managers; self employed |
| 245 | ESI | 55.7 | Wholesale trade managers; salaried |
| 222 | ESC | 55.8 | Officers and administrators, public administration |
| 245 | ESC | 56.1 | Business and repair services managers; salaried |
| 326 | ESC | 56.3 | Insurance adjusters, examiners and investigators |
| 245 | ESC | 56.3 | Communications, utilities and sanitary services managers; salaried |
| 220 | ESC | 57.3 | Office managers, n.e.c. |
| 245 | ESC | 57.3 | Finance, insurance and real estate managers; self employed |
| 056 | ESC | 58.3 | Personnel and labor relations workers |
| 363 | ECS | 59.7 | Real estate appraisers |

| | | | |
|---|---|---|---|
| 202 | ECI | 60.1 | Bank officers and finance managers |
| 245 | ESC | 60.1 | Managers, all other industries; salaried |
| 233 | ESC | 60.8 | Sales managers, except retail trade |
| 245 | ESC | 61.3 | Managers, nondurable goods manufacturing; salaried |
| 245 | ESC | 61.7 | Finance, insurance and real estate managers; salaried |
| 245 | ESC | 61.8 | Managers, durable goods manufacturing; salaried |
| 013 | ERI | 64.1 | Industrial engineers |
| 271 | ESA | 65.5 | Stock and bond salesmen |
| 031 | EAS | 76.4 | Lawyers |
| 132 | EAS | 77.1 | Law college teachers |
| 030 | EAS | 78.0 | Judges |
| Conventional | | | |
| 333, 383 | CSR | 16.7 | Messengers, including telegraph and office boys |
| 310 | CSI | 27.4 | Cashiers |
| 663 | CRE | 28.9 | Sewers and stitchers |
| 344 | CRI | 30.1 | Duplicating machine operators |
| 332 | CER | 30.8 | Mail handlers, except post office |
| 314 | CES | 33.0 | Counter clerks, except food |
| 330 | CSA | 33.1 | Library attendants and assistants |
| 355 | CIR | 34.0 | Office machine operators |
| 325 | CRS | 34.9 | File clerks |
| 311 | CES | 35.3 | Clerical assistants, social welfare |
| 385 | CSE | 35.7 | Telephone operators |

| | | | |
|---|---|---|---|
| 364 | CSE | 36.3 | Receptionists |
| 350 | CRI | 36.4 | Tabulating machine operators |
| 391 | CIE | 37.6 | Typists |
| 342 | CIS | 37.7 | Calculating machine operators |
| 303 | CRI | 38.5 | Billing clerks |
| 394,395 | CES | 39.6 | Miscellaneous and not specified clerical workers |
| 345 | CRI | 39.9 | Keypunch operators |
| 384 | CIR | 40.5 | Telegraph operators |
| 362 | CIE | 40.7 | Proofreaders |
| 341 | CIS | 40.8 | Bookkeeping and billing machine operators |
| 361 | CER | 41.2 | Postal clerks |
| 375 | CIS | 41.5 | Statistical clerks |
| 376 | CES | 42.5 | Stenographers |
| 301 | CRS | 43.7 | Bank tellers |
| 360 | CIE | 44.7 | Payroll and timekeeping clerks |
| 305 | CSI | 45.9 | Bookkeepers |
| 371 | CSA | 47.1 | Medical secretaries |
| 372 | CSA | 47.7 | Secretaries, n.e.c. |
| 321 | CIS | 48.3 | Estimators and investigators, n.e.c. |
| 370 | CSA | 49.0 | Legal secretaries |
| 312 | CES | 52.3 | Clerical supervisors, n.e.c. |
| 210 | CES | 56.4 | Creditmen |
| 001 | CES | 60.6 | Accountants |
| 115 | CSE | 73.3 | Business and commerce college teachers |

Note: Allocated and apprentice census categories are not listed. Also, 36 types of managers with the same census code (245) are listed separately here.

