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4

SOCIOECONOMIC INDEXES FOR OCCUPATIONS: A REVIEW, UPDATE, AND CRITIQUE

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Following a review of the history and sources of socioeconomic indexes for occupations, we estimate a new set of indexes for 1990 Census occupation lines, based on relationships between the prestige ratings obtained by Nakao and Treas in the 1989 General Social Survey and characteristics of occupational incumbents in the 1990 Census. We also investigate theoretical and empirical relationships among socioeconomic and prestige indexes, using data from the 1994 General Social Survey. Many common occupations, especially those held by women, do not fit the typical relationships among prestige, education, and earnings. The fit between prestige and socioeconomic characteristics of occupations can be improved by statistical transformation of the variables. However, in rudimentary models of occupational stratification, prestige-validated socioeconomic indexes are of limited value. They give too much weight to occupational earnings, and they ignore intergenerational relationships between occupational education and occupational earnings. Levels of occupational education appear to define the main dimension of occupational persistence across and within generations. We conclude that composite indexes of occupational socioeconomic status are scientifically obsolete.

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1. SOCIOECONOMIC STATUS

Socioeconomic status is typically used as a shorthand expression for variables that characterize the placement of persons, families, households, census tracts, or other aggregates with respect to the capacity to create or consume goods that are valued in our society. Thus socioeconomic status may be indicated by educational attainment, occupational standing, social class, income (or poverty), wealth, and tangible possessions—such as home appliances or libraries, houses, cars, boats, or by degrees from elite colleges and universities. At some times, it has also been taken to include measures of participation in social, cultural, or political life. It is an empirical rather than a conceptual or theoretical question whether we should take socioeconomic status as no more than a convenient shorthand expression for variables like these, or whether such variables, taken collectively, behave as if they formed a unitary construct.[1]

There is a long standing and well-developed methodology for measuring one aspect of socioeconomic status using characteristics of occupations or of their incumbents. This has practical advantages because past as well as current occupations can be ascertained reliably, even by proxy. Occupational status also appears to indicate a reliable and powerful characteristic of persons or households by dint of its temporal stability and substantial correlation with other social and economic variables. At the same time, a scalar measure of occupational standing obviously cannot reflect everything about a job that might be relevant to other social, economic, or psychological variables (Rytina 1992; Hauser and Logan 1992), nor is there a strong theoretical basis for the concept of occupational socioeconomic status (Hodge 1981). Thus, while we both follow and elaborate one tradition of occupation-based socioeconomic measurement in this paper, we caution readers that the product of our work should be used thoughtfully and cautiously. Even the best measure of occupational socioeconomic status cannot stand alone, and some common occupations do not

(*Continued*) We thank Keiko Nakao for providing unpublished data from the 1989 NORC-GSS study of occupational prestige in the United States. We thank John Fox, Harry Ganzeboom, Michael Hout, and Adrian Raftery for helpful advice. The opinions expressed herein are those of the authors. Machine readable versions of the Hauser-Warren 1980-basis and 1990-basis SEI scores and their component data are available online at ftp:\\elaine.ssc.wisc.edu\pub\hauser. Address correspondence to Robert M. Hauser, Department of Sociology, University of Wisconsin–Madison, 1180 Observatory Drive, Madison, Wisconsin 53706 or HAUSER@SSC.WISC.EDU.

[1]For example, see Hauser (1972).

fit typical relationships among socioeconomic characteristics and occupational prestige. Indeed, we hope that our work will help to identify the limits as well as the heuristic value of measures of occupational socioeconomic status.

2. JOBS, OCCUPATIONS, AND OCCUPATIONAL STATUS

In our opinion, the social sciences have recently suffered from a preoccupation with current measures of income or poverty. To some degree, we think this focus is policy and program-driven. In the administration and evaluation of social, economic, and health programs we must necessarily rely upon narrow, temporally specific economic measures of eligibility or of outcome. The focus on strictly economic variables is perhaps also a consequence of the diffusion of economic thinking beyond the disciplinary boundary of economics and into the general population. Whatever its sources, this preoccupation may have diverted us from other major and consequential sources, dimensions, and consequences of social inequality.

There are good reasons to focus more attention on the collection, coding, and scaling of job and occupational data than has recently been the case. First, job-holding is the most important social and economic role held by most adults outside their immediate family or household. When we meet someone new, our first question is often "What do you do?", and that is a very good question. Job-holding defines how we spend much of our time, and it provides strong clues about the activities and circumstances in which that time is spent. Second, job-holding tells us about the technical and social skills that we bring to the labor market, and for most people job-holding delimits current and future economic prospects. Thus, even for persons who are not attached to the labor market, past jobs or the jobs held by other members of the same family or household provide information about economic and social standing. Third, as market labor has become nearly universal among adult women as well as men, it is increasingly possible to characterize individuals in terms of their own current or past jobs. Fourth, once we have a good job description, it is possible to map jobs into a multitude of classifications, scales, and measures, some of which may provide more information about economic standing than we can obtain from the usual questions about income or wealth. Fifth, measurement of jobs and occupations does not entail the same problems of refusal, recall, reliability, and stability as occur in the measurement of income or wealth. While job descriptions—contemporary or retrospective—are im-

perfect, the reliability and validity of carefully collected occupational data are high enough to support sustained analysis, and there is little tendency for the quality of occupational reports to decay with the passage of time.[2] Thus, even if we are limited to retrospective questions, we can confidently trace occupational trajectories across the adult years. The same cannot be said of earnings trajectories, let alone other components of personal or household income.

2.1. *Conceptual Issues*

It is important to distinguish between jobs and occupations and between establishments and industries. A job is a specific and sometimes unique bundle of activities carried out by a person in the expectation of economic remuneration. An occupation is an abstract category used to group and classify similar jobs. Such abstractions are often heterogeneous and idiosyncratic in construction, but they usually involve determinations of similarity in typical activities, in the sites where work is performed, in the form of job tenure, in the skill requirements of the job, or in the product or service that results from the job. The distinction between establishments and industries parallels that between jobs and occupations. An establishment is a specific geographic location where products or services are made or delivered, while an industry is an abstract category used to group and classify products or services. There are multiple systems for the classification of jobs and establishments and, within them, complex interdependencies between occupational and industrial classifications. Most social scientific uses of occupational data are based on the classification systems of the U.S. Bureau of the Census, which are revised each decade at the time of the decennial census or else on the *Dictionary of Occupational Titles*, which is produced by the Employment and Training Administration of the Department of Labor.

It has recently been proposed that the best way to collect job information may be to ask directly about the conditions of work. Jencks, Perman, and Rainwater (1988) developed a new composite index of the overall

[2]For example, in the Wisconsin Longitudinal Study (WLS), there is virtually no difference between the accuracy of reports of occupations held in 1975, which were reported and coded contemporaneously, and reports of the same occupations that were ascertained and coded independently in 1992–1993 (Hauser, Sewell, and Warren 1994). The WLS is a long-term study of more than 10,000 women and men who graduated from Wisconsin high schools in 1957.

quality of jobs, which they call the index of job desirability. They argue that occupational status measures, like the Duncan Socioeconomic Index (SEI) and occupational prestige, are too distant from the job because they characterize a broad occupational category, while earnings alone fail to capture nonpecuniary job rewards. In a small national telephone sample ($N = 809$), Jencks, Perman, and Rainwater measured the desirability of jobs directly, using a magnitude estimation task.[3] Then, they selected job characteristics that predicted (the natural log of) desirability.[4] Finally, they constructed a composite of those characteristics (the index of job desirability or IJD) and showed that it had high reliability and desirable analytic characteristics relative to conventional measures of occupational standing—e.g., that it reflects gender and experience differences better than the Duncan SEI. Moreover, unlike occupation-based measures of job characteristics, obtained by matching job descriptions or census occupations to lines in the *Dictionary of Occupational Titles*, the IJD pertains directly to individual jobs. Jencks, Perman, and Rainwater argue that it is much easier to ascertain the components of the IJD than to collect and code detailed occupational descriptions, so it is potentially both an economic and powerful measure. The IJD is as yet new and little tried, but we think it is worth careful consideration and evaluation.[5]

From the perspective taken here, some measures of social class reflect job or personal characteristics, while others are strictly occupational. For example, consider two conceptions of "social class," each of which is widely used in international comparative studies of social stratification. Both schemes are shown in Figure 1. Wright's (1985:88) class typology

[3]The question reads, "Now we would like you to rate your job compared to what most people consider an average job. . . . Let's give an average job a rating of 100. Then, if your job is TWICE as good as an average job, you should give it a rating of 200. If it is HALF as good, give it 50, and so on. You can give any number you like. So considering everything . . . if an average job is rated 100, how would you rate your job?"

[4]From 48 job characteristics, Jencks, Perman, and Rainwater selected 14 that significantly predicted job desirability. They narrowed that list to earnings, plus seven other characteristics, which accounted for most of the explained variation. These are educational requirements of the job, hours greater than 35 per week, on-the-job training, dirtiness of the job, frequency of supervision, repetitiveness, and federal employment; dirt, supervision, and repetition were undesirable.

[5]Using Bayesian methods, Hauser (1995) has suggested that earnings and education requirements of the job are the only characteristics whose effects may be large enough to sustain replication. Fortunately, the job desirability item, along with all 14 significant job characteristics, were measured in the Wisconsin Longitudinal Study in 1992–1993, and this will permit a test of the findings of Jencks, Perman, and Rainwater.

Erikson and Goldthorp's Class Schema

I. Higher-grade Professionals, administrators, and officials; managers in large industrial establishments; large proprietors
II. Lower-grade professionals, administrators, and officials; higher-grade technicians; managers in small industrial establishments; supervisors of nonmanual employees
IIa. Routine nonmanual employees, higher grade (administration and commerce)
IIIb. Routine nonmanual employees, lower grade (sales and services)
IVa. Small proprietors, artisans, etc., with employees
IVb. Small proprietors, artisans, etc., without employees
IVc. Farmers and smallholders; other self-employed workers in primary production
V. Lower-grade technicians; supervisors of manual workers
VI. Skilled manual workers
VIIa. Semi- and unskilled manual workers (not in argiculture, etc.)
VIIb. Agricultural and other workers in primary production

Wright's Class Typology

Owners:

1. Bourgeoisie
2. Small employers
3. Petty bourgeosie

Nonowners:

4. Expert managers
5. Expert supervisors
6. Expert nonmanagers
7. Semicredentialed managers
8. Semicredentialed supervisors
9. Semicredentialed workers
10. Uncredentialed managers
11. Uncredentialed supervisors
12. Proletarians

FIGURE 1. The Erikson-Goldthorpe and Wright social class schemas.

combines concepts of ownership, authority, and expertise. Its measurement requires information about a person's educational attainment as well as ownership, authority, supervision, and occupational classification. On the other hand, although it uses information about employment that is not

routinely collected in the course of occupational measurement in the United States, Erikson and Goldthorpe's (1992a:38–39) "class schema," is ultimately a grouping of occupational categories based upon Goldthorpe and Hope's (1974) study of occupational prestige in Great Britain (Goldthorpe 1980).

Each of these schemes is regarded by its authors as a theoretically refined basis for identifying the membership of real and discrete social classes. In Wright's neo-Marxian classification, the aim is to identify modes of labor exploitation in the relations of production. In Erikson and Goldthorpe's neo-Weberian classification, the class categories are designed to identify distinct combinations of occupational function and employment status. Both Wright and Erikson and Goldthorpe vigorously defend their class schemes against suggestions that they are no more than convenient aggregations of constituent variables. For example, Halaby and Weakliem (1993) demonstrated that the variables in Wright's class schema lost some of their power to explain differential earnings when they were combined into his class typology.[6] In reply, Wright (1993:32) declared, "these nominal categories correspond to qualitatively distinct causal mechanisms," and he rejected the empirical evidence of Halaby and Weakliem by arguing that "the choice depends on the questions being asked and the broader theoretical agenda within which a specific analysis is embedded" (p. 34). Similarly, when Hout and Hauser (1992) reported that Erikson and Goldthorpe's (1992a) mobility model vastly understated the explanatory power of the main vertical dimension of their class schema, Erikson and Goldthorpe (1992b:296) rejected their finding because, among other reasons, "In the class structural perspective on mobility that we ourselves adopt, hierarchy need not be specially privileged."[7]

In working with measures of occupational social standing, we emphasize the social and economic grading of the occupational structure, rather than *a priori* constructions of distinct social classes. Our strong suspicion is that differences between the two class schemes and between them and the measures emphasized in this review lie more in the proximity of constituent variables to jobs and persons than in other theoretical or conceptual distinctions that have been debated by their authors. Other things

[6]See also Halaby (1993).

[7]Hout and Hauser's (1992) model of the mobility table neither accorded the vertical dimension special "privilege" nor denied other social structural effects on mobility. It merely corrected a crude and defective specification of the vertical dimension by Erikson and Goldthorpe (1987).

being equal, we should expect a classification based partly upon personal and job characteristics to be more direct and powerful in its influence than a classification based on occupational characteristics alone. Wright's class typology somewhat resembles Hollingshead's well-known (and too widely used) index of class position in that both combine information about jobs and educational attainment, though in very different ways (Hollingshead 1957; Hollingshead and Redlich 1958). Rather than relying on any precast combination of occupation and other social or economic characteristics, we suggest that, wherever possible, investigators should collect and use data on education and income, as well as on occupational standing.

People are linked to jobs, most often through job-holding, but also through their relationships with other people who hold or have held jobs. Jobs can be mapped into standard occupational classifications, and the categories of those classifications may be linked to occupational characteristics. By working back through this series of linkages, we can describe people in terms of occupational characteristics. Such characteristics will be valid as descriptions of jobs only to the degree that occupations are homogeneous, and the intervening maps and linkages are sound. In our view, the remarkable thing about this way of measuring social and economic characteristics is not that it is error prone, which would seem obvious, but that it has remarkably high reliability and validity. That it does so is a social fact that rests both on skill and care in classification and coding, and also on strong uniformities in social structure.

2.2. *Measurement Issues*

Unlike income, there is little perceived risk to respondents in describing the jobs held by themselves and others they know. Rates of refusal and nonresponse to occupation questions are very low. For example, in the 1994 General Social Survey (GSS), only 139 of 2992 respondents (4.6 percent) could not be classified by the major occupation group of a job that they had held, currently or in the past, and of the unclassifiable cases, all but 13 were persons who had never worked. In the case of family income, 356 respondents (11.9 percent) failed to respond, and about half of the nonresponses were outright refusals. In the case of own income, 865 respondents (28.9 percent) reported that they had no income in the preceding year, and of those with income, 7.9 percent did not report it (Davis and Smith 1994:29–32, 64–65).

Unlike the case of income, respondents usually know enough about their jobs (or those held by other significant persons in their lives) to provide information that can be coded reliably. However, it takes time and care to collect and code occupational data. One way of describing this is to say that the collection of income and other strictly economic data places a large cognitive burden on the respondent, while the collection of occupational data places more of that burden on the collector and coder of the data.

In a complete series of occupation questions, it is necessary to ascertain industry and class of worker as well as occupation; a typical series is shown in Figure 2. These questions would be sufficient to permit coding entries into the classification systems used in any of the U.S. Censuses from 1940 to 1990. The Census revises its classification system decennially, but over the past 50 years there has been a seven-digit coding system, three digits each for occupation and industry and one digit for class of worker. The classification system was relatively stable from 1940 to 1960. There was a minor upgrade in 1970, and in 1980 the system was overhauled completely in order to bring it up to date and render it more comparable to other (including international) classification systems. The 1980 system was carried forward with minor changes in 1990.

It takes time for respondents to answer the five questions in Figure 2, and it takes time to code them. We usually allow about 1.5 minutes

1. What kind of work does . . . do? (For example, electrical engineer, stock clerk, typist, farmer)
2. What are . . .'s most important activities or duties at that job? (For example, types, keeps account books, files, sells cars, operates printing press, finishes concrete)
3. What kind of buisness or industry is this? (For example, TV and radio, manufacturing, retail shoe store, State Labor Department, farm)
4. Is this mainly manufacturing, wholesale trade, retail trade, or something else?
5. Is . . . and employee of a private company, business or individual for wages, salary or commission? A federal government employee? A state government employee? Self-employed in own business, professional practice, or farm? (If not farm, ask, "Is the business incorporated?") Working without pay in a family business or farm?

FIGURE 2. Occupation-industry question series.

of telephone or household survey time per occupation-industry entry, and experienced coders can complete about 10 entries per hour. To code occupation and industry, a trained coder must attempt to match text between survey reports and listings in the Census Bureau's alphabetic or classified indexes of industries and occupations.[8] The alphabetic indexes list permissible codes for occupation and industry, based on an alphabetic sort of common responses. The classified index is a reverse listing, in which the same set of entries is sorted by occupation or industry code, thus providing a definition by extension of each line of the classifications.[9] Coders must occasionally refer to other resources, like the *Dictionary of Occupational Titles*, to learn more about specific occupations or to find synonyms for unfamiliar descriptions. Where more than one occupation or industry line may be appropriate, codes can be allocated at random with probabilities determined by the distributions across the candidate lines in the preceding Census—that is, from a cross-classification of detailed occupation by detailed industry. In some surveys, the senior author has trained interviewers as well as coders in occupational classification, and this pays dividends in the quality of industry and occupation reports.

In connection with the 1990 Census, the Bureau of the Census is distributing a VMS software product that can be used to code about half of the typical occupation or industry entries, leaving the remaining half for trained coders. Experienced coders can achieve 85 percent agreement in the classification of three-digit industry and 80 to 85 percent agreement in the classification of three-digit occupation. This level of agreement is sufficient to produce high levels of correlation between independent codings of the same occupational characteristics. For example, Bielby, Hauser, and Featherman (1977:1258, 1262) independently recoded reports of father's occupation and of son's first occupation among 578 white males and

[8]The senior author has often been asked for advice by investigators in *ad hoc* surveys, who have little interest in detailed occupation-industry coding. Often, they have not asked the right questions to begin with, and they are looking for a way of sight-coding one-line descriptions into some scheme like the Hollingshead index. This reflects a casual attitude toward socioeconomic measurement that probably would not be tolerated by the same investigators if it pertained to their major substantive interests. Readers who imagine that detailed occupation-industry coding requires too great an investment might ask themselves about the cognitive demands that are placed on respondents by detailed questions about their incomes and assets.

[9]In the last three decennial Censuses, these references are from the U.S. Bureau of the Census (1971a, 1971b, 1982a, 1982b, 1992a, 1992b). Two recent editions of the *Dictionary of Occupational Titles* are from the U.S. Department of Labor (1977, 1991).

348 black males in the 1973 Occupational Changes in a Generation (OCG) survey. When the codes were mapped into the Duncan SEI, the correlations between recoded occupational statuses were 0.94 for father's occupation and 0.94 for son's first occupation among whites, and the corresponding correlations were 0.88 and 0.93 among blacks.[10]

Occupations can also be reported reliably by respondents, whether the jobs are or were their own or someone else's.[11] Again, using occupations from the 1973 OCG survey that were mapped into the Duncan SEI, Bielby, Hauser, and Featherman (1977) obtained test-retest correlations of 0.64 among black men and 0.87 among white men for father's occupational status over about a three-month period. The corresponding test-retest correlations were 0.77 and 0.87 for men's first, full-time civilian occupations, and they were 0.72 and 0.80 for current occupations.[12] The latter figures may seem low, but they do not measure reliability in the strict sense. They are based on reports of own current occupation in the March 1973 CPS and in a reinterview six months later; thus, the correlation reflects true changes in status as well as reporting error. These correlations of occupational status are somewhat lower than corresponding test-retest correlations of own educational attainment, 0.87 among blacks and 0.92 among whites. In a recent study, Hauser, Sewell, and Warren (1994) obtained correlations between Duncan SEI scores of occupations that were reported contemporaneously by a sample of more than 6000 male and female high school graduates from Wisconsin in 1975, when the sample was about 36 years old, and that were reported again, retrospectively, in

[10]A report by Nakao and Treas (1994) of low coding reliability in the NORC General Social Survey seems exceptional. In the 1989 GSS, they found a correlation of only 0.76 between two versions of a 1960-vintage prestige scale for workers' occupations independently coded into the 1970 and 1980 Census occupational classification systems. For further evidence about unreliability of occupational coding in the GSS, see Smith, Crovitz, and Walsh (1988).

[11]Given the likely uses of occupational data, we believe that the reliability and stability of an occupational index, like the Duncan SEI, is more pertinent to an evaluation of the quality of occupational measurement than would be a measure of simple agreement between reports across occasions.

[12]The low reliabilities observed for blacks underscore the need to measure reliability contemporaneously in social surveys. However, the reason for the lower reliabilities was the homogeneity of blacks in occupational standing, not greater reporting error. The standard deviations of errors were barely larger among blacks than among whites, but the standard deviations of true statuses were much smaller among blacks. Since reliability is a ratio of true variance to total variance, reliability was low among blacks (Bielby, et al. 1977: 1258, 1262).

1992–1993. The test-retest correlations over the 17-to-18-year recall period for persons who were employed in 1975 were 0.84 among men and 0.79 among women. Parents' occupations also can be reported reliably by older teenage youth. In a study of sixth, ninth, and twelfth grade boys from Fort Wayne, Indiana, Mason et al. (1976) reported correlations between son's and father's reports of the father's occupational status of 0.80, 0.92, and 0.93 at the sixth, ninth, and twelfth grades among white youth and correlations of 0.39, 0.38, and 0.74 among black youth at the same grade levels.[13]

2.3. *Occupational Prestige*

What are the relevant status characteristics of occupations? Many discussions of occupations in the stratification system begin with the concept of occupational prestige, the general level of social standing enjoyed by the incumbents of an occupation. There has been great debate about the definition of prestige. For example, should it, as in the classic sociological literature, describe a relationship of deference or derogation between role incumbents, or does it merely pertain to the general desirability or goodness of an occupation? However defined, there is substantial agreement about the properties of occupational prestige.

First, it does not matter much how people are asked to rate occupations. Regardless of the form of the question and the mode of response, essentially the same ranking will be obtained. To take two extreme cases, in an Israeli sample, Kraus, Schild, and Hodge (1978) found that prestige was the main dimension of perceived differences among occupations when respondents were asked to sort pairs of occupation titles into similar groups, without any specification of the kind of similarity that they were to use. Duncan, Featherman, and Duncan (1972:77) estimated a correlation of 0.81 between expert judgments of required occupational intelligence (the Barr scale from the 1920s) and the Duncan SEI for 96 matched 1950-basis Census occupations. For 47 Barr titles that could be matched to a 1964 NORC study of occupational prestige, they found a correlation of 0.91.

Second, it does not matter much who rates the occupations. Even from a small sample, one can obtain a reliable and valid prestige scale by averaging ratings of occupations. There is indirect evidence that prestige ratings of occupations are highly correlated in the United States between

[13]The Fort Wayne samples were very small, 80 whites at each grade level and 30 to 50 blacks at each grade level.

the nineteenth and twentieth centuries (Hauser 1982).[14] Between the second major national survey of prestige, carried out in the middle 1960s by the National Opinion Research Center (NORC), and the most recent survey, carried out in 1989 by NORC, the correlation is 0.97 across 160 titles that were rated both in the 1960s and in 1989 (Nakao and Treas 1994). Earlier, Hodge, Siegel, and Rossi (1964) had found a correlation of 0.99 for a smaller set of titles over the 1947–1963 period. Occupational prestige ratings are also highly correlated across countries. Treiman (1975; 1977) assembled a definitive international collection of prestige studies up through the early 1970s, and he found an average intercorrelation of 0.81 across 55 countries. He combined these data to create the Standard International Occupational Prestige Scale (SIOPS), into which one can map from the 1950, 1960, and 1970 U.S. Census classifications and the 1958 and 1969 International Standard Classifications of Occupations (Treiman 1977). Finally, there are scant variations in occupational prestige ratings across populations defined by sex (Bose and Rossi 1983), race (Siegel 1970), or location in the social hierarchy within industrialized nations and most of the nonindustrialized world (Haller and Bills 1979).

In the United States there have been three major national surveys of occupational prestige. The first was carried out at NORC in 1947 by North and Hatt, but its major findings were not reported for more than a decade (Reiss 1961). These ratings covered only 90 titles, and investigators used a variety of questionable methods to fill in the missing lines until Duncan (1961) constructed an approximation to prestige scores for the full 1950 Census classification. The second major U.S. study of prestige was carried out in a series of NORC surveys in the mid-1960s. Siegel (1971) reconciled the ratings from different surveys and directly estimated the prestige of every line in the 1960 Census occupational classification. These ratings were later updated to the 1970 Census classification by Hauser and Featherman (1977) and by Davis and Smith (1994), and Stevens and Hoisington (1987) updated them again to the 1980 Census classification.[15] The third U.S. pres-

[14]Hauser's historical data were ratings of occupations by several social historians, each of whom professed great familiarity with the social structure of a nineteenth-century American city and claimed that their ratings would reflect contemporary opinion.

[15]Since there were large changes between the 1960 and 1970 Census classification schemes, the Hauser-Featherman update was carried out by estimating weighted average scores for detailed 1970 Census lines in terms of their 1960 Census components, using a sample of the 1960 population whose jobs had been classified using both systems (U.S. Bureau of the Census 1972). Similarly, Stevens and Hoisington (1987) used a matrix that expressed detailed 1980 Census lines in terms of their 1970 Census

tige study was carried out in conjunction with the 1989 GSS of the National Opinion Research Center (Nakao and Treas 1994). These occupational prestige ratings were initially mapped into categories of the 1980 Census classification, and have been updated to be usable with the 1990 system.

The main problem with occupational prestige ratings is that they lack criterion validity. Prestige is not as highly correlated with other variables as are other measures of occupational social standing—specifically, measures of the socioeconomic status of occupations, as indicated by the average educational attainment and income of occupational incumbents. One well-replicated example of this is intergenerational occupational mobility. In analyses of correlations between the occupational standing of fathers and sons, prestige scales behave roughly as if they were error-ridden measurements of the socioeconomic status of the occupations held by fathers and sons (Featherman et al. 1975; Featherman and Hauser 1976). Indeed, the low criterion validity of occupational prestige is one of the reasons that Treiman found few takers for his Standard International Occupational Prestige Scale.

2.4. *Socioeconomic Indexes of Occupational Status*

How did we get from occupational prestige to occupational socioeconomic status? While the two more recent prestige surveys obtained ratings for all occupational titles in the then-current Census classification schemes, only 90 titles were rated in the 1947 NORC survey (Reiss 1961:5–6, 261–62). This created a problem for investigators who wanted to "fill in" scores for unrated occupations (Duncan 1961:110–14). Not only did they have to create new scores, but there was no basis for comparability between studies. As part of a project on "Occupational Classification for Vital Statistics Use," Duncan created a set of socioeconomic scores for all occupations, and he transformed these back into the original metric of the NORC prestige scores. First, Duncan matched titles that had been rated in the survey into lines from the 1950 Census; unfortunately, only 45 titles could be matched. Then he regressed the percentage of "good" or "excellent" rat-

components, using a sample of the 1970 population whose jobs had been classified using both systems (U.S. Bureau of the Census 1989). Our guess is that the latter set of scores will not be used widely, for the prestige scores on which it was based date from the 1960s, and the Nakao-Treas prestige scores are now available. Moreover, we might expect the validity of the prestige scores to become attenuated through repeated application of the weighting procedure.

ings on the five-point scale used in the NORC survey on age-adjusted percentages of male occupational incumbents in the 1950 Census who had completed high school or more and who had reported incomes of $3500 or more in 1949. This regression yielded roughly equal weights for the two regressors, and the multiple correlation was 0.91. The socioeconomic index was constructed by applying the regression weights to the age-standardized characteristics of all 1950-basis Census titles (including distinctions by industry and class of worker within large residual groups).[16] Finally, Duncan also reported a transform of the index back to the metric of the original NORC prestige scores, which were the mean ratings of each occupation on the five-point scale, and a set of decile scores, pertaining to the position of each occupation in the ranking of the employed population by values of the socioeconomic index. Most subsequent use of Duncan's work has employed the index, rather than the NORC transform or the decile scores. For example, perhaps the best-known application of the Duncan SEI scale was by Blau and Duncan (1967) in their classic study of social mobility among American men. Unfortunately, because the SEI was initially constructed as a proxy for occupational prestige, some subsequent work has failed to distinguish between the prestige and socioeconomic status of occupations.

The Duncan SEI has been updated or elaborated in several ways, and researchers should be cautious in using the updates because of their potential lack of comparability. Duncan assigned scores to categories of the 1960 Census occupational classification, and these were the scores used in the Blau-Duncan monograph. Hauser and Featherman (1977) updated the 1960-basis SEI scores to occupation lines from the 1970 Census, using the same averaging method described above in relation to the 1960-basis NORC (Siegel) prestige scores.[17] Stevens and Featherman (1981) published a major revision of the SEI. Using the map of Siegel prestige scores into 1970-basis Census occupation lines, they regressed prestige scores for all occupations on measures of the educational attainment and income of all occupational incumbents in 1970; the scale values were the predicted prestige scores in the regressions. In order to meet complaints that the original Duncan SEI ignored women, they produced two versions

[16]Unfortunately, neither of the subsequent revisions of the Duncan scale includes these additional distinctions.

[17]The senior author has elaborated the scale scores by class of worker and industry for selected 1970–basis occupation lines. These scores are available by request.

of their new scale, one in which the regressors pertained to the characteristics of male workers (MSEI2) and a second in which the regressors pertained to the characteristics of all workers (TSEI2).

MSEI2 and TSEI2 are entirely new scales. They are not comparable to the Duncan SEI, even though they were constructed using a similar methodology. We could compare findings based on those scales to those based on the SEI by mapping 1970-basis occupations into both systems. We could compare findings across time using MSEI2 or TSEI2 by projecting them back into earlier Census classification systems; to our knowledge, no one has carried out the latter task. Stevens and Cho (1985) carried the 1970-basis MSEI2 and TSEI2 forward to the 1980 Census classification system using the same methodology as Hauser and Featherman (1977)—that is, by taking a weighted average of scores for 1980-basis Census occupation lines in terms of their 1970-basis constituent lines, based on a sample from the 1970 Census (U.S. Bureau of the Census 1989). This rendered MSEI2 and TSEI2 as comparable between 1970 and 1980-basis lines as the Duncan SEI was between 1950 or 1960-basis and 1970-basis lines.

As part of their update of Siegel's scores, Nakao and Treas (1994) created socioeconomic scores for 1980-basis Census occupation lines by regressing their prestige ratings on the characteristics of male and female occupational incumbents in the 1980 Census.[18] The new NORC prestige scores were collected at the end of the decade (1989), while the corresponding socioeconomic status scores were based upon characteristics of the work force in 1980. The obvious next step is to create yet another set of socioeconomic scores, using the 1989 prestige scores as a criterion, but based upon characteristics of the work force in the 1990 Census. This is one of the analytic tasks that we have undertaken in the present study.

The revision of indexes of occupational socioeconomic status may be a good thing, if our focus is on the present day, but it presents great

[18]The Nakao-Treas prestige and socioeconomic scores may be obtained in machine-readable form from Dr. Tom Smith, General Social Survey, National Opinion Research Center, University of Chicago, Chicago, IL 60637. Unfortunately, Nakao and Treas (1994:11) present an incorrect version of their SEI prediction equation for all workers (TSEI). We have verified that the correct equation (excluding three apprenticeship lines), which was earlier presented in a methodological report of the General Social Survey (Nakao and Treas 1992), is TSEI = 16.896 + 0.620 (Education) + 0.276 (Income).

problems in establishing intertemporal comparability.[19] Findings based on the original Duncan SEI may be compared across occupations coded to the standards of the Censuses of 1950 to 1970. Findings based upon the Stevens-Featherman scales may be compared freely from 1970 to 1990 (for the 1980 and 1990 systems are very close), and those based upon the Nakao-Treas scales are only comparable from 1980 to 1990. Of course, these limits are based on the assumption that occupations have been coded only once, to the standards of a single decennial census. We believe that, given the preservation of original responses in machine-readable form, we shall in years to come be able to code old data to new standards economically. For example, in the 1992–1993 round of the Wisconsin Longitudinal Survey, we have first coded all occupation reports to 1970 standards, in order to preserve comparability with past codes. A next step will be to sort the text entries for each occupation-industry report by the 1970 codes and batch code them into lines in the 1990 classification. This will be both faster and cheaper than an independent recode of the data in multiple systems.

The Duncan SEI and its successors are not the only readily available socioeconomic scores for occupations. The major competitor in this respect is the series of Nam-Powers scores now available for Census occupational classifications from 1940 through 1980 (Stafford and Fossett 1991) using a methodology developed by Nam and Powers (1983). Nam and Powers rate occupations on the basis of the average percentile of their incumbents in the cumulative distribution of workers, when the occupations are ranked by median education and by median income.[20] That is, the Nam-Powers ratings are purely relative measures of standing that have no specific functional relationship to the actual levels of schooling or income in occupations. Depending on one's point of view, this has either the advantage or disadvantage of lacking a criterion to weight the relative importance of occupational education and occupational income; indeed, it suggests that, for some purposes, it might make more sense to use mea-

[19]In addition to the aforementioned updates of the Duncan SEI, Fridman, Lee, and Falcon (1987) have used Duncan's methodology to construct socioeconomic scores for occupations in the Census of 1940.

[20]It is not clear why the weights of education and income should be equal. Also, Stafford and Fossett's listing of socioeconomic scores contains serious errors. It lists scores for industries within categories of 1960-basis occupations using 1970-basis, three-digit industry codes. Thus a mechanical recode using their list will generate many erroneous score assignments when data have been coded using 1960-basis occupation and industry codes.

sures both of occupational education and of occupational income and avoid any *a priori* combination of them. One might argue that the Nam-Powers scores are, by construction, comparable across years and occupational classifications. We disagree. First, they will vary across time with changes in the relative standing of occupations. Such changes occur with glacial speed (Duncan 1968), and we do not think that they present a serious problem. Second, and more important, the scores will change over time as the occupational distribution changes, even in the absence of any change in the characteristics of occupational incumbents. We think this is a most undesirable property, and for this reason, we believe that the Nam-Powers scores present serious problems of comparability across time.

Advocates of the Nam-Powers approach have suggested that it yields a purely socioeconomic measure, whereas the Duncan scale (and, presumably, its relatives) is a combination of occupational education, income, and prestige (Haug 1977:3; Powers 1982). There is surely room for confusion about this issue, for Duncan's (1961) text is ambivalent about whether the SEI was a proxy measure of prestige or whether it was a distinct "socioeconomic" measure (Hodge 1981; Stevens and Featherman 1981; Nam and Terrie 1982). While it is possible to argue both about intent and about the accuracy with which the SEI approximates prestige, the fact is that the SEI is simply a weighted average of occupational education and income. Once the weights have been determined, prestige plays no part in the index.[21] Since Duncan's regression analysis gave virtually equal weight to occupational education and income, it is not surprising that the SEI should correlate highly with the Nam-Powers index, despite the nonlinear relationship between the latter and its educational and economic components.[22] Indeed, laying aside the difference between absolute and relative measurement, we would not stray far from the truth in saying that the Duncan SEI and the Nam-Powers index are both equally weighted averages of occupational education and income.

[21]This is patently the case for the vast majority of occupation lines for which no prestige data were obtained in the North-Hatt prestige study. To make the point clearer yet, we might imagine a composite measure of occupational status, constructed as a weighted average of occupational education, income, and prestige. To our knowledge, no one has produced such an index. Unfortunately, Haug's view has recently been taken up by a social historian, Matthew Sobek, who writes of the Duncan SEI that "it can be considered a prestige scale for practical historical purposes" (Sobek 1996).

[22]Beyond this, it is well known that correlations involving linear composites are rather insensitive to differential weighting of the components.

This is not by any means to claim that the SEI or its relatives are better constructions than the Nam-Powers index. For example, there are serious questions about the validity of Duncan's regression estimates. Although Duncan (1961:122–23) listed all of the residuals from his regression, he apparently did not recognize the sensitivity of his estimates to three outlying and influential observations (ministers, railroad engineers, and railroad conductors). Had those observations been deleted, the effect of occupational income would have been more than three times as large as that of occupational education (Fox 1991; Friendly 1991), and the Duncan SEI would have been essentially a measure of occupational income. We might count Duncan's use of all of the observations as a fortunate choice in light of later evidence that the effects of occupational education on prestige are larger than those of occupational income. Siegel (1971) and Stevens and Featherman (1981) have each noted that Duncan's findings were affected by the top-heavy selection of the 45 NORC titles that could be matched to 1950 Census titles. The selection of titles led to an overestimate of the effect of occupational income relative to occupational education, when Duncan's estimates (or similar, contemporaneous estimates based on the same titles) were compared to estimates based on all Census titles in 1970. For example, the effect of occupational education was substantially larger than that of occupational income, both in the male-based scores (MSEI2) and the scores for the total population (TSEI2) that were estimated by Stevens and Featherman (1981:369).[23]

2.5. *Other Indexes of Occupational Status*

This is perhaps an appropriate point for us to comment on the Hollingshead Index of Social Position, a classification of selected occupational titles into seven occupational grades. There must be something appealing about it, for its use has persisted over more than 30 years, and, as far as we know, it has never been published formally.[24] Perhaps one reason for this is a comparison between the Hollingshead Index and the Duncan SEI by Haug and Sussman (1971), which came out most unfavorably to the SEI. The central finding of the Haug-Sussman paper, on which they base a

[23]We shall turn later to methodological problems in the more recent prestige-weighted estimates of occupational socioeconomic status.

[24]The senior author obtained his copy from a colleague at Brown University in the late 1960s.

resounding rejection of the SEI, is a correlation of 0.74 in a national sample between the SEI and Hollingshead's Two Factor Index of Social Position, where both variables were categorized to approximate the marginal distribution of the Hollingshead Index. This "low" correlation, they argue, invalidates the SEI as a measure of "social class." However, as Haug and Sussman note, the Hollingshead Index includes individual variation in education within occupation, while the SEI does not. Moreover, they report in a footnote that in fully disaggregated data, the correlation between the SEI and the Two-Factor Index is 0.82, and it is 0.84 if one uses only the occupational component of the Hollingshead index. It is not clear why one would regard the last correlations as "low," when, for example, Duncan (1961:124) observed correlations of 0.84 and 0.85 between occupational income and prestige and between occupational education and prestige among the 45 titles used in his regression analysis. Indeed, similar correlations are observed between prestige scores and socioeconomic indexes across all occupation lines in the 1990 Census (see Table 3).

In a similar analysis, Haug (1972: 442) reports a correlation of only 0.75 between the Duncan SEI and 1960-basis Census scores for occupational status in a small national sample ($N = 1284$). Recall that the Census (or Nam-Powers) score is an equally weighted composite of the percentile ranks of occupations in the educational and income distributions of the labor force (U.S. Bureau of the Census 1963; Nam and Powers 1983). Noting Gordon's (1969) finding of a correlation of 0.95 between the same two indexes across 91 occupations, Haug attributes the low correlation in her sample to the difference between equal and sample-based weights for the occupations and concludes that the SEI is defective.[25] We were surprised by these discrepant figures, so we estimated the correlation between the Stevens-Featherman MSEI2 and the 1970-basis Census socioeconomic scores in the 1973 Occupational Changes in a Generation sample.[26] Among 26,000 U.S. men aged 25 to 64 in 1973, the correlation between the scores for current occupations was 0.87. The Duncan-type SEI and the Nam-Powers scores are surely not indistinguishable, but neither do they appear as different as Haug suggested.

In an invited commentary on Haug and Sussman's paper, Hollingshead described the development of his occupational "index," which was based on the social standing of occupations in his study of New Haven,

[25]See also Haug (1977:61).

[26]The 1970-basis Census socioeconomic scores were estimated by Stafford and Fossett (1991).

Connecticut. In response to a query about the placement of certain occupations, Hollingshead (1971:566) wrote:

> The problem of allocation of a given individual's occupation to a particular place on the economic scale is occasionally difficult. Haug and Sussman puzzle over why a correction officer was assigned a rating of 2 while a policeman rated 5. This particular correction officer was a professional social worker attached to the juvenile court. He held a Master of Science degree from a recognized school of social work. Policemen were rated 5 because they are trained men and were generally regarded in the community as skilled municipal employees.

In other words Hollingshead's "index" is a combination of his ratings of specific individuals in New Haven and of his perception of the general social standing of occupations. If we were going to use a prestige scale, we should want to use ratings based on the opinion of more than one individual, and we certainly should not want to rate entire occupational categories based on the characteristics of a single occupational incumbent.

Ganzeboom, De Graaf, and Treiman (1992) have developed a standard International Socio-Economic Index (ISEI) of occupational status, which may prove useful in international comparisons. Rather than using prestige as a criterion, they explicitly constructed a set of scores that best account for the correlation between occupational education and occupational income. They argue that this construction fits Duncan's (1961:116–17) rationale for the SEI: "We have, therefore, the following sequence: a man qualifies himself for occupational life by obtaining an education; as a consequence of his pursuing his occupation, he obtains income. Occupation, therefore, is the intervening activity linking income to education." Ganzeboom, De Graaf, and Treiman estimated this model for a pooled sample of 73,901 full-time employed men from 16 countries for whom detailed occupational data in the 1968 ISCO classification were available, and they cross-validated the coefficients using five fresh large national surveys in countries for which local socioeconomic indexes were available. In the cross-validation, the ISEI performed about as well as locally constructed indexes. Thus the ISEI would appear to be a valuable tool for international comparative analyses of the effects of occupational status. Of course, the weighting scheme used by Ganzeboom, De Graaf, and Treiman,

as well as those based on occupational prestige as a criterion, may not be optimal in other content domains, and a test of those assumptions would be a valuable contribution to our understanding of socioeconomic measurement.

We have argued, thus far, that occupations carry a great deal of information about social standing, that respondents are willing and able to describe occupations, that they can be coded reliably—whether ascertained by self-report or proxy, and that their social standing can be measured by mapping the prestige or socioeconomic status of occupations into detailed occupational classifications. Occupational status also appears to be rather stable across time. For example, observed father-son correlations of occupational socioeconomic status typically range between 0.35 and 0.45. Econometric estimates of intergenerational income persistence approach these magnitudes only with heroic assumptions about unreliability and instability of incomes across time (Solon 1992; Zimmerman 1992). Within individual careers, occupational status correlations are also moderately high. For example, without correction for attenuation, the correlations between the status of a man's first, full-time civilian occupation and that of his current occupation in the Blau-Duncan study ranged only from 0.584 at ages 25 to 34 to 0.513 at ages 55 to 64 in 1962. In the Wisconsin Longitudinal Study, without correction for attenuation, the correlations between Duncan scores of first, full-time civilian occupations and 1992/93 occupations were 0.44 among women and 0.58 among men. The correlations between status scores of contemporaneous reports of current occupations in 1975 and 1992–1993 were 0.57 among women and 0.71 among men. Across the same 17-year span, the correlations of annual earnings were 0.38 among women and 0.51 among men. Findings like these suggest that occupational status may be a better indicator of long-term—or, as economists call it, permanent—income than is income at a single point in time (Goldberger 1989; Zimmerman 1992). Unlike permanent income, occupational status can be measured well at a single point in time. However, as demonstrated below, the persistence of occupational status does not depend on its association with income.

2.6. *Gender and Occupational Status*

We have thus far ignored relationships between gender and measures of occupational standing. There are scant differences in occupational prestige *ratings* by men and women (Nakao and Treas 1994); neither do gender spec-

ificity in rated occupational titles nor the percentage of women in occupations substantially affect occupational prestige (Fox and Suschnigg 1989). There are, of course, large and persistent differences in occupations held by men and women and in their remuneration. At the same time, depending on the rating or scale used, occupational prestige or status differences favor men, or favor women, or show essentially no differences (Boyd 1986), and the choice of scales also influences gender differentials in the effects of schooling and early occupational experience on the occupational standing of adults (Featherman and Stevens 1982; Warren et al. 1996).

Occupational socioeconomic indexes based on characteristics of male workers are highly correlated with those based on the characteristics of all workers, but recent practice has encouraged the use of the latter scales. First, unlike the Duncan index and its later analog (Stevens and Featherman's MSEI2), the "total" indexes, like Stevens and Featherman's TSEI2, include women in the measurement of occupational status. Second, in both the United States and Canada, the average differences in "total" indexes favor men more than the differences in "male" indexes, and this conforms with widespread beliefs about male-female disparities in occupational standing. Boyd (1986:471) has stated this forcefully: "the scaling of occupations into total scores produces results which are the most consistent with the argument that women in the labor force are disadvantaged relative to men." We do not think this provides sufficient scientific justification for a choice between indexes. There has been relatively little investigation of the specific differences in "male" and "total" indexes that lead to variation in their statistical properties, but see Featherman and Stevens (1982:102–108). Rather, the practice, unfortunate in our opinion, has been to construct "total," "male," and—in some cases "female"—indexes of occupational socioeconomic status in strictly parallel fashion, following Duncan's procedures, and to compare the behavior of the indexes in male or female samples without attempting to solve the puzzle posed by the differential behavior of the indexes.

We suggest the hypothesis that the differential behavior of "male," "total," and "female" indexes of occupational socioeconomic status is in part due to the same difference in male and female work patterns that confounds some other efforts to compare the economic standing of men and women. That is, employed women are more likely to work part-time than men. Both the share of women and the tendency to work part-time vary from occupation to occupation. Thus, when the "economic" status of occupations is indexed by one of the usual functions of the earnings distribution, like the

median, mean, or percentage above an arbitrary threshold, the income measure is affected by the extent of part-time work in the occupation.

To our knowledge, none of the several constructions of socioeconomic status indexes has introduced any adjustment for part-time or part-year work. This probably has made little difference in previously constructed indexes for male occupational incumbents, most of whom work full-time and full-year, but it has affected the construction of scores based on the characteristics of women or of all employed persons. Of course, this raises the question whether the status of an occupation is better indexed by the annual pay of its incumbents, regardless of their labor supply, or by something closer to the wage rate. If the wage rate is the key economic variable, the greater external validity of "male-based" occupational status indexes, which has often been observed for women as well as men, becomes understandable.