# Appendix B

## Additional Results by Age and Situs of Work:

## Means, Standard Deviations, and Correlations of Years Education, Occupational Prestige, Hours Worked, Weeks Worked, and Income

TABLE B-1

Means and Standard Deviations for Men

in All Statuses of Work (Except Artistic)

| | | Age | | | |
|---|---|---|---|---|---|
| | | 26-35 | 36-45 | 46-55 | 56-65 |
| Years education | Mean | 12.6 | 12.0 | 11.5 | 10.7 |
| | SD | 2.9 | 3.3 | 3.3 | 3.4 |
| Occup prestige | Mean | 43.1 | 43.3 | 41.8 | 40.3 |
| | SD | 14.1 | 14.1 | 13.4 | 13.5 |
| Hours/week | Mean | 45.3 | 45.4 | 44.6 | 44.0 |
| | SD | 7.2 | 7.4 | 7.0 | 6.7 |
| Weeks/year | Mean | 49.2 | 49.5 | 49.5 | 49.0 |
| | SD | 5.9 | 5.2 | 5.3 | 6.3 |
| Income/year | Mean | 9,456 | 11,232 | 11,248 | 10,242 |
| | SD | 5,169 | 7,233 | 7,878 | 7,764 |
| Age | Mean | 30.3 | 40.7 | 50.3 | 59.6 |
| | SD | 2.9 | 2.8 | 2.8 | 2.7 |
| (N) | | (7651) | (7505) | (7143) | (4332) |

TABLE B-2

Means and Standard Deviations for Realistic Work

| | | Age | | | |
|---|---|---|---|---|---|
| | | 26-35 | 36-45 | 46-55 | 56-65 |
| Years education | Mean | 11.2 | 10.5 | 10.1 | 9.4 |
| | SD | 2.4 | 2.8 | 2.8 | 2.9 |
| Occup prestige | Mean | 34.7 | 34.9 | 34.3 | 33.3 |
| | SD | 9.5 | 9.8 | 9.5 | 9.5 |
| Hours/week | Mean | 44.5 | 44.2 | 43.6 | 42.9 |
| | SD | 6.8 | 6.6 | 6.2 | 5.7 |
| Weeks/year | Mean | 49.2 | 49.1 | 49.1 | 48.7 |
| | SD | 5.7 | 5.8 | 5.9 | 6.5 |
| Income/year | Mean | 8,348 | 8,992 | 8,779 | 8,009 |
| | SD | 3,654 | 4,182 | 4,315 | 3,995 |
| Age | Mean | 30.2 | 40.7 | 50.3 | 59.6 |
| | SD | 2.9 | 2.8 | 2.8 | 2.7 |
| (N) | | (4060) | (3934) | (3942) | (2503) |

TABLE B-3

Means and Standard Deviations for Investigative Work

| | | Age | | | |
|---|---|---|---|---|---|
| | | 26-35 | 36-45 | 46-55 | 56-65 |
| Years education | Mean | 14.6 | 14.5 | 13.7 | 13.0 |
| | SD | 2.8 | 3.2 | 3.7 | 4.1 |
| Occup prestige | Mean | 59.5 | 61.2 | 58.6 | 57.7 |
| | SD | 14.3 | 15.3 | 15.6 | 17.0 |
| Hours/week | Mean | 44.7 | 45.2 | 44.5 | 44.2 |
| | SD | 7.1 | 7.5 | 7.1 | 6.8 |
| Weeks/year | Mean | 49.5 | 50.1 | 50.3 | 50.1 |
| | SD | 6.2 | 4.3 | 2.7 | 3.0 |
| Income/year | Mean | 11,515 | 15,855 | 16,025 | 14,758 |
| | SD | 6,549 | 10,366 | 10,844 | 11,644 |
| Age | Mean | 30.2 | 40.4 | 50.0 | 59.6 |
| | SD | 2.9 | 2.8 | 2.8 | 2.7 |
| (N) | | (786) | (675) | (506) | (242) |

TABLE B-4

Means and Standard Deviations for Social Occupations

| | | Age | | | |
|---|---|---|---|---|---|
| | | 26-35 | 36-45 | 46-55 | 56-65 |
| Years education | Mean | 15.5 | 15.2 | 14.2 | 13.7 |
| | SD | 2.5 | 3.1 | 3.6 | 3.9 |
| Occup prestige | Mean | 57.0 | 56.2 | 52.7 | 53.0 |
| | SD | 10.9 | 12.1 | 12.9 | 13.3 |
| Hours/week | Mean | 46.2 | 46.7 | 46.6 | 45.7 |
| | SD | 7.8 | 8.2 | 7.9 | 7.8 |
| Weeks/year | Mean | 47.5 | 47.9 | 48.5 | 47.7 |
| | SD | 7.1 | 6.3 | 6.5 | 7.9 |
| Income/year | Mean | 8,925 | 10,580 | 11,265 | 10,783 |
| | SD | 4,265 | 5,102 | 7,227 | 7,028 |
| Age | Mean | 30.3 | 40.6 | 50.1 | 59.5 |
| | SD | 2.9 | 2.9 | 2.9 | 2.7 |
| (N) | | (565) | (492) | (406) | (226) |