To test this hypothesis, we need measures of occupational income that standardize for labor supply. One way to accomplish this is to limit the population to full-time, full-year workers of each sex, but this could create selection problems, and it could lead to excessive sampling variability in smaller occupations, especially among women. A preferable course, we think, will be to include all workers, but to adjust earnings for part-time/full-time status and weeks worked.

3. A SOCIOECONOMIC INDEX FOR THE 1990s

We think that it will be useful to base a new socioeconomic index for occupations on characteristics of employed persons that are contemporary to the prestige ratings—that is, those in the 1990 Census. These can easily be mapped into 1980-basis census lines because there were minimal changes in the occupational classification between 1980 and 1990. Finally, they will provide a smoother transition into the future because they will be based on more recent occupational characteristics.

We have made a special extract of occupational education and earnings from the 1990 Census 5 percent public use sample for each state and the District of Columbia. This extract also contains three-digit industry, class of worker, age, sex, race, hours worked per week, and weeks worked per year. In particular, it has enabled us to construct socioeconomic indexes for the total work force and, separately, for men and for women. Our purpose in creating gender-specific indexes has been to compare the behavior of occupational characteristics between men and women, especially in relation to occupational prestige. We do not recommend routine use of the gender-specific indexes in research. As shown below, while the

indexes for all workers, men, and women have roughly the same range and are in the same metric, their statistical properties differ. Findings based on the total, male, and female indexes are not strictly comparable (Warren, Sheridan, and Hauser 1996), and, where researchers choose to use a composite socioeconomic index, we recommend the index based on the characteristics of all workers.

3.1. *Data and Variables*

Throughout our analyses, we used the same definition of occupational education as Nakao and Treas (1994)—namely, the percentage of people in an occupation who had completed one or more years of college. We used three alternative definitions of occupational economic standing. First, we selected the employed civilian labor force, eliminated persons without earnings in 1989, and coded earnings as the percentage of workers in an occupation who earned $25,000 or more in 1989. The $25,000 threshold occurs at approximately the same percentile point of the earnings distribution in 1990 as the $15,000 threshold used by Nakao and Treas for 1980 Census data. Second, for the same sample, we coded economic standing as the percentage of workers in an occupation who earned $14.30 per hour or more in 1989. This wage rate yields earnings of $25,000 per year for 35 hours per week of work, 50 weeks per year. To estimate the wage rate, we divided annual earnings by the product of the number of hours worked per week and the number of weeks worked per year. For these two inclusive sampling schemes, 5,559,121 records were selected, and after weighting these cases represented 112,169,744 workers. Third, we selected full-time, full-year workers, those who worked at least 35 hours per week and who worked at least 50 weeks in 1989. In this case, we coded earnings as the percentage of workers in an occupation who earned $25,000 or more in 1989.[27] We selected 3,491,686 records of full-time, year-round workers, which represent 70,517,365 workers after weighting.

Throughout our analyses, we have used occupational earnings (wage and salary earnings, plus farm and nonfarm net business income), rather

[27]We cannot claim that the thresholds of occupational education and occupational income are theoretically equivalent and, thus, that effects of percentage points above or below those thresholds (or transformations of them) are equivalent. However, the use of threshold measures provides a convenient metric, and we doubt that the behavior of these measures differs substantially from that of other potential measures of aggregate occupational standing. In fact, since the Bureau of the Census dropped its years of schooling concept with the 1990 Census, we had little choice but to use a threshold measure of occupational education.

than occupational income. This departs from Duncan's analysis and that of later updates of the SEI, each of which has used occupational income. We have used earnings for several reasons. Earnings is the component of income that is reported best in the Census. It is by far the largest component of most workers' incomes, and it is more closely related to occupational incumbency than other types of income. After experimenting with alternative treatments of earnings, we have constructed the new socioeconomic indexes using occupational wage rates, which should be based solely on earnings.

In previous constructions of socioeconomic indexes for occupations, some researchers have used age-standardized educational attainment and income (Duncan 1961; Nakao and Treas 1994), and others have not adjusted the socioeconomic characteristics by age (Stevens and Featherman 1981). In our analyses, we used three treatments of the data: indirect standardization, direct standardization, and no standardization.

There are 501 occupations in the 1990 Census classification system. Nakao and Treas (1994) were able to assign prestige ratings directly to all but three: Brickmasons' and Stonemasons' Apprentices (564), Carpenter Apprentices (569), and Tool and Die Maker Apprentices (635). These three apprenticeship categories contained no independently rated titles but had merely been assigned the prestige ratings of the corresponding "master" lines. Following Nakao and Treas, we dropped these three cases from our analyses of occupational prestige. Thus our analyses are based on 498 occupation lines.

Like most earlier investigators, we prefer a measure of the percentage of prestige ratings above a fixed threshold as a criterion variable, rather than a weighted average of arbitrarily scored prestige ranks. For example, Duncan (1961:119–20) chose to use the percentage of raters who chose "excellent" or "good" on the 5-point scale offered in the 1947 North-Hatt prestige study, rather than the prestige score.[28] He showed there was an S-shaped relationship between his criterion and the weighted prestige scores and that the percentage criterion varied more in the middle of the prestige hierarchy. In the Stevens-Featherman revision of the SEI, the investigators did not have direct access to percentage ratings. They estimated a cubic equation to describe the relationship between "good" and "excellent" ratings for the 45 titles in the North-Hatt study that were used in Duncan's analysis and the weighted prestige scores estimated by Siegel (1971) for

[28]But compare Haug's (1977:60–61) egregious critique of Duncan's (1961) criterion variable.

those same titles (Stevens and Featherman 1981:368). They then constructed a percentage-like dependent variable by using their equation to transform Siegel's prestige scores for all occupations. Nakao and Treas (1994:10) came closer to Duncan's original procedure by analyzing the percentage of raters who chose ranks of 5 or higher on the 9-point scale that was used in the 1989 GSS (as well as in NORC surveys of the 1960s). Our analyses are based upon the same prestige measure used by Nakao and Treas,[29] but we have also analyzed a logistic transformation in order to reduce heteroscedasticity in the residuals from the regression of prestige on occupational earnings and education. That is, where y_i = percentage choosing ranks of 5 or higher for the ith occupation, we analyzed

$$\ln\left(\frac{y_i}{100 - y_i}\right). \tag{1}$$

Another methodological variation is that we have estimated weighted as well as unweighted regressions of the prestige criterion on occupational education and income, where the weights are the population counts in each occupation. To some degree, weighting reduces the influence of outlying observations, in those cases where the outliers are relatively rare occupations, whose unusual characteristics may be consequences of sampling variability. Weighted analyses also approximate the relationships among occupational characteristics that would be estimated in samples of the general population. Finally, chastened and instructed by the example of Fox's (1991) and Friendly's (1991) reanalyses of Duncan's data, we have paid a good deal of attention to issues of fit and functional form.

3.2. *Regression Analyses of Occupational Prestige*

In preliminary work, we ran 126 regression analyses of occupational prestige on occupational education and earnings. We varied the specification of the models among definitions of samples, variables, and weighting procedures, as described above. That is, half the regressions were weighted by the relevant sample counts (for all workers, men, or women), and half gave equal weight to each occupation line. One-third of the models used total annual earnings of workers; one-third used estimated wage rates; and one-third used total annual earnings of full-time, year-round workers. One-third of the models used weighted prestige scores; one-third used the

[29]The 1989 prestige ratings and 1980-basis occupational characteristics were kindly given to us by Keiko Nakao.

percentage with ranks of five or higher; and one-third used the logit of the percentage with ranks of five or higher. One-third of the models used socioeconomic data for all workers, men, and women, respectively. Finally, we varied the use of raw, indirectly standardized, and directly standardized educational attainment and earnings.[30] Based on comparisons of the fit of these models, we decided to consider further only those weighted models for men, women, and all workers in which no variables were standardized for age, economic standing was indicated by the estimated wage rate, and the dependent variable was the logistic transform of the percentage of ratings of five or higher.

We then turned to a more intensive examination of the socioeconomic and prestige data, and we modified the models in important ways. First, rather than using the simple logistic transformation of prestige, we used a started logit of the percentage of prestige ratings above the threshold (Mosteller and Tukey 1979: 109–15):

$$\ln\left(\frac{y_i + 1}{100 - y_i + 1}\right). \tag{2}$$

This symmetric transformation eliminates the extreme or undefined values of the log transform that would otherwise occur when the observed percentage is at or near 0 or 100. Second, we experimented with corresponding transformations of the measures of occupational education and occupational wage rates. Third, in an additional effort to reduce heteroscedasticity, we estimated the prestige regressions by weighted least squares, using weights, w_{ij}, suggested by Theil (1970):

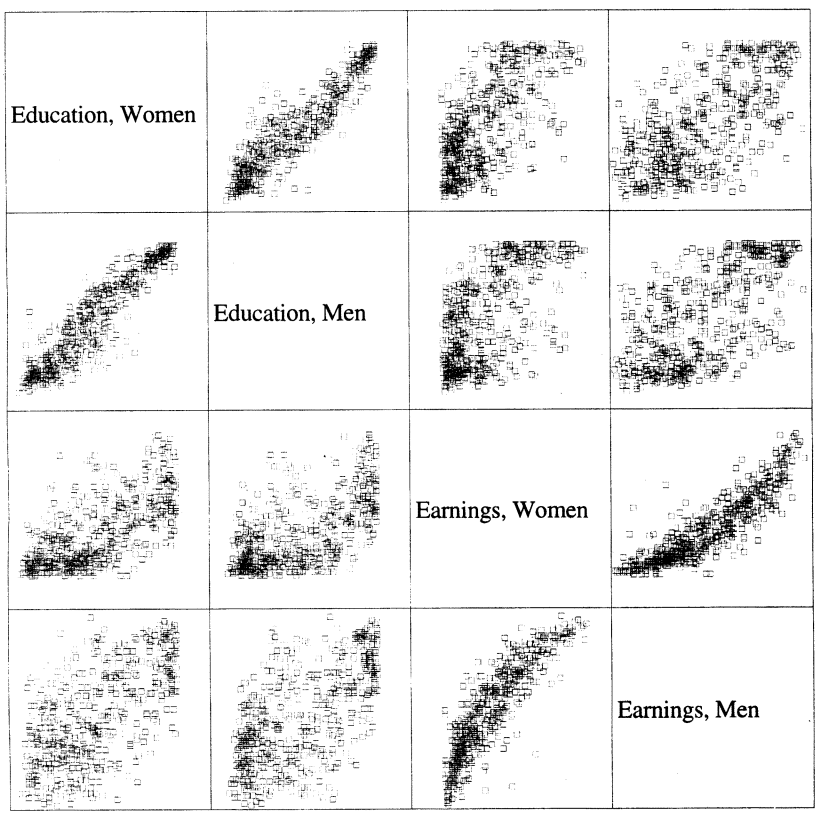
$$w_{ij} = n_{ij} f_i (1 - f_i), \tag{3}$$

where n_{ij} is the count in occupation i in sample group j (total, men, or women), and f_i is the relative frequency of high prestige ratings in occupation i. Fourth, we used an interactive regression graphics program (R-CODE) to identify influential outlying observations and evidence of nonlinearity (Cook and Weisberg 1994).

It is instructive to display the relationships among the educational and economic characteristics of the occupations of men and women. Linear relationships among these variables would simplify analyses of the

[30]We did not use every possible combination of these several factors. We used direct standardization only in analyses of the characteristics of all workers, male and female.

prestige regressions, and, more important, they would make it easier to comprehend differences in the statistical properties of socioeconomic indexes for women and men. That is, it would be analytically convenient if the standing of men's occupations were a linear transformation of the standing of women's occupations; we could then specify status differences between occupations without reference to gender. Figure 3 shows the bivariate scatterplots of women's and men's occupational education and earnings, where the latter variables are expressed as percentages above the threshold



Source: 1990 Census Public Use Files. See text for explanation.

FIGURE 3. Occupational distributions by sex of worker: 1990 Percentages with College Experience and Earnings Above $25,000 in 1989.

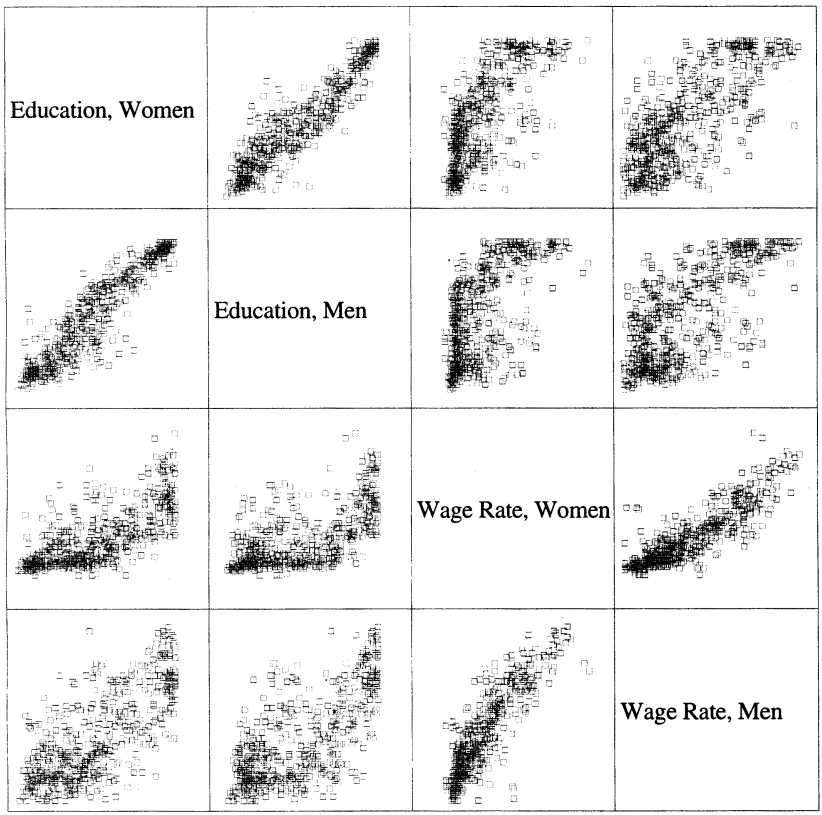
levels of one year of college and $25,000, respectively.[31] The relationship between the occupational education of women and that of men appears to be linear, but the other five bivariate relationships are far from linear. The scatterplot of occupational earnings of women by occupational earnings of men has a crescent moon shape. The scatterplot of women's occupational earnings by their occupational education is pressed up against the axes, while the corresponding plot for men shows only a weak relationship. The shapes of the scatterplots in Figure 3 suggest the desirability of revising or transforming the variables.

On the hypothesis that part-time work might account for nonlinearity in the relationships, we considered using percentages above a wage-rate threshold, rather than an earnings threshold. The bivariate scatterplots of these relationships are shown in Figure 4. This version of the economic standing measure offered little improvement, thus invalidating our hypothesis that an adjustment for labor supply would eliminate some differences between socioeconomic indexes based on the characteristics of women and men. Finally, as shown in Figure 5, we continued to use the estimated wage rate to indicate the economic standing of occupations, but we transformed both education and wage rates into started logits. These transformations make the bivariate relationships among all four variables roughly linear, and we have used them in our preferred regression models of occupational prestige.[32]

In the final set of regression analyses, we used several types of residual plots to identify influential outliers. For example, we looked at plots of externally studentized residuals by leverage, and we looked at partial regression (added variable) plots. Guided by these graphical displays, we decided to delete several occupation lines from the regression analyses used to estimate weights for the socioeconomic scores. We did not delete an occupation line merely because its observed prestige was far from the regression line, but only when it appeared that the observation was also highly leveraged. That is, we deleted an unusual observation if it

[31] Five extreme outliers have been eliminated from the scatterplots in Figs. 3, 4, and 5. They are the occupation lines for natural science teachers, n.e.c. (117), social work teachers (146), supervisors, brickmasons, stone masons, and tile setters (553), longshore equipment operators (845), and helpers, extractive occupations (868). In each of these occupation lines, the number of observations of women, of men, or both, were very small—that is, no larger than 12.

[32] We have also carried out parallel regression analyses using the percentage-based measures of occupational education and occupational earnings, and the choice of regressors does not substantially affect statistical properties of the indexes.

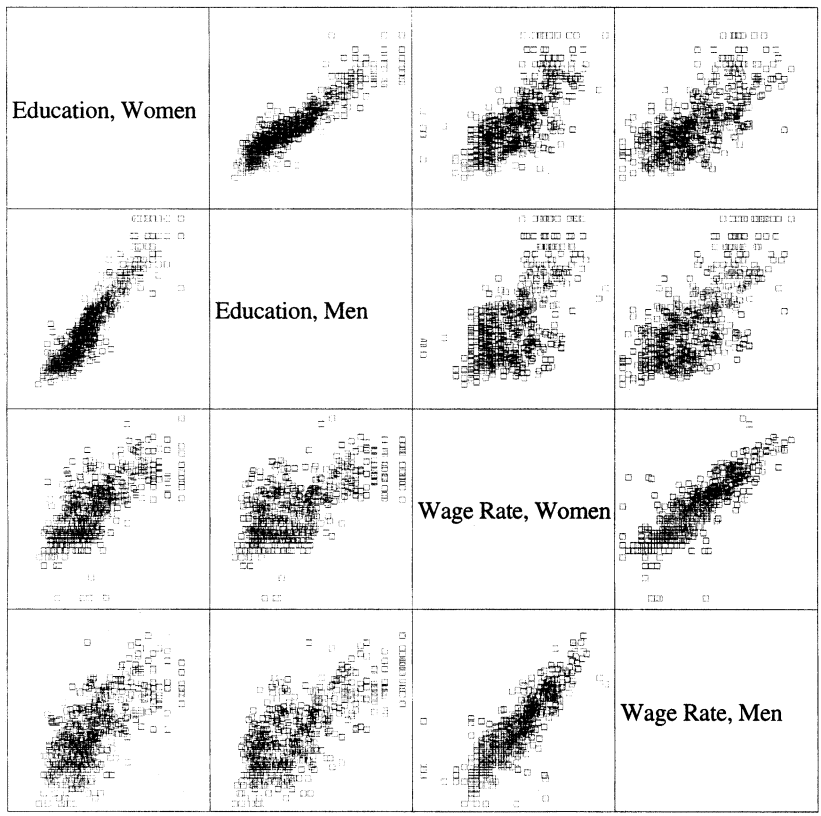


Source: 1990 Census Public Use Files. See text for explanation.

FIGURE 4. Occupational distributions by sex of worker: 1990 Percentages with College Experience and Wage Rate Above $14.30 per hour.

appeared likely to affect the estimated regression coefficients substantially. For example, we did not delete the observation for Sales Occupations, Other Business Service (257), for which the rated titles were Crafting and Moving Estimator and Home Improvement Salesperson (Nakao and Treas 1994:51). Its prestige was much lower than predicted among women, men, and all workers, but because its incumbents have near-average levels of education and earnings, it was not an influential outlier.

Some characteristics of the excluded occupation lines are shown in Table 1. We deleted 7 lines from the regressions for all workers, 10 lines



Source: 1990 Census Public Use Files. See text for explanation.

FIGURE 5. Occupational distributions by sex of worker: 1990 Started Logits of College Experience and Wage Rate above $14.30/hour.

from the regressions for men, and 11 lines from the regressions for women. This is a small number of lines, relative to the 498 occupation lines that entered the analyses, but the deleted lines reflect a substantial number of workers. The deletions include 15.9 percent of all workers, 16.4 percent of men, and 30.0 percent of women. Thus we looked closely, both at the characteristics of the deleted lines and at the effects of those deletions on the estimated weights of the socioeconomic scores. Some of the deleted lines contain very small numbers of workers, and it is thus not worthwhile

to dwell on their characteristics. These include Longshore Equipment Operators (845), male Natural Science Teachers, n.e.c. (117) and Social Work Teachers (146), and female Supervisors, Brickmasons, Stonemasons, and Tile Setters (553).

The other unusual occupation lines contain many workers, and their behavior is thus important and instructive. Table 1 shows the occupation codes and population estimates of each line, followed by the started logits of education, earnings, and prestige. Columns 6 and 7 display the predicted prestige logits and their residuals—that is, the differences between observed and predicted prestige. The last two columns give the level of earnings that is predicted by education and the residual earnings, net of education.

For example, among all workers, Managers and Administrators, n.e.c., (22) have high levels of education and high wage rates, but their earnings are still high relative to their educational attainment. Their predicted prestige levels fall well below the actual prestige levels of the large number of rated titles for that occupation line in the 1989 GSS (Nakao and Treas 1994:43). This line includes a variety of business owners and managers, as well as bankers and college presidents. About 30 percent of Managers and Administrators, n.e.c, are women, and the patterns of prestige and earnings are similar among men and among women: high wages relative to schooling and high prestige relative to schooling and wage rates.

Truck Drivers (804) also have high earnings among all workers and among men, relative to their low levels of educational attainment. Their prestige ratings are far lower than those of other occupations with similar levels of schooling and wages. Waiters and Waitresses (435) and Janitors and Cleaners (453) are similar to Truck Drivers among all workers, in that their prestige falls well below the level expected from their low educational attainments and wages. However, they are even worse off than Truck Drivers, for their wages also fall below the level expected from their schooling. Note that, while Truck Drivers are mainly men, Janitors and Cleaners are almost evenly divided between men and women, and Waiters and Waitresses are mainly women. Among these three outlying occupation groups, earnings follow gender composition. That is, Waiters and Waitresses are paid least, relative to schooling, and Truck Drivers are paid most, relative to schooling. Even among women workers, Waiters and Waitresses have a prestige deficit relative to their schooling and wage rates, and they are poorly paid, relative to their schooling. Also, among women workers, General Office Clerks (379) follow the same pattern as waiters and waitresses:

TABLE 1
Descriptions and Analyses of Excluded Cases: Regression Analyses of Occupational Prestige

Code	1990 Population	Observed Education	Observed Wage	Started Logit of Prestige			Predicted Wage	Residual Wage	Occupation Title
				Observed	*Predicted*	*Residual*			
Total									
22	5,119,742	0.97	0.15	0.91	0.67	0.24	−0.64	0.79	Mngrs./Administrators, n.e.c.
156	2,927,819	2.77	−0.08	1.58	1.39	0.19	0.16	−0.24	Teachers, Elementary School
313	3,783,271	0.20	−2.15	0.22	−0.33	0.55	−0.98	−1.17	Secretaries
435	1,280,050	−0.36	−2.77	−1.38	−0.75	−0.63	−1.23	−1.55	Waiters and Waitresses
453	2,135,885	−1.29	−2.05	−1.53	−0.95	−0.58	−1.64	−0.41	Janitors and Cleaners
804	2,615,667	−1.07	−1.24	−1.16	−0.62	−0.54	−1.55	0.31	Truck Drivers
845	3,831	−1.07	−0.78	−0.78	−0.49	−0.29	−1.54	0.76	Longshore Equipment Operators
Excluded	17,866,265								
Men									
22	3,531,576	1.09	0.56	0.91	0.76	0.15	−0.28	0.84	Mngrs./Administrators, n.e.c.
117	227	3.23	0.30	2.25	1.29	0.96	0.78	−0.47	Natural Science Teachers, n.e.c.
146	18	4.62	4.62	2.25	3.66	−1.41	1.46	3.15	Social Work Teachers
176	279,710	2.22	−1.54	1.54	0.15	1.40	0.28	−1.82	Clergy
453	1,478,275	−1.15	−1.91	−1.53	−1.04	−0.49	−1.38	−0.53	Janitors and Cleaners
473	648,981	−0.69	−1.35	0.24	−0.65	0.88	−1.15	−0.20	Farmers, Except Horticultural
558	587,582	−0.36	−0.20	0.99	−0.02	1.02	−0.99	0.79	Supervisors, Constructing, n.e.c.

628	1,030,471	−0.21	−0.07	0.51	0.08	0.44	−0.92	0.84	Supervisors, Production Occupations
804	2,466,768	−1.12	−1.20	−1.16	−0.71	−0.45	−1.36	0.16	Truck Drivers
845	3,805	−1.07	−0.64	−0.78	−0.44	−0.34	−1.34	0.69	Longshore Equipment Operators
Excluded	10,027,413								
Women									
22	1,588,166	0.81	−0.78	0.91	0.46	0.45	−1.48	0.69	Mngrs./Administrators, n.e.c.
23	805,820	1.62	−1.02	1.64	0.77	0.87	−0.99	−0.03	Accountants and Auditors
95	1,734,694	2.76	0.12	1.55	1.59	−0.04	−0.31	0.42	Registered Nurses
156	2,297,247	2.61	−0.24	1.58	1.43	0.15	−0.40	0.16	Teachers, Elementary School
313	3,734,523	0.21	−2.22	0.22	−0.20	0.42	−1.83	−0.39	Secretaries
337	1,609,204	0.13	−2.11	0.26	−0.21	0.46	−1.88	−0.23	Bookkprs., Acc./Audit. Clerks
379	1,114,599	−0.03	−2.34	−0.80	−0.34	−0.46	−1.98	−0.36	General Office Clerks
435	1,022,032	−0.52	−2.97	−1.38	−0.73	−0.64	−2.27	−0.69	Waiters and Waitresses
447	1,417,986	−0.61	−2.34	−0.16	−0.60	0.44	−2.32	−0.01	Nursing Aides, Orderlies, and Attendants
553	96	−4.62	−1.02	0.61	−2.07	2.68	−4.72	3.70	Supervisors, Brickmasons, Stonemasons, and Tile Setters
845	26	−1.30	−1.91	−0.78	−0.80	0.02	−2.73	0.83	Longshore Equipment Operators
Excluded	15,324,393								

low pay relative to schooling and low prestige relative to schooling and wages.

Among all workers, Elementary School Teachers (156) and Secretaries (313) have low wages, relative to their schooling, and their prestige ratings are much higher than would be expected from their schooling and earnings. These two occupation lines mainly include women workers, who account for more than 10 percent of all women workers and almost 40 percent of the women in outlying occupation lines. It would thus be a serious error to identify the socioeconomic status of these (and similar) occupations with their prestige. Note, however, that among women workers, Elementary School Teachers are not underpaid, relative to their schooling.

Among male workers, Clergymen (176) and Farmers (801) are underpaid, relative to their schooling, but they enjoy very high levels of prestige. On the other hand, male Supervisors in Construction (558) and in Production Occupations (628) somewhat resemble Managers and Administrators, though perhaps by virtue of unionization, rather than entrepreneurship. That is, supervisors enjoy high wage rates relative to their schooling and high prestige levels relative to their schooling and wages.

Among the outlying women's occupations, in addition to Managers and Administrators, Elementary School Teachers, and Secretaries, relatively high levels of prestige go to Accountants and Auditors (23), Bookkeepers and Accounting or Audit Clerks (337), and Nursing Aides, Orderlies, and Attendants (447). Registered Nurses (95) are well paid relative to their schooling, but their prestige levels are not out of line with their schooling and wages.

It is striking that several of the largest and most influential exceptions to typical relationships among occupational education, wage rates, and prestige occur in common and visible jobs: business owners, farmers, clergy, secretaries, teachers, waiters and waitresses, janitors, and truck drivers. In each case, it is perhaps easy to rationalize the exceptions. The business of business is making money, and the entrepreneur is an American cultural icon. Farming is as much a way of life as a job; it carries some income in kind; and it, too, is a cultural icon. Religious vocations are a calling. Secretaries and teachers are prototypical women's jobs, paid more in prestige than in dollars. And so on.

There are cautionary messages in these findings. First, the typically strong connections between occupational socioeconomic status and prestige are not simply a product of highly visible relationships across common occupations, but they show up more clearly across a large number of

less common or visible jobs. Second, when we think about the relationships among socioeconomic status and prestige, we should be most cautious about thinking of them concretely in relation to common occupations, for they may be exceptions. Third, prestige-validated socioeconomic indexes were initially used as proxies for missing prestige measures. Their greater criterion validity encouraged widespread use, well after prestige scores became available for all occupations. Thus researchers have often glossed over the differences between occupational prestige and socioeconomic status. The present findings remind us that occupational prestige is by no means the same as occupational socioeconomic status, and we should respect both the theoretical and empirical distinctions between them (Hodge 1981; Jencks 1990).

Table 2 shows the estimates from selected regression analyses of occupational prestige on occupational education and earnings or wage rates. The display includes only about one-fifth of the analyses that we examined, but they provide a good indication of the effects of varying specifications. Several important patterns appear. First, regardless of the specification, occupational education and earnings or wage rates account for 70 to 80 percent of the variance in occupational prestige. We note, however, that R^2 is not a particularly good guide to fit in this context, for it sometimes declines when extreme outliers are removed, as in the contrast between models in lines 13 to 15 with those in lines 16 to 18 or between models in lines 19 to 21 with those in lines 22 to 24. This can occur precisely because the outliers are relatively influential observations. Second, as suggested by the contrast between lines 1 to 3 and lines 4 to 6, a better fit is obtained without standardization of education and earnings by age. In the latter models, R^2 is larger, and the standard errors of estimate are smaller. Third, as shown by the contrast between lines 4 to 6 and lines 7 to 9, the fit of weighted regressions is substantially better than that of unweighted regressions. For example, among women workers, comparing lines 6 and 9, weighting increases R^2 by 0.09, from 0.72 to 0.81, and it reduces the standard error of estimate from 12.46 to 9.65. Fourth, regardless of the functional form of the equations—the transformations of the regressors and of prestige—there are consistent variations in the relative effects of education and of earnings or wage rates among men, women, and all workers. Whether we look at regression coefficients or at standardized regression coefficients, among all workers and among women the effects of occupational education are always larger than those of occupational earnings or wage rates. In most cases the education effects are 1.5 to 2.5 times larger

TABLE 2

Specifications, Parameters, and Fit Statistics for SEI Prediction Equations

Population	Model Specification						SEI Prediction Equation						
							Metric Coefficients			Standardized Coefficients			
	Dependent Variable	Independent Variables	Standardization for Age	Sample Weight	Labor Supply Adjustment	Outliers Deleted	*Constant*	*Education*	*Earnings*	*Education*	*Earnings*	R^2	Standard Error
1 Total	Percent 5+	Percentages	Indirect	None	No	No	6.340	0.592	0.293	0.680	0.263	0.73	12.18
2 Male	Percent 5+	Percentages	Indirect	None	No	No	1.353	0.492	0.434	0.571	0.342	0.68	13.23
3 Female	Percent 5+	Percentages	Indirect	None	No	No	11.965	0.548	0.350	0.616	0.295	0.70	12.80
4 Total	Percent 5+	Percentages	None	None	No	No	7.926	0.592	0.249	0.695	0.257	0.75	11.58
5 Male	Percent 5+	Percentages	None	None	No	No	5.973	0.511	0.319	0.609	0.327	0.72	12.32
6 Female	Percent 5+	Percentages	None	None	No	No	12.438	0.545	0.313	0.635	0.280	0.72	12.46
7 Total	Percent 5+	Percentages	None	Total	No	No	7.706	0.596	0.278	0.677	0.299	0.80	10.05
8 Male	Percent 5+	Percentages	None	Male	No	No	6.395	0.408	0.439	0.485	0.463	0.78	10.44
9 Female	Percent 5+	Percentages	None	Female	No	No	10.296	0.611	0.315	0.675	0.259	0.81	9.65
10 Total	Percent 5+	Percentages	None	Total	Yes	No	9.238	0.561	0.366	0.638	0.316	0.79	9.24
11 Male	Percent 5+	Percentages	None	Male	Yes	No	9.913	0.363	0.549	0.431	0.504	0.78	10.45
12 Female	Percent 5+	Percentages	None	Female	Yes	No	9.455	0.656	0.278	0.726	0.193	0.80	9.92
13 Total	Started Logit	Percentages	None	WLS, Total	Yes	No	−1.698	0.023	0.016	0.611	0.327	0.74	0.45
14 Male	Started Logit	Percentages	None	WLS, Male	Yes	No	−1.660	0.014	0.024	0.396	0.513	0.72	0.47
15 Female	Started Logit	Percentages	None	WLS, Female	Yes	No	−1.686	0.027	0.014	0.679	0.219	0.75	0.44
16 Total	Started Logit	Percentages	None	WLS, Total	Yes	Yes	−1.692	0.021	0.019	0.558	0.380	0.73	0.45
17 Male	Started Logit	Percentages	None	WLS, Male	Yes	Yes	−1.644	0.013	0.025	0.376	0.535	0.73	0.45
18 Female	Started Logit	Percentages	None	WLS, Female	Yes	Yes	−1.661	0.024	0.016	0.646	0.242	0.71	0.45
19 Total	Started Logit	Started Logits	None	WLS, Total	Yes	No	0.187	0.480	0.268	0.643	0.295	0.74	0.45
20 Male	Started Logit	Started Logits	None	WLS, Male	Yes	No	0.214	0.308	0.481	0.442	0.484	0.74	0.45
21 Female	Started Logit	Started Logits	None	WLS, Female	Yes	No	0.398	0.468	0.280	0.612	0.280	0.74	0.44
22 Total	Started Logit	Started Logits	None	WLS, Total	Yes	Yes	0.205	0.436	0.287	0.605	0.322	0.71	0.45
23 Male	Started Logit	Started Logits	None	WLS, Male	Yes	Yes	0.175	0.303	0.454	0.462	0.466	0.75	0.44
24 Female	Started Logit	Started Logits	None	WLS, Female	Yes	Yes	0.305	0.455	0.270	0.608	0.270	0.70	0.46

Note: Models were estimated using data for a maximum of 497 of the 501 1990-basis occupation lines. Lines 564, 569, and 635, which are apprenticeship occupations, were excluded from all analyses following Nakao and Treas (1994). Line 845, "Longshore Equipment Operators," was also excluded because of the small number of female occupational incumbents. Standardized education and earnings percentages exceeded 100 percent in a small number of lines and were top-coded.

than the economic effects. On the other hand, prestige is more sensitive to the earnings of male occupational incumbents. In several specifications, the earning or wage effects are larger than the education effects, and in all cases the earning or wage effects are larger relative to the education effects among men than among women or among all workers. Fifth, as shown by the contrast between lines 7 to 9 and lines 10 to 12, use of the occupational wage rate, rather than occupational earnings has no consistent effect on fit. The standard error of estimate declines in the analysis based on all workers, but it remains stable for men and increases among women. Contrary to our expectation, use of the occupational wage rate increases the gender differential in the relative effects of education and earnings on prestige. That is, in the wage-rate specification, the effect of earnings relative to economic standing increases among men, and it declines among women. Finally, we note the modest effects of the deletion of outliers on the slopes of the prediction equations. These appear in comparisons of lines 13 to 15 with lines 16 to 18 and in comparisons of lines 19 to 21 with lines 22 to 24. Among men and women workers, taken separately, outlier deletion has very little effect on the weights, but among all workers combined, it leads to an increase in the effect of the wage rate relative to educational attainment.

It is less easy to assess the comparative advantages of the started logit specifications relative to those in percentages because there are changes both in the estimation method (to weighted least squares) and a change in the metric of the prestige variable. Moreover, our choice of models has been guided by an interest in consistency in the transformation of variables and by examination of a variety of residual plots, as well as by numeric measures of fit. Our preferred specifications of the prestige equation are those reported in the last three rows of the table (22 to 24), in which the economic indicator is the occupational wage rate, all of the variables have been expressed as started logits, the estimates are obtained by weighted least squares, and outliers have been deleted. In these three models, the estimates for women and for all workers combined are quite similar, and they show larger effects of educational attainment than of occupational wages by a factor of about 1.5. On the other hand, there is an opposite and nearly equal differential in the effects of education and wages among men. Despite the substantial similarity in the started logits of occupational education and occupational wages of men and women, as shown in Figure 5, differences in the estimation equations appear large enough so we might expect to see differences in the statistical properties of the male and the female or total socioeconomic indexes.

3.3. *Socioeconomic Indexes for All Occupations*

Using the estimated parameters of our final preferred models, we computed total-based, male-based, and female-based SEI scores for all occupations.[33] All three sets of scores were transformed to range between 0 and 100; in each case we added 2.08 to the predicted value of the started logit of prestige and multiplied the sum by 17.3. Appendix A presents the 1990-basis and 1980-basis total (TSEI), male (MSEI), and female (FSEI) scores for all occupation lines, the socioeconomic components of those scores, and the 1989 Nakao-Treas prestige scores and ratings.

In Appendix A, a series of flags indicates whether lines have been split, renumbered, renamed, or aggregated. Natural Science Teachers, n.e.c. (117) and Teachers, Postsecondary, n.e.c. (153) have been merged and given the same education, earnings, and SEI scores. The same is true for Longshore Equipment Operators (845) and Miscellaneous Material Moving Equipment Operators (859). By construction, the figures for education and earnings are weighted averages of two lines (117 and 154 in one case, 845 and 859 in the other). In converting from the 1990 Census Occupational Classification System to the 1980 Occupational Classification System, six 1990-basis lines were merged into two 1980-basis lines (017, 021, and 022 into 019; 466, 467, and 468 into 469), and six 1990-basis lines were split into twelve 1980-basis lines (353 into 349 and 353; 368 into 368 and 369; 436 into 436 and 437; 674 into 673 and 674; 795 into 794 and 795; 804 into 804 and 805). When 1990-basis lines were split into multiple 1980-basis lines, the values for education, earnings, and SEI scores were applied to each of the new lines. When 1990-basis lines were merged into a single 1980-basis line, we computed a weighted average of the education and earnings scores (weighted by the number of occupational incumbents), and then recomputed the SEI scores for the new line. Also, many 1990-basis lines were renumbered in the 1980-basis classification, and some lines were renamed.[34]

In several cases, where the three-digit codes for 1990 were heterogeneous and included a large number of individuals, Appendix A provides optional SEI values for splits of the parent line by class of worker and/or

[33]Machine-readable versions of the Hauser-Warren 1980-basis and 1990-basis SEI scores and their component data are available on-line at ftp:\\elaine.ssc.wisc.edu\pub\hauser.

[34]See Nakao and Treas (1994:40–41) for details regarding these changes in classification.

industry. This follows the precedent of Duncan's scoring of split lines in the 1950 and 1960 Census classifications. The split 1990-basis lines include Managers, Food Service and Lodging (17); Managers and Administrators, n.e.c. (22); Accountants and Auditors (23); Registered Nurses (95); Supervisors and Proprietors, Sales Occupations (243); Sales Representatives: Mining, Manufacturing, and Wholesale (259); Sales Workers, Other Commodities (274); Cashiers (276); Secretaries (313); Bookkeepers, Accounting and Audit Clerks (337); General Office Clerks (379); Janitors and Cleaners (453); Auto Mechanics, except Apprentices (505); Carpenters, except Apprentices (567); Supervisors, Production Occupations (628); Assemblers (785); Truck Drivers (804); Stock Handlers and Baggers (877); and Laborers, except Construction (889).

Finally, Appendix A lists weighted average values of SEI scores, their components, and NORC prestige scores for major occupation groups. These may be useful in summarizing occupational differences for descriptive purposes or in scoring occupation groups when detailed codes for occupation, industry, and class of worker are not available.

3.4. *Properties of the Socioeconomic Indexes*

Table 3 shows unweighted correlations among the transformed measures of occupational prestige, education, and wage rate; the total, male, and female 1990-basis SEI scores (TSEI, MSEI, and FSEI); and the Nakao-Treas indexes for 1990 Census occupation lines. The correlations of prestige with educational attainment (0.82 to 0.85) are larger than with the wage rate (0.70 to 0.74). In each case, the prestige correlations are slightly lower with the characteristics of female occupational incumbents than with those of male or of all incumbents. The correlations of prestige with the Nakao-Treas indexes and with the corresponding 1990-basis socioeconomic indexes are similar: 0.87 among all workers for both indexes, 0.86 for the 1990-basis MSEI, and 0.84 for the Nakao-Treas MSEI. Also, the correlation between the total and male indexes is the same for the 1990-basis indexes as for the Nakao-Treas indexes, 0.97. However, the 1990-basis indexes are not fully interchangeable with the Nakao-Treas indexes. The correlations are 0.97 for the total indexes and 0.94 for the male indexes.

While the total 1990-basis index is almost equally correlated with the male index and the female index (0.97 and 0.96), the correlation between the new male and female indexes, 0.91, is far from perfect. That is,

TABLE 3
Correlations Among Prestige, Gender-Specific Socioeconomic Characteristics of Occupations, 1990-Basis SEI Scores, and Nakao-Treas SEI Scores: 1990-basis Census Occupation Lines

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1 Prestige 5+ (started logit)	1.00											
2 Total-based education (started logit)	0.85	1.00										
3 Male-based education (started logit)	0.84	0.98	1.00									
4 Female-based education (started logit)	0.82	0.96	0.92	1.00								
5 Total-based wage rate (started logit)	0.71	0.66	0.61	0.64	1.00							
6 Male-based wage rate (started logit)	0.74	0.72	0.70	0.69	0.95	1.00						
7 Female-based wage rate (started logit)	0.70	0.69	0.64	0.70	0.89	0.85	1.00					
8 1990-basis TSEI	0.87	0.97	0.94	0.93	0.83	0.86	0.81	1.00				
9 1990-basis MSEI	0.86	0.93	0.92	0.87	0.85	0.92	0.81	0.97	1.00			
10 1990-basis FSEI	0.84	0.94	0.90	0.98	0.76	0.78	0.84	0.96	0.91	1.00		
11 Nakao-Treas TSEI	0.87	0.95	0.93	0.91	0.78	0.80	0.78	0.97	0.94	0.93	1.00	
12 Nakao-Treas MSEI	0.84	0.94	0.95	0.89	0.72	0.79	0.73	0.94	0.94	0.90	0.97	1.00

Note: Estimates are based on unweighted data for 501 occupation lines.

almost 10 percent of the variance in the two indexes is not in common, which is a great deal, if we should like to think that MSEI and FSEI measure the same thing.[35] It is not obvious to what degree this is a consequence of the differential slopes of educational attainment and wage rates in the prediction equations for the two indexes or of the differing socioeconomic characteristics of male and of female occupational incumbents. Both the coefficients and the socioeconomic characteristics differ among the 1990-basis indexes. The coefficient of earnings is about 1.5 times that of education in the male index (MSEI), and the coefficient of education is about 1.5 times that of earnings in the female index (FSEI); its coefficients are similar to those in the total index (TSEI), as shown in lines 22 to 24 of Table 2. At the same time, the occupational socioeconomic characteristics also differ by gender. In Table 3, the correlation between occupational education of men and women workers is 0.92, while that of occupational wage rates is 0.85. Note that the correlation of occupational education between men and women is slightly larger than that between MSEI and FSEI. To identify the source of the imperfect correlations among indexes, we constructed pseudo-indexes for men and women, using the occupational characteristics of the same gender but the regression coefficients for the other gender. The differing coefficients of the male-based and female-based prediction equations had little effect on the correlations. When the coefficients were altered, the correlations between actual and pseudo-indexes were 0.984 among men and 0.983 among women. On the other hand, among combinations of indexes whose socioeconomic components differed, the correlations ranged from 0.90 to 0.92. Almost all of the lack of commonality between MSEI and FSEI can be attributed to differences in the educational attainments and wage rates of male and female occupational incumbents.

Thus, despite our best analytic effort to establish commonality in relationships between the socioeconomic determinants of occupational prestige among American men and women, there remain substantial gender differences among those determinants across occupations. These lead us to doubt the possibility of establishing a metric of occupational socioeconomic status that would be fully and equally valid for male and female workers. Surely, an index based on the characteristics of all workers would be preferable to one based on the characteristics of men alone or of women

[35]That is, the correlation between the two indexes tells us the share of the variance in each that would be explained by a common factor that affected each equally.

alone.[36] The correlations of TSEI with MSEI and FSEI are 0.97 and 0.96, respectively.[37] However, the correlations suggest that the 1990-basis TSEI as common measure is an imperfect substitute for either MSEI or FSEI, while the latter are far from perfect substitutes for one another.

The correlations in Table 3 provide no information about the properties of the old or new socioeconomic indexes in comparisons of mean attainment levels among men and women. Table 4 gives the means and standard deviations of each of the occupational status measures for men and women in the 1990 Census sample and for respondents in the 1994 General Social Survey (GSS) who reported a current or last job or who reported a first, full-time civilian occupation.[38] It is reassuring that the means and standard deviations of the measures for current or last occupations in the GSS look very similar to those of corresponding measures in the 1990 Census. This is important because the GSS, but not the Census, can provide estimates of intergenerational and intragenerational correlations among alternative measures of occupational standing. Whether one indexes occupations with the characteristics of men, of women, or of all workers, women hold jobs with higher average levels of schooling but lower wage rates than men. For example, when occupations are indexed by the started logit of educational attainment for all workers in the 1990 Census, the mean logit is 0.172 for men and 0.449 for women. Obversely, when occupations are indexed by the started logit of the wage rate for all workers in the 1990 Census, the mean logit is -0.878 for men and -1.429 for women.[39] Similar observations hold for current or last jobs in the Census and the GSS and for first civilian occupations in the GSS. Thus use of a composite socioeconomic index will show that women hold better or worse jobs than men, depending on the relative weights given to schooling

[36]We have also experimented with the possibility of constructing an index for all workers that would be based on separate effects on prestige of the occupational education and wage rates of women and men. That is, the prediction equation would be of the form prestige = f(male education, female education, male wages, female wages). Such equations provided no predictive advantage over those using the characteristics of all workers combined.

[37]Note that the corresponding correlations are equally large in the case of occupational education: 0.98 and 0.96.

[38]The first-job item was ascertained from a random half of 1994 GSS respondents.

[39]Recall that the education measure refers to the percentage of occupational incumbents with at least one year of post–high school education and that the wage rate measure refers to the percentage of occupational incumbents earning more than $14.30 per hour in 1989.