TABLE B-5

Means and Standard Deviations for Enterprising Work

| | | Age | | | |
|---|---|---|---|---|---|
| | | 26-35 | 36-45 | 46-55 | 56-65 |
| Years education | Mean | 13.5 | 13.2 | 12.8 | 12.1 |
| | SD | 2.5 | 2.8 | 2.8 | 3.1 |
| Occup prestige | Mean | 49.3 | 49.8 | 49.4 | 48.7 |
| | SD | 10.3 | 9.6 | 9.8 | 10.0 |
| Hours/week | Mean | 47.5 | 47.9 | 46.8 | 46.7 |
| | SD | 7.7 | 7.9 | 7.6 | 7.9 |
| Weeks/year | Mean | 49.7 | 50.2 | 50.2 | 49.7 |
| | SD | 5.4 | 3.9 | 3.8 | 5.8 |
| Income/year | Mean | 11,357 | 14,346 | 15,100 | 14,296 |
| | SD | 6,843 | 9,239 | 10,564 | 11,092 |
| Age | Mean | 30.5 | 40.7 | 50.3 | 59.6 |
| | SD | 2.8 | 2.8 | 2.8 | 2.7 |
| (N) | | (1796) | (1984) | (1884) | (1073) |

TABLE B-6

Means and Standard Deviations for Conventional Work

| | | Age | | | |
|---|---|---|---|---|---|
| | | 26-35 | 36-45 | 46-55 | 56-65 |
| Years education | Mean | 13.7 | 13.1 | 12.7 | 12.2 |
| | SD | 2.5 | 2.7 | 2.5 | 2.6 |
| Occup prestige | Mean | 48.0 | 47.7 | 46.6 | 45.9 |
| | SD | 10.3 | 9.4 | 9.6 | 9.7 |
| Hours/week | Mean | 43.8 | 44.3 | 43.1 | 42.2 |
| | SD | 6.6 | 6.8 | 6.5 | 5.6 |
| Weeks/year | Mean | 49.0 | 50.2 | 49.8 | 49.3 |
| | SD | 6.9 | 3.8 | 5.3 | 7.2 |
| Income/year | Mean | 8,935 | 10,837 | 11,386 | 10,331 |
| | SD | 4,006 | 6,099 | 6,216 | 6,003 |
| Age | Mean | 30.0 | 40.4 | 50.3 | 59.5 |
| | SD | 2.9 | 2.8 | 2.8 | 2.6 |
| (N) | | (444) | (420) | (405) | (288) |

TABLE B-7

Correlations for Men in All Situses of Work (Except Artistic):

Men 26-35 Above the Diagonal and Men 36-45 Below the Diagonal

| | Educ | Pres | Hours | Weeks | Income | R[a] | I | S | E | C |
|---|---|---|---|---|---|---|---|---|---|---|
| Years educ | | .64 | .05 | -.01 | .32 | -.49 | .24 | .29 | .18 | .10 |
| Prestige | .64 | | .07 | .02 | .35 | -.63 | .39 | .28 | .24 | .09 |
| Hours/week | .10 | .12 | | .04 | .12 | -.12 | -.03 | .04 | .17 | -.05 |
| Weeks/year | .08 | .09 | .07 | | .21 | .00 | .01 | -.08 | .05 | -.01 |
| Income/year | .43 | .48 | .18 | .16 | | -.23 | .14 | -.03 | .20 | .17 |
| Real | -.49 | -.63 | -.17 | -.07 | -.32 | | -.36 | -.30 | -.59 | -.26 |
| Inv | .24 | .40 | -.01 | .04 | .20 | -.33 | | -.10 | -.19 | -.08 |
| Soc | .26 | .24 | .05 | -.08 | -.02 | -.28 | -.08 | | -.16 | -.07 |
| Ent | .22 | .28 | .20 | .08 | .26 | -.63 | -.19 | -.16 | | -.14 |
| Conv | .08 | .08 | -.04 | .03 | .03 | -.26 | -.08 | -.06 | -.15 | |

[a]Dummy variable

TABLE B-8

Correlations for Men in All Situses of Work (Except Artistic):

Men 46-55 Above the Diagonal and Men 56-65 Below the Diagonal

| | Educ | Pres | Hours | Weeks | Income | R[a] | I | S | E | C |
|---|---|---|---|---|---|---|---|---|---|---|
| Years educ | | .59 | .09 | .07 | .44 | -.46 | .19 | .21 | .25 | .09 |
| Prestige | .55 | | .10 | .11 | .48 | -.61 | .35 | .20 | .34 | .09 |
| Hours/week | .11 | .13 | | .06 | .14 | -.16 | -.01 | .05 | .19 | -.05 |
| Weeks/year | .06 | .08 | .06 | | .16 | -.08 | .04 | -.05 | .08 | .01 |
| Income/year | .39 | .47 | .09 | .15 | | -.35 | .17 | .00 | .29 | .00 |
| Real | -.44 | -.61 | -.20 | -.05 | -.34 | | -.31 | -.27 | -.66 | -.27 |
| Inv | .16 | .31 | .01 | .04 | .14 | -.28 | | -.07 | -.16 | -.07 |
| Soc | .21 | .22 | .06 | -.05 | .02 | -.27 | -.06 | | -.15 | .06 |
| Ent | .24 | .36 | .23 | .06 | .30 | -.67 | -.14 | -.13 | | -.15 |
| Conv | .12 | .11 | -.07 | .01 | .00 | -.31 | -.06 | -.06 | -.15 | |

[a]Dummy variable

TABLE B-9

Correlations for Realistic Work (Above the Diagonal)

and Investigative Work (Below the Diagonal)

| | Educ | Pres | Hours | Weeks | Income |
|---|---|---|---|---|---|
| **Ages 26-35** | | | | | |
| Years educ | | .35 | -.03 | .07 | .29 |
| Prestige | .74 | | -.01 | .14 | .36 |
| Hours/week | .13 | .21 | | .03 | .08 |
| Weeks/year | -.13 | -.09 | -.04 | | .25 |
| Income/year | .33 | .37 | .10 | .19 | |
| **Ages 36-45** | | | | | |
| Years educ | | .38 | .03 | .09 | .31 |
| Prestige | .77 | | .01 | .11 | .38 |
| Hours/week | .18 | .29 | | .05 | .12 |
| Weeks/year | .01 | .00 | .03 | | .22 |
| Income/year | .54 | .63 | .39 | .08 | |
| **Ages 46-55** | | | | | |
| Years educ | | .35 | .01 | .07 | .33 |
| Prestige | .75 | | -.03 | .11 | .39 |
| Hours/week | .24 | .23 | | .03 | .08 |
| Weeks/year | -.01 | -.01 | .08 | | .22 |
| Income/year | .59 | .65 | .33 | .00 | |
| **Ages 56-65** | | | | | |
| Years educ | | .27 | .04 | .07 | .23 |
| Prestige | .76 | | -.04 | .10 | .39 |
| Hours/week | .27 | .33 | | .05 | -.01 |
| Weeks/year | -.02 | -.06 | .03 | | .20 |
| Income/year | .52 | .59 | .25 | -.07 | |

TABLE B-10

Correlations for Social Work (Above the Diagonal)

and Enterprising Work (Below the Diagonal)

| | Educ | Pres | Hours | Weeks | Income |
|---|---|---|---|---|---|
| | | Ages 26-35 | | | |
| Years educ | | .68 | .07 | -.12 | .09 |
| Prestige | .42 | | .02 | -.13 | .10 |
| Hours/week | -.12 | -.08 | | .13 | .00 |
| Weeks/year | -.05 | .00 | .08 | | .24 |
| Income/year | .28 | .24 | .12 | .18 | |
| | | Ages 36-45 | | | |
| Years educ | | .73 | .13 | .02 | .22 |
| Prestige | .39 | | .02 | -.06 | .22 |
| Hours/week | -.07 | -.04 | | .23 | .04 |
| Weeks/year | .09 | .10 | .02 | | .13 |
| Income/year | .39 | .33 | .06 | .13 | |
| | | Ages 46-55 | | | |
| Years educ | | .67 | .13 | -.07 | .35 |
| Prestige | .39 | | .09 | .00 | .29 |
| Hours/week | -.07 | -.03 | | .18 | .05 |
| Weeks/year | .08 | .08 | .05 | | .18 |
| Income/year | .36 | .29 | .04 | .14 | |
| | | Ages 56-65 | | | |
| Years educ | | .74 | .13 | .00 | .28 |
| Prestige | .34 | | .08 | .04 | .31 |
| Hours/week | -.08 | -.06 | | .18 | -.03 |
| Weeks/year | .06 | .05 | .03 | | .20 |
| Income/year | .35 | .31 | -.05 | .13 | |