TABLE 4
Description of Occupational Status Variables, 1990 Census and 1994 General Social Survey

	Men		Women	
	Mean	(SD)	Mean	(SD)
Current or Last Occupation, 1990 Census	(N = 3,026,651)		(N = 2,532,470)	
Prestige 5+ (started logit)	−0.015	(1.046)	0.028	(1.005)
Total-based Educ. (started logit)	0.172	(1.395)	0.449	(1.303)
Male-based Educ. (started logit)	0.298	(1.473)	0.799	(1.327)
Female-based Educ. (started logit)	0.087	(1.311)	0.310	(1.295)
Total-based Wage (started logit)	−0.878	(0.973)	−1.429	(1.055)
Male-based Wage (started logit)	−0.641	(0.998)	−0.913	(0.989)
Female-based Wage (started logit)	−1.472	(0.908)	−1.779	(0.961)
1990-basis TSEI	36.5	(14.5)	35.8	(14.4)
1990-basis MSEI	35.5	(14.7)	36.0	(13.9)
1990-basis FSEI	35.1	(13.9)	35.4	(14.3)
Nakao-Treas TSEI	48.6	(18.9)	47.8	(18.5)
Nakao-Treas MSEI	48.3	(19.3)	52.3	(16.8)
Current or Last Occupation, 1994 General Social Survey	(N = 1,250)		(N = 1,589)	
Prestige 5+ (started logit)	0.037	(1.042)	−0.019	(1.017)
Total-based Educ. (started logit)	0.172	(1.398)	0.398	(1.313)
Male-based Educ. (started logit)	0.281	(1.472)	0.751	(1.321)
Female-based Educ. (started logit)	0.112	(1.311)	0.262	(1.311)
Total-based Wage (started logit)	−0.816	(0.963)	−1.494	(1.027)
Male-based Wage (started logit)	−0.597	(0.987)	−0.987	(0.971)
Female-based Wage (started logit)	−1.416	(0.921)	1.826	(0.945)
1990-basis TSEI	36.8	(14.4)	35.1	(14.4)
1990-basis MSEI	35.8	(14.5)	35.2	(13.8)
1990-basis FSEI	35.5	(13.9)	34.8	(14.3)
Nakao-Treas TSEI	48.7	(19.2)	46.9	(18.6)
Nakao-Treas MSEI	48.1	(19.5)	51.2	(17.1)
First Occupation, 1994 General Social Survey	(N = 579)		(N = 790)	
Prestige 5+ (started logit)	−0.293	(1.124)	−0.255	(1.009)
Total-based Educ. (started logit)	−0.125	(1.446)	0.129	(1.319)
Male-based Educ. (started logit)	−0.018	(1.535)	0.499	(1.340)
Female-based Educ. (started logit)	−0.163	(1.355)	0.015	(1.317)
Total-based Wage (started logit)	−1.256	(1.076)	−1.802	(0.976)
Male-based Wage (started logit)	−1.062	(1.097)	−1.272	(0.930)
Female-based Wage (started logit)	−1.747	(1.015)	−2.080	(0.938)
1990-basis TSEI	32.3	(15.5)	31.5	(14.4)
1990-basis MSEI	30.6	(15.9)	31.7	(13.7)
1990-basis FSEI	31.8	(14.8)	31.7	(14.5)
Nakao-Treas TSEI	44.2	(19.5)	42.4	(17.6)
Nakao-Treas MSEI	43.5	(19.6)	47.5	(16.3)

and wages (or earnings) in construction of the index. If schooling is given more weight, women will appear to have better jobs than men; if wages or earnings are given more weight, men will appear to have better jobs than women.

Despite this analytic possibility, among the 1990-basis socioeconomic indexes, there are small and generally consistent gender differentials. Excepting the Census estimates based on the 1990-basis MSEI, the occupational status of men slightly exceeds that of women. This occurs because the men in women's most common occupations are relatively high in status. Thus when women are described by the characteristics of men in their occupations, the women appear well off, and this effect overwhelms the greater weight given to wages in the male-based index. However, between Nakao and Treas's two measures, the weights may differ by enough to affect gender comparisons. In the Census and in the GSS, men hold slightly higher status than women on the TSEI, but they hold lower status than women on the MSEI. Of course, the latter gender comparisons are affected by differences in the characteristics of occupational incumbents in the 1980 Census as well as by differences in weights of components of the Nakao-Treas socioeconomic indexes.

Regardless of the comparisons of the indexes in Table 4, it is not clear why one should regard prestige-validated weights—or any other particular set of weights—as uniquely appropriate for gender comparisons. That is, as long as occupation-specific education levels are higher for women than for men, while occupation-specific wages are higher for men than for women, gender comparisons based on a composite socioeconomic index will necessarily hide more than they reveal. It would be more accurate to describe women's and men's occupational standing directly and separately in terms of occupational education and occupational wage rates, rather than to rely on any composite of those two characteristics.

Table 5 shows correlations among corresponding occupational status measures of father's occupation, first occupation, and current occupation for men and women in the 1994 General Social Survey. It provides evidence about the predictive validity of alternative status measures in the context of intergenerational and intragenerational occupational stratification. For example, among men, the correlation between father's occupational standing and the standing of current or last occupation is 0.29 when occupations are indexed by their prestige and 0.38 when occupations are indexed by their average levels of schooling among men. Several striking *patterns* appear in Table 5. First, among men and women, the correlations

TABLE 5
Correlations Among Status Characteristics of Father's Occupation, First Occupation, and Current or Last Occupation: Men and Women in the 1994 General Social Survey

Occupational Status Measure	Men			Women		
	Father's Occ. First Occ.	Father's Occ. Current Occ.	First Occ. Current Occ.	Father's Occ. First Occ.	Father's Occ. Current Occ.	First Occ. Current Occ.
Prestige 5+ (started logit)	0.21	0.29	0.59	0.25	0.23	0.63
Total-based Education (started logit)	0.30	0.36	0.72	0.33	0.34	0.71
Male-based Education (started logit)	0.32	0.38	0.72	0.31	0.31	0.69
Female-based Education (started logit)	0.25	0.30	0.70	0.32	0.32	0.72
Total-based Wage (started logit)	0.17	0.21	0.49	0.17	0.23	0.58
Male-based Wage (started logit)	0.22	0.26	0.54	0.20	0.23	0.57
Female-based Wage (started logit)	0.15	0.21	0.51	0.17	0.21	0.65
1990-basis TSEI	0.28	0.34	0.68	0.30	0.33	0.69
1990-basis MSEI	0.29	0.35	0.67	0.28	0.30	0.66
1990-basis FSEI	0.23	0.29	0.67	0.29	0.30	0.72
Nakao-Treas TSEI	0.30	0.35	0.67	0.32	0.32	0.67
Nakao-Treas MSEI	0.34	0.37	0.69	0.31	0.29	0.67

based on occupational prestige and occupational wage rates are all substantially lower than corresponding correlations based on occupational schooling or on any of the socioeconomic indexes. The low prestige correlations confirm many previous findings, but it is striking that in most cases, the correlations based on wage rates are even lower than those based on prestige. Thus a purely economic measure of occupational standing appears no more likely a candidate than occupational prestige to be the major basis of occupational stratification. Second, the correlations are generally similar for each of the composite socioeconomic measures—that is, the three 1990-basis SEIs and the two Nakao-Treas indexes. The findings suggest that gender-specific indexes will yield slightly higher correlations than total or opposite-gender indexes, but the differences are not large. If one were to use either of the indexes for all workers, the correlations would be similar among men and among women. Third, the intergenerational and intragenerational correlations are as large or larger when the educational level alone is used to index occupational standing, as when a composite socioeconomic index is used. For example, among women, the correlation of father's occupation with first occupation based on the education of all workers is 0.33, while the largest of the correlations based on a socioeconomic index (the Nakao-Treas TSEI) is 0.32. In fact, if we consider only gender-specific comparisons—that is, those among the total-based and male-based education measures with the total-based and male-based socioeconomic indexes—the correlations of occupational education are all as large or larger than the corresponding SEI correlations.

These findings suggest several interesting questions. Should we doubt the validity of findings about occupational stratification that have been based upon existing socioeconomic indexes? Why are occupational wage rates or earnings not more important in the stratification process? Is there an alternative scheme for weighting occupational education and wages or earnings that would yield a more valid socioeconomic composite? Or would it be better, in future stratification research, to index occupations by their education levels, rather than by a socioeconomic composite? If education is the preferred indicator of occupational standing for research on social stratification and mobility, is it also a preferred index in analyses of political behavior, health and well-being, or any of the research areas in which measures of occupational status have been used?

The correlations in Table 5 suggest that previous findings about social stratification would not be changed dramatically if an education-based index rather than a composite index had been used. Most of the other

questions lie beyond the scope of this paper, but we have looked further at the choice of optimal weights for occupational education and wages or earnings.

4. STRUCTURAL MODELS OF THE SOCIOECONOMIC INDEX

The preceding analyses have demonstrated two potential weaknesses in composite socioeconomic indexes of occupational standing. First, gender differences are manifest both in the relationships between occupational socioeconomic standing and prestige and in the socioeconomic characteristics of occupational incumbents. Second, occupational wage rates appear to be far less highly correlated, both within and across generations, than occupational education. The latter finding leads us to wonder whether the use of prestige-validated socioeconomic indexes may implicitly overestimate the importance of the economic standing of occupations in the stratification process. To investigate this possibility, we have developed structural equation models in which the construction of socioeconomic indexes is embedded in the stratification process.

4.1. *Prestige-Validated Models*

Figure 6 shows a path model of the relationships among father's occupational status, the status of a man or woman's first occupation, and the status of his or her current or last occupation. In this rudimentary model, we specify that the status of first occupation depends on that of father's occupation, while the status of current or last occupation depends upon father's occupation and first occupation. To be sure, this is scarcely a complete model of the stratification process, but even in the absence of other variables, it is sufficient both to illustrate and to test the prestige-validated concept of occupational socioeconomic status.[40] For each occupation, there are three measures of occupational standing: educational level, wage rate, and prestige. At each of the three stages of the model—father's occupation, first occupation, and current or last occupation—we specify the determination of a socioeconomic status construct following exactly the scheme of prestige validation used in the construction of the Duncan SEI

[40]If we added other variables to the model—e.g., the educational attainment or wage rate of the respondent—the model would yield additional overidentifying restrictions and, hence, additional empirical tests of the hypotheses implicit in the construction of prestige-validated socioeconomic indexes.

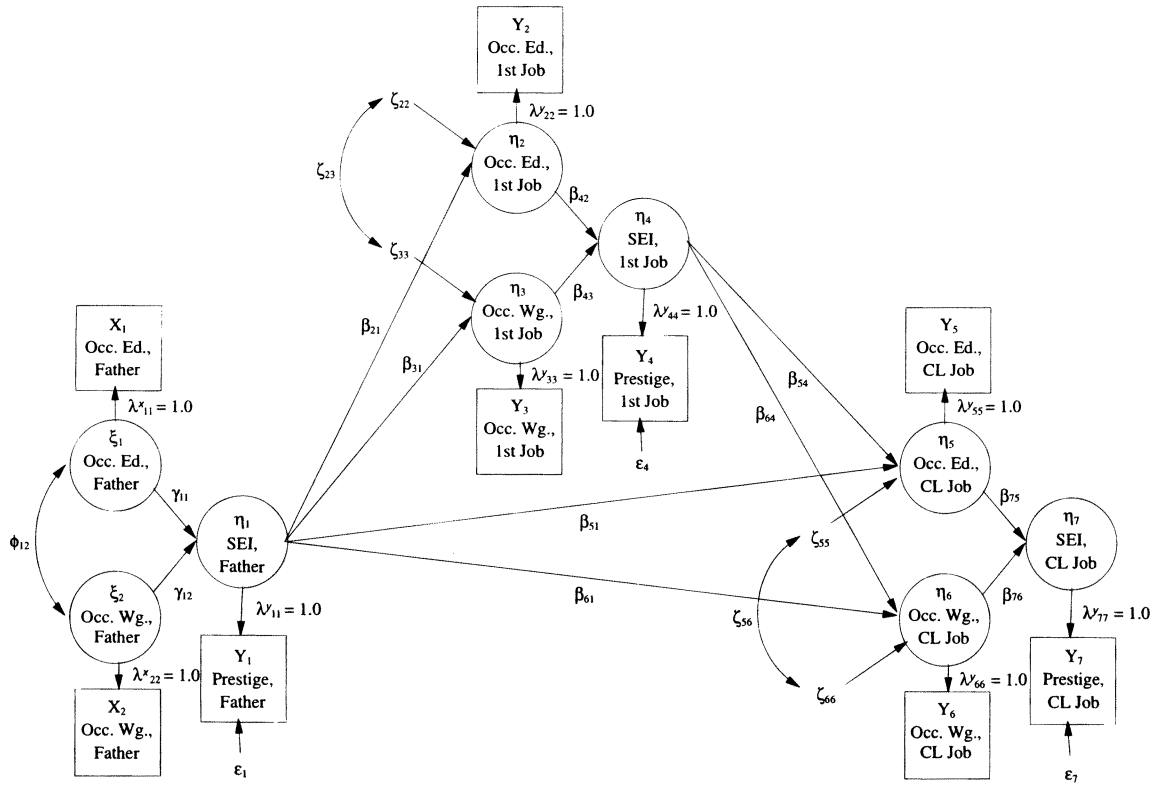


FIGURE 6. A model of intergenerational stratification in occupational status and prestige.

and other similar socioeconomic indexes. That is, an SEI composite is completely determined by measures of occupational education and occupational wages, while occupational prestige is affected by those prior variables only through the SEI composite. For example, in the case of father's occupational standing

$$\begin{aligned} \eta_1 &= \gamma_{11}\xi_1 + \gamma_{12}\xi_2 \\ Y_1 &= \lambda^y_{11}\eta_1 + \epsilon_1, \end{aligned} \tag{4}$$

where η_1 = SEI composite, ξ_1 = occupational education, ξ_2 = occupational wage rate, Y_1 = occupational prestige, ϵ_1 = a random error term, γ_{11} and γ_{12} are coefficients to be estimated, and we adopt the normalizing restriction, $\lambda^y_{11} = 1$.[41] In addition, we specify trivial measurement models of occupational education and the occupational wage rate

$$\begin{aligned} X_1 &= \lambda^x_{11}\xi_1 \\ X_2 &= \lambda^x_{22}\xi_2, \end{aligned} \tag{5}$$

where $\lambda^x_{11} = 1$ and $\lambda^x_{22} = 1$. Unlike earlier efforts to express the relationships between occupational socioeconomic status and prestige in a structural model, in which prestige and socioeconomic status were represented as consequences of a common latent factor (Featherman et al. 1975; Featherman and Hauser 1976), we believe the model of Figure 6 accurately expresses the relationships between occupational prestige and socioeconomic variables that are implicit in the construction of occupational socioeconomic indexes.

This first stage of the model in Figure 6 would have the same statistical properties as the previously estimated regressions of prestige on socioeconomic variables, were it not the case that other measured variables occur later in the model. For example, consider the second stage of the model, determination of the status of the first job. Since the educational status (η_2) and wage rate (η_3) pertaining to the first job completely determine the SEI composite for first job (η_4), characteristics of the father's occupation must affect the SEI composite of the first job by way of those components. To be sure, the path diagram shows η_2 and η_3 affected di-

[41]Throughout this discussion, when we refer, for example, to "wage rate of the father's occupation," we mean the wage rate that is typical of the occupation held by the father, not the father's wages.

rectly only by η_1, the SEI composite of father's occupation, but this is only a hypothesis. For example, we could imagine that the components of the SEI of first occupation could be affected directly by corresponding components of the SEI of father's occupation. We might draw a path from ξ_1 to η_2—i.e., from the educational level of the father's occupation to the educational level of the first job—or from ξ_2 to η_3—i.e., from the occupational wage rate of the father's job to the occupational wage rate of the first job. Or we could even suppose that the components of the SEI of first job or its prestige were affected directly by the prestige of the father's occupation.

Moreover, the relationships between the characteristics of father's occupation and those of the first occupation are repeated with respect to the current or last job. If we suppose that the effects of measured aspects of father's occupation (ξ_1 and ξ_2) occur only by way of its SEI composite (η_1), that variable directly or indirectly affects seven subsequent measured variables: prestige of father's occupation (Y_1), educational level of the first occupation (Y_2), wage rate of the first occupation (Y_3), prestige of the first occupation (Y_4), educational level of the current or last occupation (Y_5), wage rate of the current or last occupation (Y_6), and prestige of the current or last occupation (Y_7). Consider the unrestricted reduced-form regressions of the Y_i on ξ_1 and ξ_2, say

$$\begin{aligned} Y_1 &= \pi_{11}\xi_1 + \pi_{12}\xi_2 + \epsilon_1 \\ Y_2 &= \pi_{21}\xi_1 + \pi_{22}\xi_2 + \epsilon_2 \\ &\cdots \\ Y_7 &= \pi_{71}\xi_1 + \pi_{72}\xi_2 + \epsilon_7. \end{aligned} \tag{6}$$

Then, if the model of Figure 6 holds in the population, $\pi_{11} = \gamma_{11}$ and $\pi_{12} = \gamma_{12}$, while $\pi_{21} = \beta_{21}\gamma_{11}$ and $\pi_{12} = \beta_{21}\gamma_{12}$, so

$$\frac{\pi_{11}}{\pi_{12}} = \frac{\pi_{21}}{\pi_{22}} = \frac{\gamma_{11}}{\gamma_{12}}. \tag{7}$$

Equation 7 shows that the model places proportionality constraints on the reduced-form coefficients of ξ_1 and ξ_2. Similar observations hold for the ratios of all seven pairs of reduced form coefficients. Thus, again based on the model of Figure 6, unlike the case of the simple prestige regressions, the ratios of slopes of father's SEI on its components, γ_{11} and γ_{12}, are overidentified. In this way, the model yields testable hypotheses about the relative weights of occupational education and occupational wage rates in the determination of the socioeconomic construct for father's occupation.

Similar observations hold with respect to the effects of the components of the SEI of first job, except there are fewer overidentifying restrictions. In that case, the model provides only four measured variables that depend directly or indirectly on the SEI construct (η_4): prestige of the first job (Y_4), educational level of the current or last job (Y_5), wage rate of the current or last job (Y_6), and prestige of the current or last job (Y_7). The last stage of the model, the determination of the SEI of current or last occupation, provides no additional overidentifying restrictions on the coefficients of the SEI composite because there is only one indicator of η_7—namely, prestige of the current or last job (Y_7). However, one more set of overidentifying restrictions is based upon the measurements at all three stages of the model. That is, if the conventional model holds, by assumption, the same relative weights should apply to the educational level and wage rate of an occupation, regardless of the stage of the model at which it appears. We expressed these constraints by equating effects of occupational education and of occupational wage rates on the socioeconomic composites:

$$\begin{aligned} \gamma_{11} &= \beta_{42} = \beta_{75} \\ \gamma_{12} &= \beta_{43} = \beta_{76}. \end{aligned} \tag{8}$$

In estimating the model of Figure 6, we initially add one other set of restrictions pertaining to similarity in the relationships between occupational socioeconomic status and prestige across the three stages of the model. Although the socioeconomic composites (η_1, η_4, and η_7) are completely determined by their components, there is a disturbance (ϵ_1, ϵ_4, and ϵ_7) in each of the equations for occupational prestige measures (Y_1, Y_4, and Y_7). In each such equation, the variances—for example, $Var[\epsilon_1] = \theta^{\delta}_{11}$—could be a free parameter, as is the error variance in the previous regressions of occupational prestige on educational levels and wage rates. However, with the idea that the determination of prestige should be the same across all three stages of the model, we add the restriction that

$$\theta^{\epsilon}_{11} = \theta^{\epsilon}_{44} = \theta^{\epsilon}_{77}, \tag{9}$$

that is, the unexplained variance in occupational prestige is invariant.

To summarize, the model of Figure 6 has three important features. First, it embeds the determination of occupational socioeconomic status and prestige within a model of the stratification process. Second, it specifies a set of overidentifying restrictions following from the absence of lagged effects from prestige and from the components of occupational

socioeconomic status to variables that appear later in the model. Third, it specifies a set of overidentifying restrictions pertaining to constant relative effects of occupational education and occupational wage rate on the socioeconomic status of occupations. Some of these last restrictions apply to each stage of the model taken separately, while others apply to the constancy of the effects across stages of the model. The satisfaction of all of these overidentifying restrictions is presumed in the usual models of stratification because they assume that a composite socioeconomic index conveys all of the relevant information about the behavior of its components.

Table 6 gives fit statistics for several variants of the model of Figure 6. The vertical panels of the table correspond to variations in the gender of the GSS sample and to the gender basis of the socioeconomic components used in the model. The horizontal panels refer to variations in the specification of the model. Each model has been estimated by maximum likelihood using LISREL 8.12 (Jöreskog and Sörbom 1993). In addition to the degrees of freedom (df), which are the same for entries in the same row, we also show the Bayesian information criterion, BIC $= L^2 - df \times \ln(N)$, where L^2 is the likelihood-ratio chi-square statistic and N is the sample size. BIC is useful in making judgments about model fit when a model would be rejected by conventional statistical tests. That is, in analyses based on large samples, BIC may suggest accepting a model that is rejected by conventional criteria of statistical significance. Positive values of BIC suggest model rejection, while negative values provide evidence in favor of a model. Between two models, a difference of 10 or more in BIC provides strong evidence favoring the model with the lower BIC value (Raftery 1995:25).

The first row of Table 6 gives fit measures for model A, which incorporates all of the overidentifying restrictions discussed earlier. That is, at each stage of the model socioeconomic characteristics affect later variables only through SEI composites, and the effects of the components on the composites are invariant across the three stages of the model. Moreover, the error variance in occupational prestige is invariant across stages of the model. This model—which corresponds to the typical, linear specifications of the stratification process—has 27 overidentifying restrictions, and it fits quite badly. Regardless of the population or the gender-basis of the socioeconomic measures, it would be rejected by conventional statistical criteria. Moreover, with one exception—estimates based on male-based SEI components among GSS women—the values of BIC also lead to rejection of the model.

We next estimated several less restrictive models in order to locate the constraints leading to lack of fit in model A. In model B, we retained the restrictions of model A, but we freed the paths between successive educational components of occupational socioeconomic status. That is, relative to the model in Figure 6, we added paths from ξ_1 to η_2 and from η_2 to η_5. This change dramatically improves model fit. While all of the versions of model B would nominally be rejected at conventional levels of statistical significance, L^2 declines substantially, and BIC is large and negative in each case. Similarly, in model C, we added paths between the successive wage-rate components of socioeconomic status, letting ξ_2 affect η_3 and η_3 affect η_6.[42] In this case, the fit improves substantially for women, both in comparison with the baseline model and model B. However, while model C improves fit for men, relative to model A, the BIC statistics are not impressive, and the fit is worse than that of model B. In model D, we added both the paths between successive educational components and those between successive wage-rate components. Here, the fit was still improved relative to the baseline models for men and for women, but it was not much better than model B for men or model C for women. The implication of these findings is that one source of invalidity in the traditional prestige-validated indexes of socioeconomic status is the failure to observe specific effects of the socioeconomic components. Among men, the traditional model does not fully represent the effects of occupational education, while among women, the traditional model does not fully represent the effects of occupational wage rates. Both among men and among women, the lagged effects of the socioeconomic variables occur mainly between first and current occupations, not between father's occupation and first occupation. The intergenerational effects are small but positive among men and negligible among women.

In model E, we retained the restrictions of model A, except we freed the error variances of the three prestige measures. That is, we permitted the validity of prestige as an indicator of socioeconomic status to vary across the life course by eliminating the restrictions in equation (9). While model E improves fit for men in the analyses based on the total and male SEI, it does not provide satisfactory fit in those cases, nor does it improve fit substantially in the other four analyses.

[42]Note that, in each of these cases, we have not added the lag-2 effects of the socioeconomic components—e.g., the path from ξ_1 to η_5 or that from ξ_2 to η_6. We also estimated models incorporating these effects, but the improvement in fit was negligible.

TABLE
Specifications and Fit Statistics for Models of

Model specification	*df*	Men			
		Total-based SEI		Male-based SEI	
		Chi-sq.	BIC	Chi-sq.	BIC
A. Base model as described in Figure 6.	27	179.8	13.2	191.4	24.8
B. Model A, but free paths between successive occupational education variables.	25	93.8	−60.5	107.7	−46.6
C. Model A, but free paths between successive occupational wage rate variables.	25	151.0	−3.3	163.9	9.6
D. Model A, but free paths between successive occupational education and wage rate variables.	23	92.6	−49.3	105.6	−36.3
E. Model A, but free prestige variances.	25	157.2	2.9	165.7	11.4
F. Model A, but free prestige covariances.	24	156.4	8.3	166.5	18.3
G. Model A, but free covariance between prestige for respondent's first and current or last occupations.	26	158.3	−2.1	169.1	8.7
H. Model A, but free all prestige variances and covariance between prestige for respondent's first and current or last occupations.	24	136.1	−12.1	143.6	−4.5
I. For MEN: Model H, but also free paths between successive occupational education variables.	22	48.0	−87.8	57.4	−78.4
J. For WOMEN: Model H, but also free paths between successive occupational wage rate variables.	22	—	—	—	—
K. Model I or J, but allow effects of occup. education to vary for father's SEI, respondent's first job SEI, and respondent's current or last job SEI.	20	34.8	−88.7	47.4	−76.0
L. Model I or J, but allow effects of occup. wage rate to vary for father's SEI, respondent's first job SEI, and respondent's current or last job SEI.	20	27.0	−96.4	29.4	−94.1
M. Model I or J, but allow effects of occupational education and wage rate to vary for father's SEI, respondent's first job SEI, and respondent's current or last job SEI.	18	26.4	−84.7	27.2	−83.9

In model F, we reinstated the restrictions of equation (9) but freed the three covariances among errors in prestige, θ^{ϵ}_{14}, θ^{ϵ}_{17}, and θ^{ϵ}_{47}. Under this specification, while the prestige scores partly determine the weights of occupational education and occupational wage rates in the socioeconomic

6
Mobility in Occupational Status and Prestige

(N = 479)		Women (N = 622)					
Female-based SEI		Total-based SEI		Male-based SEI		Female-based SEI	
Chi-sq.	BIC	Chi-sq.	BIC	Chi-sq.	BIC	Chi-sq.	BIC
181.6	15.0	178.9	5.2	166.5	−7.2	205.9	32.2
91.6	−62.7	123.3	−37.5	126.3	−34.5	109.6	−51.2
148.1	−6.2	108.4	−52.4	114.1	−46.7	98.0	−62.8
90.3	−51.6	98.0	−50.0	106.2	−41.8	80.7	−67.3
171.9	17.6	169.0	8.2	148.6	−12.3	192.7	31.9
160.1	12.0	123.4	−30.9	111.5	−42.9	153.0	−1.4
162.1	1.6	124.1	−43.1	112.3	−55.0	153.5	−13.7
151.6	3.5	113.8	−40.6	95.5	−58.9	140.1	−14.3
59.0	−76.8	—	—	—	—	—	—
—	—	43.3	−98.2	43.0	−98.5	32.0	−109.5
47.3	−76.1	40.4	−88.3	26.7	−102.0	30.3	−98.3
40.1	−83.4	41.0	−87.7	34.1	−94.6	29.6	−99.1
34.9	−76.2	23.9	−91.9	22.8	−93.0	27.3	−88.5

composites, the determination of prestige by socioeconomic status is no longer required to account for correlation among prestige indicators across the life course. This specification improves fit substantially among women in the GSS but not among men. Inspection of the estimated error covari-

ances showed that one of the three covariances, θ^{ϵ}_{47}, was large and statistically significant in all six analyses, while the other two error covariances were always very small and nonsignificant. For this reason, we estimated model G, which alters model A only by freeing θ^{ϵ}_{47} in each analysis. This one specification improves fit substantially in all six analyses, and it moves BIC into the acceptable range in all but two analyses, those based on the male and the female SEI among men. That is, the model of Figure 6 does satisfactorily account for intergenerational persistence in occupational prestige, but it does not account for persistence in occupational prestige from first to current jobs, especially among women. We suspect this is explained by overall stability in occupational careers, magnified by the tendency of women to hold common jobs whose prestige is not determined by occupational education or wage rates.[43]

In model H, we modified model G by freeing the three prestige variances. As indicated by BIC, this improved fit slightly in three of the analyses, but it did not improve fit in the other three cases. We then combined the specifications of model H and model B or model C in models I and J for men and women, respectively. That is, in model I we freed the prestige variances, the covariance between prestige of first and current occupation, and the lagged effects of the occupational education variables; in model J we freed the prestige variances, the covariance between prestige of first and current occupation, and the lagged effects of the occupational wage rate variables. For each of the three sets of socioeconomic components, models I and J fit well, yielding large, negative BIC statistics. Again, the lagged effects of occupational education (among men) and of occupational wage rates (among women) were substantial only in the case of the effect of first occupation on current occupation.

Before settling on models I and J as preferred specifications, we considered relaxing one other set of restrictions—namely, those pertaining to the constant effects of occupational education and occupational wage rate on the socioeconomic composite at each stage of the model. Using models I or J as the new baseline, in model K we released the constraints on γ_{11}, β_{42}, and β_{75} in equation (8). In model L, we released the constraints on γ_{12}, β_{43}, and β_{76} in equation (8). In model M, we released both those sets of constraints. In all of the comparisons of models K, L, or M with models I or J, the contrasts were nominally statistically significant, but BIC either increased or declined slightly. While the evidence is mixed, we

[43]Recall the discussion of outliers in Table 1.

have concluded that differentials in effects of occupational education and occupational income across the three stages of the model are not large enough to warrant the specification of differential weights for the components of the socioeconomic composite.

Thus, within the constraints of the traditional, prestige-validated model of occupational socioeconomic status, we prefer the specifications of model I for men and model J for women. While the general structure of models I and J remains similar to the model of Figure 6, there are important differences. First, and most important, there are lagged, intragenerational effects of occupational education (among men) and of occupational wage rates (among women), and these are inconsistent with the implicit assumption that a composite measure of occupational socioeconomic status fully accounts for the effects of its components. Second, the error variance of occupational prestige varies across stages of the model, and this is inconsistent with the implicit assumption that occupational prestige is equally valid across the life course as a measure of socioeconomic status. In our opinion, the violation of this assumption is relatively unimportant, for it may reflect no more than differentials in occupational composition across generations and within the career. However, the finding is cautionary: The usual aggregate regressions of prestige on socioeconomic status do not necessarily tell us the validity of prestige. Third, the traditional socioeconomic model of occupational prestige does not account for the persistence of prestige in individual careers, and this failure of the model is especially striking among women. Even though there is a great deal of evidence that the persistence of occupational prestige is relatively weak, the low level of persistence does not follow from socioeconomic explanations of prestige.

4.2. *Modeling Socioeconomic Status without Prestige*

Because the initial versions of the model in Figure 6 fit poorly, and because there were so many overidentifying restrictions in that model, we considered the possibility that a socioeconomic model of occupational standing might be identified without recourse to a prestige-validated index. Figure 7 shows a model of this kind. It differs from Figure 6 only by the elimination of measured occupational prestige from all three stages of the stratification process. That is, as in the case of Figure 6, we show three occupational status composites, corresponding to the status of father's occupation, first occupation, and current or last occupation, each fully determined by occupational education and occupational wage rate.

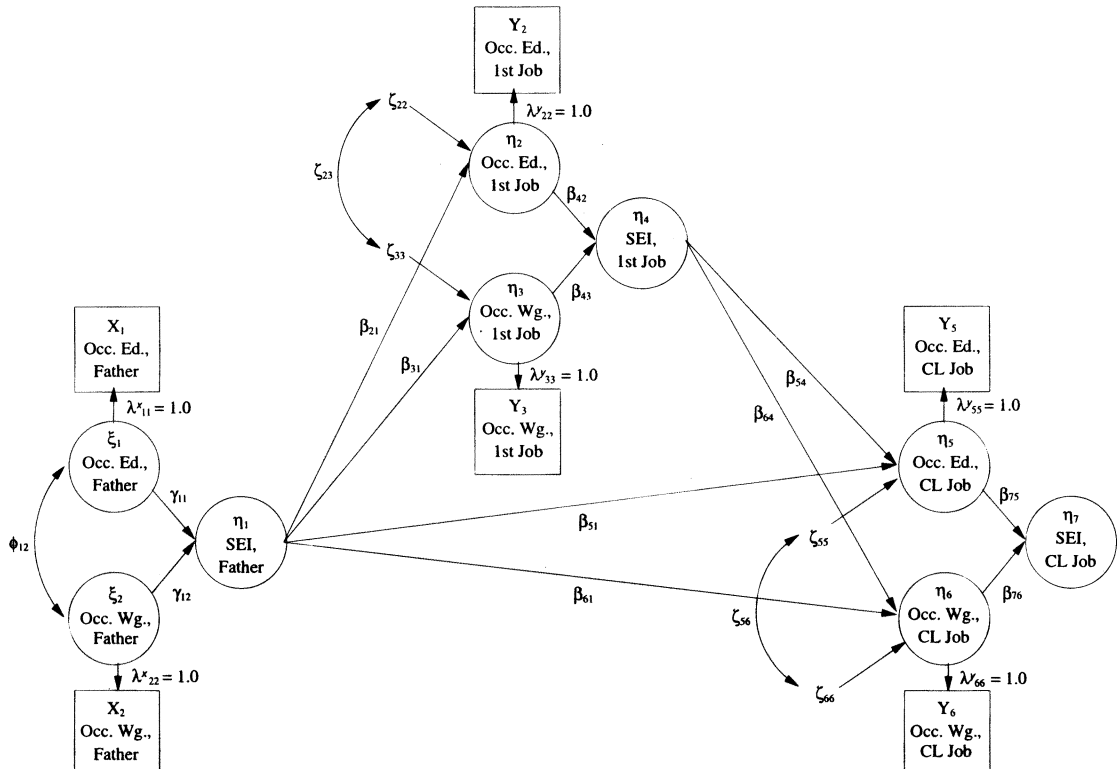


FIGURE 7. A model of intergenerational stratification in occupational socioeconomic status.

If we are willing to make assumptions corresponding to our initial specification of Figure 6 or to models I or J of Table 6, then all of the parameters of the model in Figure 7 are identified, without reference to any prestige measure. For example, any of Y_2, Y_3, Y_5, and Y_6 are sufficient to identify the relative sizes of γ_{11} and γ_{12}, while either of Y_5 and Y_6 are sufficient to identify β_{42} and β_{43}. To be sure, because no variable in the model follows η_7, the coefficients of the final composite, β_{75} and β_{76}, would not be identified in Figure 7, except by the assumption that the corresponding effects are constant across the three stages of the model. However, that assumption is sustained by the findings in Table 6. Moreover, in a more elaborate model of the stratification process—e.g., one that included personal earnings or other job outcomes—those effects would be identified without that type of cross-equation constraint.

In short, the idea that occupational stratification processes can be described adequately by relationships among composite socioeconomic indexes need not depend at all on use of a prestige criterion to determine weights of index components. Indeed, the model of Figure 7 permits us to ask directly whether a prestige criterion yields optimal weights for occupational education and wage rates in analyses of the stratification process.

In each of the models based on Figure 7, we have constrained the weights of the socioeconomic components to be equal across the three stages of the stratification process. Also, because the prestige criterion is no longer available to define a metric for the weights of the socioeconomic components, we have normalized the slopes relative to the effect of occupational education on the socioeconomic composites. That is, we specify

$$\gamma_{11} = \beta_{42} = \beta_{75} = 1, \tag{10}$$

and

$$\gamma_{12} = \beta_{43} = \beta_{76}. \tag{11}$$

Thus, γ_{12}, β_{43}, and β_{76} indicate the relative magnitude of the slopes of occupational wage rate and occupational education in the socioeconomic composites. Since the education and wage rate components are each in the same metric (started logits), this normalization is convenient and appropriate.

Table 7 reports the fit to the 1994 GSS data of alternative specifications of the model in Figure 7. Model A does not fit well. It would be rejected at conventional levels of statistical significance, and the BIC statistics are positive in each combination of gender and occupational measure. Thus use of a prestige criterion alone is not responsible for the

TABLE
Specifications and Fit Statistics for Models of Mobility in Men

Model Specification	*df*	Total-based SEI		Male-based SEI	
		Chi-sq.	BIC	Chi-sq.	BIC
A. Base model as described in Figure 7.	5	34.3	3.4	37.3	6.4
B. Model A, but free paths between successive occupational education variables.	3	5.8	−12.7	4.7	−13.9
C. Model A, but free paths between successive occupational wage rate variables.	3	2.6	−15.9	2.9	−15.6
D. Model A, but free paths between successive occupational education and wage rate variables.	1	2.2	−4.0	1.4	−4.8
E. Model A, but constrain all free parameters to equal those in the baseline prestige-validated model (Model A in Table 6).	21	90.5	—	89.3	—
F. Model C, but constrain all free parameters to equal those in the gender-specific preferred prestige-validated model (Model I in Table 6 for men and Model J in Table 6 for women).	21	8.2	—	9.2	—

limitations of the traditional socioeconomic model. As shown in models B, C, and D, the lack of fit in model A can be attributed to the absence of lagged effects of socioeconomic components. In model B, we free the paths between successive occupational education variables. This change yields a satisfactory fit among men but not among women. In model C, we free the paths between successive occupational wage rate variables. This specification fits well in all six analyses. None of the chi-square statistics is significant at even the 0.05 level, and the BIC statistics are all negative. In model D, we free the lagged effects of occupational education and of the occupational wage rate. This provides no improvement in fit relative to model C, which becomes our preferred model. That is, the strictly socio-

7
Occupational Education and Occupational Wage Rates

(N = 479)		Women (N = 622)					
Female-based SEI		Total-based SEI		Male-based SEI		Female-based SEI	
Chi-sq.	BIC	Chi-sq.	BIC	Chi-sq.	BIC	Chi-sq.	BIC
44.9	14.0	72.2	40.0	55.3	23.1	112.5	80.3
8.9	−9.6	19.6	0.3	12.7	−6.6	24.9	5.6
7.1	−11.4	4.0	−15.3	1.9	−17.4	3.4	−15.9
6.5	0.3	1.1	−5.3	0.0	−6.4	0.2	−6.2
99.0	—	82.4	—	59.9	—	125.5	—
11.3	—	10.2	—	6.8	—	16.1	—

economic model works well, provided that we specify lagged effects of occupational wage rates among men and among women. Again, the lagged effects occur only from first occupation to current occupation, not from father's occupation to first occupation. The intergenerational effects are small and nonsignificant in each analysis. The lagged intragenerational effects are approximately 0.22 among men and about 0.45 among women, regardless of which socioeconomic measures—total, male, or female—were used. As explained below, while the lagged effects are needed to obtain satisfactory fit, they are not very important substantively.

To what degree does use of the prestige-validated index contribute to lack of fit in the models of Figure 6? We cannot directly compare the fit

of models between Table 6 and Table 7 because of the former fit variances and covariances of occupational prestige as well as of the socioeconomic measures. To answer this question, we fitted the variance-covariance matrix of the socioeconomic variables using parameter estimates from model A in Table 6. The chi-square statistics from this exercise are shown in line E of Table 7. Among GSS men, use of the prestige criterion contributes substantially to lack of fit in the baseline model. That is, the chi-square statistics are much larger for the model of Figure 7 when the parameter estimates are borrowed from the model of Figure 6. However, among GSS women, the deterioration of fit is not substantial when parameter estimates are borrowed from the baseline model of Figure 6. That is, prestige-validation of socioeconomic composites is not as serious a threat to the validity of models of the stratification process among women as among men.

In line F of Table 7, we report findings from a similar exercise, based on our preferred specifications of the models of Figure 6 and Figure 7. That is, we fitted the variances and covariances of the socioeconomic variables, using the parameter estimates from model I or model J of Table 6. In this case, none of the test statistics becomes much larger when we borrow parameter estimates from the preferred model of Figure 6. This is further evidence that our modifications of the baseline model of Figure 6 have accounted for its lack of fit to relationships among the socioeconomic variables.

How does prestige-validation affect the relative weights of occupational education and wage rates in models of the stratification process? Table 8 shows these estimates under the baseline and preferred models of Figure 6 and Figure 7. In the first pair of lines, we report the estimates from Figure 6, and in the third pair of lines, we report those from Figure 7. The middle pair of lines renormalizes the estimates from Figure 6 to correspond directly with those from Figure 7. Thus our most important finding stands out in any comparison between the middle two lines and the lowest two lines of Table 8. The occupational wage rate has negligible influence in the process of stratification.

In all of the prestige-validated models the occupational wage rate has a substantial, positive weight, just as it did in the aggregate regressions of Table 2. In the total-based analysis for GSS women, the slope of the wage rate is less than half as large as that of education, but in most analyses, the wage slope is 75 to 90 percent as large as the education slope. The upper panel of Table 8 shows that the slope of the wage rate is always

TABLE 8
Effects of Occupational Education and Occupational Wage Rate on Socioeconomic Composite among Men and Women in the 1994 General Social Survey

	Men (N = 479)						Women (N = 622)					
	Total-based		Male-based		Female-based		Total-based		Male-based		Female-based	
Model specification	Educ.	Wage	Educ.	Wage	Educ.	Wage	Educ.	Wage	Educ.	Wage	Educ.	Wage
Prestige-weighted model (Figure 6)												
Baseline (Model A in Table 6)	0.462 (0.013)	0.333 (0.018)	0.390 (0.013)	0.389 (0.019)	0.470 (0.015)	0.358 (0.021)	0.509 (0.013)	0.236 (0.019)	0.427 (0.014)	0.355 (0.019)	0.445 (0.016)	0.350 (0.022)
Preferred (Model I in Table 6 for men, Model J in Table 6 for women)	0.439 (0.013)	0.375 (0.018)	0.365 (0.013)	0.436 (0.019)	0.441 (0.015)	0.401 (0.021)	0.515 (0.014)	0.223 (0.018)	0.434 (0.013)	0.340 (0.019)	0.451 (0.016)	0.339 (0.022)
Prestige-weighted model (renormalized for comparison with the socioeconomic model)												
Baseline (Model A in Table 6)	1.000	0.721	1.000	0.997	1.000	0.762	1.000	0.464	1.000	0.831	1.000	0.787
Preferred (Model I in Table 6 for men, Model J in Table 6 for women)	1.000	0.854	1.000	1.195	1.000	0.909	1.000	0.433	1.000	0.783	1.000	0.752
Socioeconomic model (Figure 7)												
Baseline (Model A in Table 7)	1.000 (–)	−0.237 (0.072)	1.000 (–)	−0.163 (0.084)	1.000 (–)	−0.266 (0.073)	1.000 (–)	0.009 (0.103)	1.000 (–)	0.353 (0.161)	1.000 (–)	0.017 (0.123)
Preferred (Model C in Table 7 for both men and women)	1.000 (–)	−0.220 (0.072)	1.000 (–)	−0.167 (0.083)	1.000 (–)	−0.241 (0.075)	1.000 (–)	0.089 (0.115)	1.000 (–)	0.349 (0.161)	1.000 (–)	0.066 (0.134)

statistically significant in models based on Figure 6. However, in the socioeconomic models of Figure 7, the slope of the wage rate is in every case negative among men, and, while the wage slopes among GSS women are all positive, they are in most cases not statistically significant.

Our reading of these findings is that, in a purely socioeconomic model, the appropriate weight of the wage rate is approximately zero. That is, in the GSS data the process of occupational stratification would best be described by relationships among occupation-based measures of educational attainment, to which the relationships of occupational prestige and occupational wage rates would be merely incidental.[44] While the correlated errors of prestige (in the models of Figure 6) and the lagged effects of occupational wage rates (in the models of Figure 7) show that there are unique aspects of the persistence of occupational prestige and occupational economic standing, our findings from the socioeconomic model point to occupational differentiation by education as the central feature of the stratification process, among the three dimensions considered in the present study.

The estimated slopes from the prestige-validated model also display other interesting features. First, as already noted, they somewhat resemble the weights in the aggregate prestige regressions of Table 2. For example, regardless of the gender of the GSS respondents, educational level carries relatively more weight in the analyses based on the occupational characteristics of all workers and on women workers than in the analyses based on the occupational characteristics of male workers. Second, the relative weights of educational level and wage rate are affected by the gender of the GSS respondent as well as by the gender of the source of the occupational characteristics. In five of six possible comparisons, the relative weight of wages is greater among male than among female GSS respondents. Third, in the preferred models of Table 6 (model I and model J), education always gets a larger weight relative to the wage rate than in the baseline model. That is, as parameters are added to capture the persistence of occupational prestige, the weights shift toward those estimated in the purely socioeconomic model. Finally, in the case of women

[44]We hasten to add that it will be desirable to validate these findings in larger bodies of data in which father's occupation, first occupation, and current occupation have been ascertained, such as the two Occupational Changes in a Generation surveys (OCG). However, since those data were coded to standards of the 1960 and/or 1970 Censuses, the exercise depends on the availability of measures of occupational education and earnings from those earlier censuses.

the weights in the prestige-validated models more closely resemble the weights in the socioeconomic models than in the case of men.[45]

Our overall findings about intergenerational and intragenerational persistence in occupational standing are both illustrated and tempered by Table 9, which shows model-based and observed correlations among socioeconomic status and its components. Again, we show correlations separately by the gender of the GSS respondent and by the source of the socioeconomic characteristics of occupations used in the analysis. Since each set of correlations for men or women is based upon the same set of occupational data, differences among the sets must arise from differences in the Census data (for all workers, men, and women), from differences in the weights of educational level and wage rate in the composite indexes, and from other differences in model specification—e.g., lagged effects or correlated errors.

There are several important patterns in Table 9. First, although the differences in specification between the baseline and preferred models of Figure 6 and Figure 7 affect model fit, they have very little influence on the model-based correlations between socioeconomic composites. Whether we consider the prestige-validated or socioeconomic models, there are negligible differences between baseline and preferred models in the correlations among socioeconomic composites. Second, the source of the socioeconomic characteristics of occupational incumbents affects the model-based correlations among composites. This is especially evident among GSS men, for whom female-based occupational indexes yield substantially lower correlations, between and within generations, than total- or male-based occupational indexes. For example, the father-son correlation is 0.225 when women's characteristics are used to construct the index in the baseline model, and it is 0.305 when men's characteristics are used to construct the index in the baseline model. Notice that there is little sign of a corresponding, gender-specific differential on intergenerational correlations among women, but the female-based first-current correlations are slightly larger among women than the male-based first-current correlations. Third, correlations based on the socioeconomic models are always larger than those based on prestige-validated models. The differences are modest, but the sharp differences in weights do make a difference. Notice that the differences in correlation are smaller among women than among

[45]This presumably accounts for the smaller contrasts for women than for men between model A and model E in Table 7.