TABLE B-11

Correlations for Conventional Work

| | Educ | Pres | Hours | Weeks | Income |
|---|---|---|---|---|---|
| **Ages 26-35** | | | | | |
| Years educ | | .55 | .01 | .01 | .38 |
| Prestige | | | .03 | .06 | .31 |
| Hours/week | | | | .04 | .11 |
| Weeks/year | | | | | .32 |
| Income/year | | | | | |
| **Ages 36-45** | | | | | |
| Years educ | | .40 | .04 | .06 | .36 |
| Prestige | | | .10 | .06 | .29 |
| Hours/week | | | | .02 | .21 |
| Weeks/year | | | | | .10 |
| Income/year | | | | | |
| **Ages 46-55** | | | | | |
| Years educ | | .38 | .07 | .01 | .35 |
| Prestige | | | .06 | .17 | .38 |
| Hours/week | | | | .06 | .15 |
| Weeks/year | | | | | .16 |
| Income/year | | | | | |
| **Ages 56-65** | | | | | |
| Years educ | | .44 | .07 | -.05 | .37 |
| Prestige | | | .16 | .00 | .37 |
| Hours/week | | | | .07 | .15 |
| Weeks/year | | | | | .20 |
| Income/year | | | | | |

TABLE B-12

Mean Income of Men 36-65: By Education and Situs of Work

| Situs of Work | Years of Education | | | | | |
|---|---|---|---|---|---|---|
| | 8 or fewer | 9-11 | 12 | 13-15 | 16 or more | Total |
| Real | 7,309 | 8,533 | 9,325 | 10,067 | 14,141 | 8,674 |
| Inv | 7,862 | 9,372 | 10,914 | 12,206 | 21,946 | 15,729 |
| Art | a | 10,675 | 11,320 | 14,203 | 15,537 | 13,652 |
| Soc | 7,301 | 8,609 | 9,427 | 10,464 | 12,304 | 10,868 |
| Ent | 9,788 | 11,607 | 12,599 | 14,628 | 20,796 | 14,623 |
| Conv | 7,792 | 9,154 | 9,770 | 10,839 | 15,360 | 10,906 |
| Total | 7,614 | 9,169 | 10,372 | 12,364 | 18,123 | 11,054 |

a- Fewer than 10 cases

TABLE B-13

Mean Prestige of Men 36-65: By Education and Situs of Work

| Situs of Work | Years of Education | | | | | |
|---|---|---|---|---|---|---|
| | 8 or fewer | 9-11 | 12 | 13-15 | 16 or more | Total |
| Real | 30.9 | 33.6 | 36.0 | 38.4 | 50.5 | 34.3 |
| Inv | 41.6 | 45.3 | 50.2 | 57.4 | 71.7 | 59.7 |
| Art | a | 50.7 | 52.9 | 57.1 | 61.2 | 57.0 |
| Soc | 41.3 | 41.2 | 43.9 | 50.0 | 62.8 | 54.3 |
| Ent | 44.0 | 45.9 | 48.0 | 49.7 | 55.1 | 49.4 |
| Conv | 41.0 | 42.7 | 44.9 | 48.0 | 54.0 | 46.8 |
| Total | 33.1 | 37.0 | 41.2 | 46.8 | 59.7 | 42.3 |

[a] Fewer than 10 cases

TABLE B-14

Mean Years of Education of Men 36-65: By Educational Group and Situs of Work

| Situs of Work | Years of Education | | | | | |
|---|---|---|---|---|---|---|
| | 8 or fewer | 9-11 | 12 | 13-15 | 16 or more | Total |
| Real | 6.8 | 10.0 | 12.0 | 13.7 | 16.5 | 10.1 |
| Inv | 7.0 | 10.1 | 12.0 | 14.0 | 17.2 | 14.0 |
| Art | a | 9.9 | 12.0 | 14.1 | 16.8 | 14.1 |
| Soc | 6.8 | 10.2 | 12.0 | 13.9 | 17.4 | 14.5 |
| Ent | 7.1 | 10.2 | 12.0 | 13.9 | 16.7 | 12.8 |
| Conv | 7.3 | 10.2 | 12.0 | 13.9 | 16.4 | 12.7 |
| Total | 6.8 | 10.1 | 12.0 | 13.9 | 16.9 | 11.6 |

a Fewer than 10 cases



END