TABLE 9
Correlations among Selected Occupational Variables: Men and Women in the 1994 General Social Survey

Model Specification	Total-based			Male-based			Female-based		
	Father/ First	Father/ Current	First/ Current	Father/ First	Father/ Current	First/ Current	Father/ First	Father/ Current	First/ Current
				Men (N = 479)					
Prestige-weighted model (Figure 6)									
Baseline (Model A in Table 6)	0.274	0.336	0.679	0.305	0.365	0.686	0.225	0.282	0.663
Preferred (Model I in Table 6 for men, Model J in Table 6 for women)	0.270	0.332	0.672	0.300	0.361	0.680	0.222	0.281	0.658
Socioeconomic model (Figure 7)									
Baseline (Model A in Table 7)	0.302	0.358	0.720	0.315	0.379	0.725	0.246	0.299	0.704
Preferred (Model C in Table 7 for both men and women)	0.302	0.358	0.721	0.315	0.379	0.725	0.247	0.300	0.705
Occupational education	0.300	0.359	0.718	0.315	0.383	0.725	0.245	0.299	0.701
Occupational wage rate	0.167	0.213	0.495	0.220	0.261	0.542	0.150	0.213	0.507
				Women (N = 622)					
Prestige-weighted model (Figure 6)									
Baseline (Model A in Table 6)	0.313	0.336	0.697	0.294	0.309	0.678	0.286	0.300	0.712
Preferred (Model I in Table 6 for men, Model J in Table 6 for women)	0.314	0.336	0.696	0.295	0.309	0.676	0.287	0.299	0.709
Socioeconomic model (Figure 7)									
Baseline (Model A in Table 7)	0.332	0.341	0.710	0.307	0.314	0.688	0.317	0.316	0.722
Preferred (Model C in Table 7 for both men and women)	0.329	0.342	0.709	0.307	0.314	0.689	0.316	0.316	0.722
Occupational education	0.332	0.341	0.710	0.313	0.309	0.689	0.318	0.316	0.722
Occupational wage rate	0.168	0.233	0.579	0.197	0.233	0.573	0.172	0.211	0.655

men; this is consistent with our observation that the differences in weights are smaller among women than among men.

Most important, the observed intergenerational and intragenerational correlations of occupational education are virtually the same as those of indexes based on socioeconomic models. That is, to estimate correlations of occupational status across generations or within the career, we would do quite as well to index occupations by their educational level alone as by some combination of their educational and wage levels. Combining educational levels and wages in an index of occupational status adds nothing to our understanding of occupational stratification; indeed, choice of a substantial positive weight for the wage rate leads to an understatement of occupational persistence. As a corollary to this observation, the last two lines of Table 9 permit us to contrast the correlations of occupational education and occupational wage rates in the GSS data. In every case, the correlations of occupational wage rates are much lower than the correlations of occupational education. Also, as in the case of the composite indexes, there are gender differences in the education correlations, depending on the gender of the population from which the occupational education measures were ascertained.

Early in our review, we noted the observation that occupational status behaved across the life course something like the latent variable of economic theory, permanent income (Goldberger 1989; Zimmerman 1992), but the source of persistent occupational standing appears to be the educational level of occupations rather than their economic compensation.[46] To be sure, if educational level were chosen to index occupational standing, analysts would have to live with the observation that the occupational standing of women typically exceeds that of men, but, unlike a composite socioeconomic index, use of education alone would at least present an unambiguous gender differential.

The specific weights that we obtain for occupational education and occupational wage rates will depend on which other variables are included in or excluded from the model, as well as on our decisions about the measurement of occupational standing. Thus, when we add other educational variables to the rudimentary models of Figure 6 and Figure 7—mother's and father's education as measures of family origin and respondent's ed-

[46]Thus, Sobek's (1996) analysis of historical stability in occupational income in the United States justifiably supports the wide use of occupation as an indicator of social standing in historical research, but it appears to have focused on the wrong component of occupational socioeconomic status.

ucational attainment as an additional outcome—the relative weights of occupational education and occupational wage rates change along with the overall effect of the occupational status composite. This occurs partly because the educational variables carry some of the effect of occupational education and partly because respondent's education enters the model as yet another indicator of father's occupational status.[47] The changes are greater in the purely socioeconomic model than in the prestige-validated model. In the socioeconomic model, as one might expect, the relative weight for occupational wage rates increases when parents' educational attainments are added to the model. We think that the findings from the models of Figure 6 and Figure 7 are persuasive about the fundamental role of occupational education in the stratification process. The addition of other variables to the models may help to explain the role of education in the occupational stratification process, but it does not alter our central finding. The sensitivity of the weights of the SEI construct to alternative specifications reminds us that those weights are model-dependent. This is yet another reason why researchers should be cautious in using composite measures of occupational socioeconomic status.

4.3. *Occupational Stratification in Education*

Our findings suggest an alternative specification of the stratification process, which brings occupational prestige back into the picture, but identifies education as the main dimension of occupational stratification.[48] This idea is illustrated by the path model in Figure 8. We assume that occupational education, wage rate, and prestige are each perfectly measured. Thus the measurement models in those variables are trivial. For example, in the case of father's occupation, we have

$$\begin{aligned} Y_1 &= \eta_1, \\ Y_2 &= \eta_2, \\ Y_3 &= \eta_3. \end{aligned} \tag{12}$$

[47]These findings are available from the authors by request.

[48]Hout (1996) has made a similar proposal, based on multivariate analyses of mobility tables from the General Social Survey.

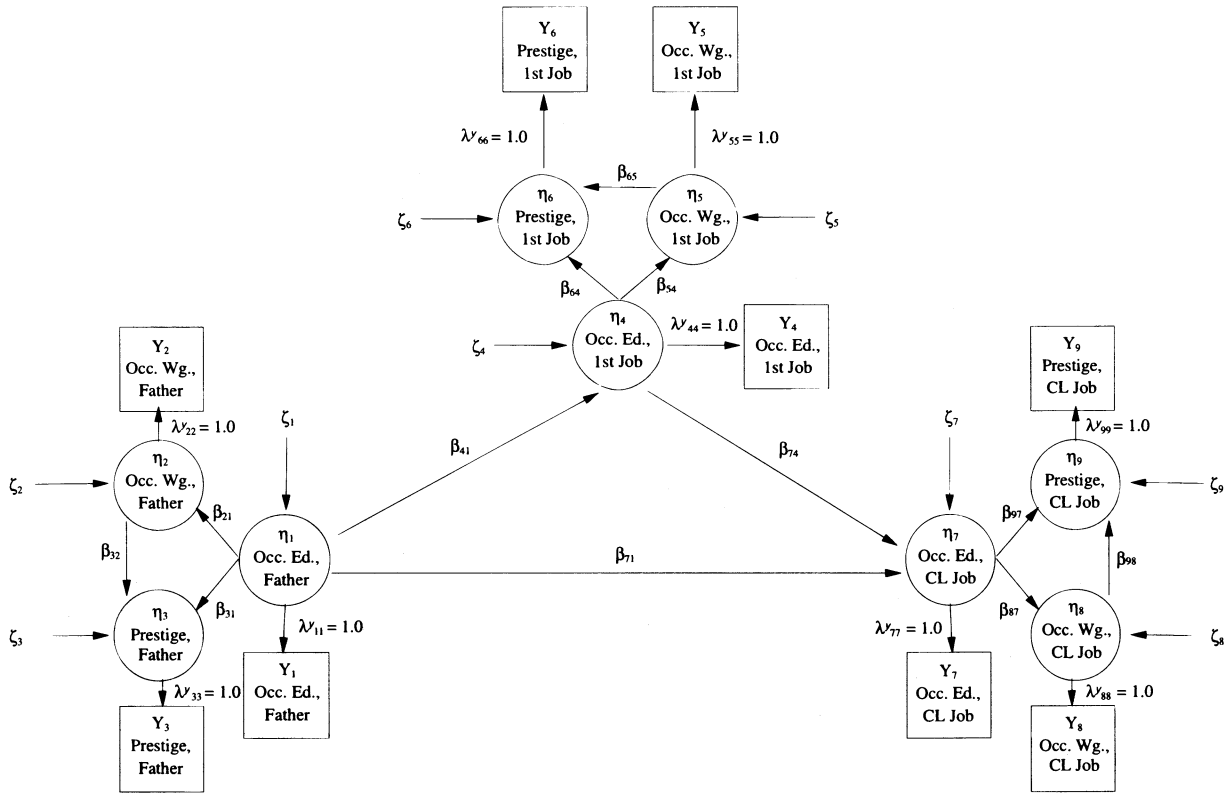


FIGURE 8. A model of intergenerational stratification in occupational education.

As in Figure 6, we postulate that occupational prestige depends upon occupational education and wage rates at each stage of the model. Again, in the case of father's occupation, we have

$$\begin{aligned} \eta_1 &= \zeta_1, \\ \eta_2 &= \beta_{21}\eta_1 + \zeta_2, \\ \eta_3 &= \beta_{31}\eta_1 + \beta_{32}\eta_2 + \zeta_3. \end{aligned} \tag{13}$$

That is, we specify that occupational wage rate and occupational prestige are each affected by occupational education, while occupational prestige also depends upon the occupational wage rate. Thus the equation in occupational prestige is the same as that used in the construction of a prestige-validated socioeconomic index. However, the model specifies that the relationships among occupational education, wage rate, and prestige are incidental to the role of occupational education in the stratification process. The stratification process is specified primarily by relationships among the educational levels of father's occupation, first occupation, and current or last occupation:

$$\begin{aligned} \eta_4 &= \beta_{41}\eta_1 + \zeta_4, \\ \eta_7 &= \beta_{71}\eta_1 + \beta_{74}\eta_4 + \zeta_7. \end{aligned} \tag{14}$$

In addition, as in earlier models, we permit specific relationships between the occupational wage rate of the first and current jobs and between the occupational prestige of first and current jobs. In the model of Figure 8, these are specified in terms of covariances between disturbances in equations: $Cov(\zeta_5, \zeta_8) = \psi_{58}$ and $Cov(\zeta_6, \zeta_9) = \psi_{69}$.

Table 10 gives fit statistics for three versions of the model of Figure 8 for each combination of socioeconomic data from the 1990 Census with the 1994 GSS samples. Model A corresponds to Figure 8, with the addition of the two correlated disturbances, and its fit is excellent. The BIC statistics are large and negative, and in only one case, that of the female socioeconomic characteristics applied to the GSS men, would the model be rejected even with the probability level $\alpha = 0.05$. In model B, we impose six restrictions, equating the slopes in the regressions of wage rate on occupational education and of prestige on wage rate and education at each stage of the model:

TABLE 10
Specifications and Fit Statistics for Models of Stratification in Occupational Education

Model specification	*df*	Data for All Workers		Data for Men		Data for Women	
		Chi-sq.	BIC	Chi-sq.	BIC	Chi-sq.	BIC
Men ($N = 479$)							
A. Base model as described in Figure 8.	22	30.7	−105.1	26.8	−109.0	41.4	−94.4
B. Model A, but equate corresponding slopes in measurement model.	28	59.8	−113.0	61.2	−111.6	67.4	−105.5
C. Model B, but equate corresponding error variances in measurement model	32	84.0	−113.5	90.6	−106.9	83.4	−114.1
Women ($N = 622$)							
A. Base model as described in Figure 8.	22	21.7	−119.8	25.1	−116.4	16.0	−125.5
B. Model A, but equate corresponding slopes in measurement model.	28	80.9	−99.2	53.7	−126.5	50.1	−130.0
C. Model B, but equate corresponding error variances in measurement model	32	124.8	−81.1	98.0	−107.8	140.0	−65.9

$$\begin{aligned} \beta_{21} &= \beta_{54} = \beta_{87}, \\ \beta_{31} &= \beta_{64} = \beta_{97}, \\ \beta_{32} &= \beta_{65} = \beta_{98}. \end{aligned} \tag{15}$$

Here, the models would in each case be rejected at conventional levels of statistical significance, but the BIC statistics improve substantially (decrease by 10 or more) in three of the six analyses and deteriorate substantially in only one case. Finally, in model C, we impose the additional restrictions that the variances of the disturbances in occupational wage rates are the same at each stage of the model and that the variances of the disturbances in occupational prestige are the same at each stage of the model:

$$\begin{aligned} \psi_{22} &= \psi_{55} = \psi_{88}, \\ \psi_{33} &= \psi_{66} = \psi_{99}. \end{aligned} \tag{16}$$

In this case, the fit is much worse in each of the analyses of GSS women, and the value of BIC improves in only one group of GSS men. For these reasons, we reject model C. While there is some evidence of stability in the slopes of the auxiliary regressions (equation 15) across the three stages of the model, we are inclined to prefer model A, where the fit is good by any standard.

Again, the model of Figure 8 does not specify that occupational education is the sole dimension of occupational persistence, for there are lagged correlations of disturbances in occupational wage rates and prestige. These correlations are moderate, ranging from 0.25 to 0.39 for wage rates and from 0.19 to 0.22 for prestige across the several specifications of model A. However, these correlations are misleadingly high, for the disturbances have been purged of the effects of occupational education and—in the case of prestige—of occupational wage rates. The covariances of the disturbances account for 12 to 19 percent of the total covariances between wage rates of first and current occupations, and they account for only 6 to 10 percent of the total covariances between prestige levels of first and current occupations.

5. DISCUSSION

In this paper, we have carried out three distinct tasks. First, we reviewed the history and properties of occupational prestige and of socioeconomic indexes of occupational status. Second, we constructed new indexes of

occupational socioeconomic status for men, women, and all workers, based on the education and income of workers in the 1990 Census and validated against occupational prestige ratings from the 1989 General Social Survey. We believe that the new indexes are not only an update of earlier socioeconomic indexes, but also an improvement, by dint of our changes in variable definition, functional form, and the treatment of outliers. Third, we have embedded the construction of socioeconomic indexes within a rudimentary model of the process of occupational stratification, which we have estimated and tested using data from the 1994 General Social Survey.

Findings from the third part of our analysis lead us to question the value of traditional socioeconomic indexes of occupational standing, including those that we have constructed. If the 1994 GSS data are a reliable guide, we would do better—in studies of the stratification process—to index occupations by their educational level alone than by any of the usual, weighted combinations of educational level and earnings. Similarly, Kalmijn (1994) finds that occupational education is more important than occupational income in assortative mating. However, given the modest sensitivity of occupational status correlations to differences in model specification, we would not suggest any wholesale effort to reevaluate previous findings about levels, trends, and differentials in occupational stratification. It would be sufficient, we think, to suggest that previously estimated levels of correlation are slightly too low. For example, corrections of correlations for simple attenuation would be much larger than corrections for differences in weighting between our prestige-validated and socioeconomic models.

We also think that it would be unwise to overstate the strength of the evidence presented here. We should very much like to see our analyses of the 1994 GSS data cross-validated in larger samples—e.g., the 1986–1988 Surveys of Income and Program Participation or the 1962 or 1973 Occupational Changes in a Generation Surveys. Finally, we would caution that our findings about the relative importance of occupational education and occupational wage rates are specific to models of the stratification process. Just as the relative weights of occupational education and wage rates differ between prestige and socioeconomic outcomes, so they may also differ across other outcomes—e.g., health, well-being, social participation, or political choice. If there is any general conclusion to be drawn from the present analysis, it is that we ought to move toward a more specific and disaggregated appraisal of the effects of occupational characteristics on social, psychological, economic, political, and health outcomes. While composite measures of occupational status may have heuristic uses, the global concept of occupational status is scientifically obsolete.

Appendix
1989 Nakao-Treas Prestige Measures and 1980/1990

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
ALL OCCUPATIONS									
	–	112,169,744	54.5	43.43	49.64	0.00	0.30	−1.13	36.81
MANAGERIAL AND SPECIALTY OCCUPATIONS									
	8	30,030,911	51.8	59.46	75.27	1.19	1.99	−0.04	55.27
Executive, Administrative, and Managerial Occupations									
	7	14,007,863	58.0	54.74	69.80	0.88	1.23	−0.16	40.22
3.00	1	12,100	61.5	60.92	80.18	1.36	1.68	−0.28	50.86
4.00	1	18,677	73.1	70.45	88.41	1.96	0.61	−0.12	43.51
5.00	1	488,497	54.4	51.23	80.82	1.40	1.41	0.12	50.77
6.00	1	47,609	72.0	53.66	67.24	0.70	0.97	−0.08	46.47
7.00	1	615,979	53.9	58.94	77.59	1.21	1.68	0.28	53.60
8.00	1	266,213	50.8	53.85	72.12	0.93	1.07	−0.04	47.43
9.00	1	116,894	66.2	62.73	84.11	1.62	1.61	0.36	53.45
13.00	1	584,688	68.5	59.46	79.04	1.29	1.76	0.48	55.18
14.00	1	601,728	47.8	63.70	83.33	1.56	1.92	0.04	54.25
15.00	1	225,606	33.5	69.22	87.89	1.91	1.29	−0.28	47.90
16.00	2	384,781	53.9	38.53	45.74	−0.17	0.74	−0.52	42.50
16.00	3	39,647	52.7	52.85	70.65	0.86	0.44	1.18	48.68
17.00	2	39,647	52.7	52.85	70.65	0.86	0.44	1.18	48.68
17.00	5	959,040	55.9	41.00	46.90	−0.12	0.24	−1.51	33.82
17.01	6	201,839	66.3	–	–	–	0.16	−1.68	32.35
17.02	6	129,135	55.1	–	–	–	0.74	−0.61	42.08
17.03	6	628,066	52.7	–	–	–	0.16	−1.07	35.38
18.00	2	45,527	87.8	49.14	65.52	0.63	1.41	−0.48	47.80
18.00	3	384,781	53.9	38.53	45.74	−0.17	0.74	−0.52	42.50
19.00	2	6,465,041	65.9	51.00	66.52	0.67	0.86	−0.11	45.52
19.00	3	45,527	87.8	49.14	65.52	0.63	1.41	−0.48	47.80
21.00	3	386,259	49.7	42.00	46.50	−0.14	1.23	−0.61	45.83
22.00	5	5,119,742	69.0	57.00	71.70	0.91	0.97	0.15	47.60
22.01	6	45,165	64.2	–	–	–	0.78	−0.48	43.05

Hauser–Warren SEIs and Component Data

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
0.53	−0.77	36.37	0.19	−1.61	35.83	
2.25	0.35	54.48	1.79	−0.57	53.57	
1.55	0.33	50.64	0.96	−0.90	45.40	
1.76	0.00	48.19	1.68	−0.74	51.05	Legislators
0.61	0.16	43.39	0.52	−0.78	41.71	Chief Executives and General Administrators, Public Administration
1.76	0.69	53.62	1.02	−0.52	46.87	Administrators and Officials, Public Administration
1.29	0.32	48.22	0.36	−1.23	38.30	Administrators, Protective Service
2.46	0.97	59.51	1.07	−0.44	47.66	Financial Managers
1.23	0.36	48.24	0.92	−0.48	46.29	Personnel and Labor Relations Managers
1.84	0.74	54.39	1.12	−0.36	48.45	Purchasing Managers
1.92	0.92	56.30	1.47	−0.32	51.39	Managers, Marketing, Advertising, and Public Relations
2.34	0.69	56.65	1.61	−0.56	51.30	Administrators, Education and Related Fields
1.76	0.44	51.63	1.12	−0.65	47.08	Managers, Medicine and Health
1.02	0.00	44.33	0.44	−1.23	38.95	Managers, Properties and Real Estate
0.92	2.01	59.61	−0.04	0.56	43.58	Postmasters and Mail Superintendents
0.92	2.01	59.61	−0.04	0.56	43.58	Postmasters and Mail Superintendents
0.55	−1.15	32.82	−0.17	−2.11	30.07	Managers, Food Serving and Lodging Establishments
0.32	−0.65	35.55	−0.12	−1.41	33.74	Mngrs., Food Services & Lodging Est. (SE)
1.07	−0.78	38.47	0.32	−1.92	34.77	Mngrs., Food Services & Lodging Est. (NSE, Personal Services)
0.52	−1.47	30.15	−0.28	−2.46	27.58	Mngrs., Food Services & Lodging Est. (NSE, Other)
1.47	−0.40	43.59	0.97	−1.18	43.41	Funeral Directors
1.02	0.00	44.33	0.44	−1.23	38.95	Managers, Properties and Real Estate
1.00	0.27	46.36	0.67	−0.95	42.14	Managers and Administrators, n.e.c.
1.47	−0.40	43.59	0.97	−1.18	43.41	Funeral Directors
1.18	−0.20	43.61	1.29	−1.07	46.41	Managers, Service Organizations, n.e.c.
1.09	0.56	49.08	0.81	−0.78	43.95	Managers and Administrators, n.e.c.
0.88	−0.44	40.13	0.61	−1.68	38.18	Mngrs./Administrators, n.e.c. (NSE, Agr. For., & Fish.)

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
22.02	6	37,213	86.1	–	–	–	1.07	−0.24	46.45
22.03	6	380,344	84.0	–	–	–	0.74	−0.92	40.51
22.04	6	1,191,124	79.3	–	–	–	1.23	−1.76	40.11
22.05	6	493,873	72.3	–	–	–	0.97	−0.56	44.06
22.06	6	244,606	69.6	–	–	–	0.88	−0.78	42.25
22.07	6	313,761	54.3	–	–	–	0.52	−1.84	34.33
22.08	6	338,765	51.1	–	–	–	1.41	−1.47	42.86
22.09	6	337,648	64.1	–	–	–	0.97	−0.83	42.75
22.10	6	48,567	44.3	–	–	–	0.44	−0.28	41.45
22.11	6	72,370	60.5	–	–	–	1.02	−1.29	40.83
22.12	6	641,209	42.1	–	–	–	1.54	−0.20	50.18
22.13	6	77,312	65.4	–	–	–	1.54	−0.78	47.27
22.14	6	25,338	80.9	–	–	–	0.65	−0.74	40.76
22.15	6	8,408	92.1	–	–	–	0.69	−0.78	40.87
22.16	6	251,147	92.7	–	–	–	0.28	−0.52	39.01
22.17	6	188,109	82.6	–	–	–	0.69	−1.02	39.68
22.18	6	58,050	79.9	–	–	–	0.48	−0.52	40.55
22.19	6	47,026	82.1	–	–	–	1.07	−0.78	43.74
22.20	6	58,970	74.9	–	–	–	0.78	−1.41	38.43
22.21	6	35,654	77.5	–	–	–	1.68	−0.97	47.40
22.22	6	132,976	77.9	–	–	–	0.56	−0.83	39.66
22.23	6	25,338	60.1	–	–	–	0.44	−1.02	37.75
22.24	6	12,427	70.8	–	–	–	0.83	−1.02	40.71
22.25	6	54,342	60.2	–	–	–	1.84	−0.48	51.03

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
1.07	1.12	53.42	1.02	−0.61	46.47	Mngrs./Administrators, n.e.c. (NSE, Mining)
0.74	0.48	46.60	0.65	−1.07	41.36	Mngrs./Administrators, n.e.c. (NSE, Construction)
1.35	1.07	54.46	0.83	−0.48	45.54	Mngrs./Administrators, n.e.c. (NSE, Manufacturing)
1.02	0.78	50.47	0.78	−0.24	46.32	Mngrs./Administrators, n.e.c. (NSE, Trans., Comm. & Util.)
0.97	0.44	47.51	0.61	−0.92	41.72	Mngrs./Administrators, n.e.c. (NSE, Wholesale)
0.78	−0.24	41.23	0.24	−1.76	34.91	Mngrs./Administrators, n.e.c. (NSE, Retail)
2.11	1.35	60.63	0.88	−0.56	45.52	Mngrs./Administrators, n.e.c. (NSE, Finance, Insur.)
0.97	0.16	45.30	0.92	−0.78	44.87	Mngrs./Administrators, n.e.c. (NSE, Bus. & Repair Serv.)
0.78	−0.56	38.66	0.16	−1.84	33.91	Mngrs./Administrators, n.e.c. (NSE, Personal Serv.)
1.07	−0.36	41.80	0.92	−1.47	41.64	Mngrs./Administrators, n.e.c. (NSE, Enter. & Rec. Serv.)
2.34	0.83	57.71	1.12	−0.83	46.24	Mngrs./Administrators, n.e.c. (NSE, Prof., Related Serv.)
1.76	0.92	55.43	1.18	−0.28	49.25	Mngrs./Administrators, n.e.c. (NSE, Public Admin.)
0.65	−0.48	38.62	0.78	−1.29	41.39	Mngrs./Administrators, n.e.c. (SE, Agr. For., & Fish.)
0.69	0.20	44.15	0.52	−0.20	44.45	Mngrs./Administrators, n.e.c. (SE, Mining)
0.28	0.04	40.73	0.40	−0.78	40.73	Mngrs./Administrators, n.e.c. (SE, Construction)
0.74	0.24	44.70	0.61	−0.74	42.59	Mngrs./Administrators, n.e.c. (SE, Manufacturing)
0.44	0.08	41.89	0.61	−0.78	42.38	Mngrs./Administrators, n.e.c. (SE, Trans., Comm. & Util.)
1.12	0.78	51.01	0.83	−0.52	45.35	Mngrs./Administrators, n.e.c. (SE, Wholesale)
0.88	0.16	44.80	0.56	−1.02	40.92	Mngrs./Administrators, n.e.c. (SE, Retail)
1.92	0.92	56.30	0.97	−0.52	46.48	Mngrs./Administrators, n.e.c. (SE, Finance, Insur.)
0.52	−0.16	40.48	0.74	−0.78	43.41	Mngrs./Administrators, n.e.c. (SE, Bus. & Repair Serv.)
0.61	−0.44	38.72	0.16	−1.41	35.91	Mngrs./Administrators, n.e.c. (SE, Personal Serv.)
0.97	−0.36	41.28	0.52	−0.97	40.82	Mngrs./Administrators, n.e.c. (SE, Enter. & Rec. Serv.)
2.22	0.56	55.03	1.47	−0.83	49.00	Mngrs./Administrators, n.e.c. (SE, Prof., Related Serv.)

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
23.00	4	1,535,605	47.5	65.38	84.44	1.64	2.11	−0.34	53.79
23.01	6	386,513	44.9	–	–	–	2.46	−0.83	54.03
23.02	6	990,052	44.7	–	–	–	1.92	0.12	54.64
23.03	6	134,525	77.1	–	–	–	3.20	−0.36	61.92
23.04	6	24,515	41.6	–	–	–	1.84	−0.83	49.30
24.00	1	66,083	31.9	48.40	59.63	0.38	1.07	−0.44	45.45
25.00	1	649,757	48.6	48.40	59.63	0.38	1.47	−0.32	49.09
26.00	1	273,409	66.8	60.65	85.22	1.70	2.22	0.40	58.26
27.00	1	493,886	42.5	43.32	54.32	0.17	1.23	−0.44	46.67
28.00	1	15,811	85.1	41.85	47.32	−0.11	−0.16	−0.78	34.44
29.00	1	217,323	47.0	50.11	69.03	0.78	0.56	−1.02	38.70
33.00	1	236,797	54.8	40.99	52.33	0.09	0.88	−0.56	43.33
34.00	1	33,289	53.7	51.43	64.91	0.60	1.12	−0.65	44.79
35.00	1	62,185	94.1	46.85	47.66	−0.09	0.56	−0.24	42.60
36.00	1	155,122	69.0	50.06	63.64	0.55	1.02	−0.20	46.26
37.00	1	355,609	22.6	48.72	57.39	0.29	0.92	−1.12	40.91
Professional Specialty Occupations									
	7	16,023,048	46.4	63.59	80.05	1.47	2.66	0.06	60.92
43.00	1	152,556	85.2	73.15	93.04	2.47	2.77	0.36	62.25
44.00	1	135,830	91.7	71.60	86.84	1.83	2.97	1.92	71.48
45.00	1	16,994	89.3	60.94	77.88	1.23	2.11	1.02	60.56
46.00	1	5,712	92.9	59.62	72.65	0.95	2.01	0.88	59.09
47.00	1	24,698	93.8	65.85	82.14	1.48	2.46	1.23	64.27
48.00	1	64,448	89.4	73.30	91.82	2.31	2.97	1.61	69.92
49.00	1	10,915	92.0	63.30	80.73	1.39	2.97	1.76	70.66
53.00	1	245,580	93.2	68.81	84.11	1.62	2.61	1.07	64.56
54.00	1	2,408	93.1	59.54	74.56	1.05	1.92	0.83	58.17
55.00	1	455,244	90.4	64.19	85.39	1.71	2.61	1.47	66.55
56.00	1	169,171	85.8	62.26	76.19	1.14	1.92	0.69	57.50
57.00	1	182,075	95.1	64.14	83.33	1.56	2.22	1.23	62.42
58.00	1	13,056	97.1	59.46	76.58	1.16	1.41	0.97	55.01
59.00	1	333,459	89.9	70.69	89.92	2.10	2.61	1.07	64.56
63.00	1	10,242	90.6	51.35	65.77	0.64	2.11	0.04	55.68
64.00	1	462,047	69.1	73.70	91.30	2.25	2.61	0.92	63.81

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
3.13	0.32	57.88	1.62	−1.02	49.26	Accountants and Auditors
3.50	0.12	58.23	2.01	−1.02	52.35	Accountants and Auditors (NSE, Prof., Related Serv.)
2.97	0.32	57.00	1.47	−1.02	48.09	Accountants and Auditors (NSE, Other)
3.50	0.78	63.44	2.34	−0.48	57.40	Accountants and Auditors (SE, Prof., Related Serv.)
2.61	−0.08	52.03	1.47	−0.83	49.00	Accountants and Auditors (SE, Other)
2.34	0.40	54.33	0.65	−0.88	42.28	Underwriters
2.34	0.36	54.01	0.92	−1.07	43.52	Other Financial Officers
2.46	0.69	57.32	1.92	−0.12	55.85	Management Analysts
1.29	0.12	46.67	1.12	−0.88	46.03	Personnel, Training, and Labor Relations Specialists
−0.08	−0.61	33.82	−0.61	−1.84	27.90	Purchasing Agents and Buyers, Farm Products
0.74	−0.52	38.76	0.44	−1.61	37.19	Buyers, Wholesale and Retail Trade Except Farm Products
1.07	−0.08	43.98	0.65	−1.23	40.61	Purchasing Agents and Buyers
1.07	−0.28	42.43	1.18	−1.18	45.03	Business and Promotion Agents
0.52	−0.20	40.17	0.65	−1.02	41.60	Construction Inspectors
1.02	0.04	44.64	1.07	−0.83	45.83	Inspectors and Compliance Officers, Except Construction
0.97	−0.24	42.22	0.92	−1.47	41.64	Management Related Occupations, n.e.c.
2.86	0.37	57.84	2.51	−0.28	60.71	
2.77	0.52	57.60	2.97	−0.48	62.36	Architects
3.20	2.01	71.53	2.46	0.83	64.53	Aerospace Engineers
2.11	1.12	58.87	2.61	0.20	62.71	Metallurgical and Materials Engineers
2.01	0.92	56.77	1.35	0.36	53.55	Mining Engineers
2.46	1.29	62.01	1.61	0.44	55.98	Petroleum Engineers
2.97	1.68	67.70	3.20	1.02	71.21	Chemical Engineers
2.97	1.92	69.60	2.11	0.61	60.72	Nuclear Engineers
2.46	1.12	60.71	2.61	0.36	63.46	Civil Engineers
1.84	0.78	54.75	4.62	1.68	85.44	Agricultural Engineers
2.61	1.54	64.72	2.01	0.88	61.21	Electrical and Electronic Engineers
2.01	0.88	56.40	1.47	−0.28	51.58	Industrial Engineers
2.22	1.23	60.28	2.61	0.74	65.23	Mechanical Engineers
1.41	0.97	53.99	1.92	1.47	63.29	Marine Engineers and Naval Architects
2.61	1.18	61.88	2.46	0.32	62.13	Engineers, n.e.c.
2.11	0.08	50.67	1.84	−0.69	52.49	Surveyors and Mapping Scientists
2.77	1.12	62.33	2.34	0.52	62.08	Computer Systems Analysts and Scientists

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total Logit (% 1 Yr. Col. +)	Total Logit (% $14.30/ hour +)	TSEI
65.00	1	243,532	56.4	53.04	70.09	0.83	1.92	0.48	56.44
66.00	1	18,844	66.0	44.47	52.63	0.10	3.50	1.18	71.80
67.00	1	30,249	49.3	55.57	73.27	0.99	2.11	−0.04	55.29
68.00	1	5,519	73.7	63.46	77.78	1.22	2.97	1.29	68.34
69.00	1	26,911	86.1	73.48	88.79	2.00	3.20	1.02	68.77
73.00	1	136,111	73.5	73.33	91.50	2.28	2.77	0.36	62.25
74.00	1	8,541	89.1	63.39	83.93	1.60	2.61	0.65	62.45
75.00	1	51,113	84.8	69.75	89.29	2.04	3.50	0.56	68.74
76.00	1	17,967	70.1	73.09	89.83	2.10	2.97	0.16	62.71
77.00	1	32,493	73.9	58.00	75.68	1.11	1.61	−0.48	49.30
78.00	1	59,751	58.0	73.14	90.35	2.15	3.20	−0.24	62.52
79.00	1	33,437	87.0	54.53	71.55	0.90	1.68	−0.36	50.46
83.00	1	26,642	56.3	64.27	80.43	1.38	4.62	0.00	74.40
84.00	1	572,733	79.4	86.05	94.64	2.71	4.62	1.23	80.53
85.00	1	154,158	87.5	71.79	91.74	2.30	3.91	1.61	77.08
86.00	1	48,537	73.3	62.28	79.65	1.33	3.91	0.36	70.86
87.00	1	27,275	84.9	67.16	82.73	1.52	3.91	1.29	75.50
88.00	1	8,159	90.2	64.86	81.98	1.47	3.91	1.18	74.94
89.00	1	43,759	71.2	50.44	61.61	0.46	2.11	0.28	56.86
95.00	4	1,836,802	5.6	66.48	83.19	1.55	2.77	0.12	61.07
95.01	6	1,801,519	5.4	–	–	–	2.77	−2.22	49.46
95.02	6	35,283	13.4	–	–	–	1.76	−0.20	51.83
96.00	1	178,998	63.8	68.32	84.48	1.64	2.77	0.92	65.06
97.00	1	87,492	10.1	55.61	74.77	1.06	0.83	−1.23	39.65
98.00	2	64,345	38.5	62.99	82.52	1.51	2.46	−0.65	54.92
98.00	3	64,345	38.5	62.99	82.52	1.51	2.46	−0.65	54.92
99.00	1	36,446	9.7	55.97	78.89	1.28	2.77	−0.08	60.08
103.00	1	88,286	24.7	61.45	83.19	1.55	2.22	0.20	57.27
104.00	1	65,258	7.9	60.76	75.00	1.07	3.50	0.20	66.92
105.00	1	68,659	27.6	62.36	84.62	1.65	2.01	−1.07	49.42
106.00	1	23,279	52.7	61.20	77.73	1.22	1.41	−0.83	46.07
113.00	1	1,352	61.7	73.51	91.30	2.25	3.91	0.08	69.48
114.00	1	5,892	65.0	73.51	91.30	2.25	4.62	0.48	76.79
115.00	1	4,718	77.9	73.51	91.30	2.25	3.91	0.32	70.66
116.00	1	3,729	88.5	73.51	91.30	2.25	3.50	0.56	68.74
117.00	1	298	76.2	73.51	91.30	2.25	3.20	0.08	64.09
118.00	1	4,320	50.2	73.51	91.30	2.25	3.50	0.32	67.52
119.00	1	3,662	72.8	73.51	91.30	2.25	3.50	0.69	69.39
123.00	1	4,239	75.0	73.51	91.30	2.25	3.91	0.36	70.86
124.00	1	956	66.3	73.51	91.30	2.25	3.50	0.36	67.72
125.00	1	1,503	66.9	73.51	91.30	2.25	2.46	0.74	61.80
126.00	1	780	52.2	73.51	91.30	2.25	4.62	0.48	76.79
127.00	1	7,248	85.6	73.51	91.30	2.25	2.61	0.40	61.20
128.00	1	16,906	62.4	73.51	91.30	2.25	3.50	0.12	66.53
129.00	1	3,785	61.0	73.51	91.30	2.25	2.97	−0.74	58.27

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
2.22	0.92	57.84	1.61	0.00	53.93	Operations and Systems Researchers and Analysts
4.62	1.68	76.35	2.46	0.48	62.89	Actuaries
2.77	0.56	57.93	1.68	−0.61	51.67	Statisticians
3.20	1.61	68.36	2.46	0.65	63.69	Mathematical Scientists, n.e.c.
3.50	1.23	66.98	2.46	−0.16	59.92	Physicists and Astronomers
2.77	0.56	57.93	2.97	−0.16	63.87	Chemists, Except Biochemists
2.61	0.83	59.14	2.11	−0.52	55.46	Atmospheric and Space Scientists
3.50	0.65	62.39	3.20	0.04	66.62	Geologists and Geodesists
2.97	0.36	57.32	2.77	−0.20	62.17	Physical Scientists, n.e.c.
1.68	−0.32	45.31	1.61	−1.02	49.16	Agricultural and Food Scientists
3.50	−0.04	57.00	2.97	−0.52	62.17	Biological and Life Scientists
1.68	−0.20	46.25	1.92	−1.35	50.10	Forestry and Conservation Scientists
4.62	0.20	64.71	4.62	−0.24	76.48	Medical Scientists
4.62	1.47	74.72	3.91	0.56	74.69	Physicians
4.62	1.84	77.58	3.50	0.61	71.61	Dentists
4.62	0.65	68.26	3.91	−0.44	70.01	Veterinarians
3.91	1.47	71.04	2.97	0.52	67.04	Optometrists
4.62	1.35	73.75	2.34	−0.20	58.72	Podiatrists
2.97	0.78	60.65	1.02	−0.88	45.21	Health Diagnosing Practitioners, n.e.c.
2.57	0.32	54.94	2.76	0.12	63.57	Registered Nurses
2.61	0.32	55.13	2.77	0.12	63.64	Registered Nurses (NSE)
2.34	0.40	54.33	1.68	−0.36	52.83	Registered Nurses (SE)
3.50	1.18	66.54	2.22	0.56	61.36	Pharmacists
0.28	−1.18	31.19	0.92	−1.23	42.76	Dietitians
2.46	−0.28	49.73	2.34	−0.92	55.33	Inhalation Therapists
2.46	−0.28	49.73	2.34	−0.92	55.33	Respiratory Therapists
1.61	0.04	47.72	3.20	−0.12	65.89	Occupational Therapists
2.46	0.48	55.65	2.11	0.08	58.26	Physical Therapists
3.20	0.69	61.18	3.50	0.16	69.52	Speech Therapists
2.22	−0.78	44.48	1.92	−1.18	50.90	Therapists, n.e.c.
1.76	−0.61	43.44	1.02	−1.12	44.05	Physicians' Assistants
4.62	0.83	69.66	3.20	−1.18	60.93	Earth, Environmental, and Marine Science Teachers
4.62	1.12	71.98	4.62	−0.56	74.96	Biological Science Teachers
3.91	0.44	62.92	3.50	−0.08	68.42	Chemistry Teachers
3.91	0.69	64.92	2.22	−0.40	56.87	Physics Teachers
3.23	0.30	58.27	3.34	−0.30	66.13	Natural Science Teachers, n.e.c.
4.62	1.18	72.41	3.20	−0.44	64.39	Psychology Teachers
3.50	0.78	63.44	3.20	0.52	68.87	Economics Teachers
3.91	0.65	64.57	4.62	−0.44	75.54	History Teachers
4.62	0.74	68.95	2.77	−0.36	61.42	Political Science Teachers
3.20	0.88	62.60	1.61	0.56	56.56	Sociology Teachers
3.91	0.52	63.57	4.62	0.44	79.64	Social Science Teachers, n.e.c.
2.61	0.48	56.41	2.77	−0.04	62.90	Engineering Teachers
3.50	0.40	60.42	3.20	−0.36	64.77	Mathematical Science Teachers
2.77	−0.56	49.09	3.91	−1.02	67.28	Computer Science Teachers

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
133.00	1	2,873	75.8	73.51	91.30	2.25	3.91	1.54	76.74
134.00	1	15,271	24.6	73.51	91.30	2.25	2.97	0.32	63.50
135.00	1	4,501	43.6	73.51	91.30	2.25	3.50	0.52	68.54
136.00	1	979	84.4	73.51	91.30	2.25	3.91	0.32	70.66
137.00	1	20,680	46.9	73.51	91.30	2.25	3.20	−0.16	62.92
138.00	1	3,735	42.0	73.51	91.30	2.25	2.77	−0.83	56.36
139.00	1	1,323	55.3	73.51	91.30	2.25	2.77	0.36	62.25
143.00	1	23,221	40.5	73.51	91.30	2.25	3.20	−0.20	62.72
144.00	1	9,876	32.3	73.51	91.30	2.25	3.20	−0.69	60.25
145.00	1	4,786	68.3	73.51	91.30	2.25	3.91	1.68	77.44
146.00	1	267	6.7	73.51	91.30	2.25	4.62	0.74	78.07
147.00	1	2,397	79.9	73.51	91.30	2.25	3.50	−0.20	64.97
148.00	1	1,208	42.5	73.51	91.30	2.25	1.92	0.00	54.06
149.00	1	456	15.1	73.51	91.30	2.25	2.46	0.20	59.12
153.00	1	13,352	64.5	73.51	91.30	2.25	3.20	0.08	64.09
154.00	1	592,095	60.8	73.51	91.30	2.25	3.50	0.16	66.73
155.00	1	248,195	1.8	54.93	71.05	0.88	1.07	−2.34	36.03
156.00	1	2,927,819	21.5	64.08	83.58	1.58	2.77	−0.08	60.08
157.00	1	611,115	43.1	66.37	81.42	1.44	3.20	0.08	64.09
158.00	1	58,459	17.3	65.06	86.32	1.78	1.76	−0.56	50.01
159.00	1	539,519	38.0	45.73	51.64	0.06	1.54	−0.83	47.04
163.00	1	230,797	38.0	56.69	71.18	0.88	2.61	−0.20	58.25
164.00	1	194,054	19.5	54.42	69.91	0.82	1.92	−0.78	50.17
165.00	1	26,250	44.9	52.04	65.38	0.62	1.76	−0.88	48.46
166.00	1	145,546	57.0	62.86	80.00	1.35	3.91	0.28	70.46
167.00	1	187,194	41.4	69.39	86.44	1.79	4.62	0.24	75.58
168.00	1	2,128	50.1	60.75	80.37	1.37	4.62	−0.24	73.23
169.00	1	19,936	52.9	65.02	80.77	1.40	3.91	−0.40	67.12
173.00	1	17,913	67.6	52.32	64.60	0.59	2.77	0.40	62.45
174.00	1	629,824	31.2	51.50	68.52	0.76	1.84	−1.02	48.34
175.00	1	43,365	28.5	38.06	40.54	−0.38	0.74	−2.11	34.60
176.00	1	310,871	90.0	68.96	83.04	1.54	2.11	−1.61	47.50
177.00	1	89,756	43.6	43.55	53.92	0.15	1.54	−1.68	42.81
178.00	1	731,435	75.9	74.77	90.02	2.12	4.62	1.18	80.26
179.00	1	30,195	76.9	71.49	86.84	1.83	2.11	1.02	60.56
183.00	1	96,950	51.4	63.05	81.32	1.43	2.61	−0.40	57.26
184.00	1	73,090	49.7	54.31	73.56	1.00	2.22	0.04	56.49
185.00	1	561,925	45.2	46.53	56.73	0.27	1.07	−0.65	44.40
186.00	1	136,116	66.5	46.56	69.97	0.83	1.18	−0.65	45.20
187.00	1	94,046	60.6	57.62	72.20	0.93	2.11	−0.20	54.51
188.00	1	195,843	47.7	52.38	69.52	0.81	1.35	−1.07	44.39
189.00	1	134,190	70.3	45.11	58.26	0.33	1.07	−0.92	43.04

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
3.91	1.76	73.26	3.91	0.92	76.37	Medical Science Teachers
3.50	0.69	62.74	2.97	0.20	65.52	Health Specialties Teachers
3.91	1.23	69.15	3.20	0.04	66.62	Business, Commerce, and Marketing Teachers
3.91	0.56	63.90	4.62	−1.12	72.33	Agriculture and Forestry Teachers
3.50	0.28	59.47	3.20	−0.56	63.81	Art, Drama, and Music Teachers
2.97	−0.48	50.76	2.61	−1.12	56.53	Physical Education Teachers
2.97	0.78	60.65	2.61	−0.16	61.05	Education Teachers
2.77	0.20	55.05	3.50	−0.48	66.54	English Teachers
3.20	−0.56	51.33	3.20	−0.74	62.99	Foreign Language Teachers
4.62	2.22	80.56	2.97	0.92	68.91	Law Teachers
4.62	4.62	99.34	4.62	0.65	80.62	Social Work Teachers
3.91	0.00	59.48	2.34	−1.02	54.87	Theology Teachers
1.92	0.36	51.86	2.01	−0.24	56.02	Trade and Industrial Teachers
1.84	1.84	63.02	2.61	−0.04	61.61	Home Economics Teachers
3.23	0.30	58.27	3.34	−0.30	66.13	Teachers, Postsecondary, n.e.c.
3.50	0.44	60.74	3.20	−0.32	64.96	Postsecondary Teachers, Subject Not Specified
1.61	−1.41	36.36	1.07	−2.34	38.80	Teachers, Prekindergarten and Kindergarten
3.50	0.40	60.42	2.61	−0.24	60.68	Teachers, Elementary School
3.50	0.36	60.10	2.97	−0.12	64.05	Teachers, Secondary School
2.22	0.00	50.61	1.68	−0.69	51.26	Teachers, Special Education
1.61	−0.40	44.30	1.47	−1.12	47.61	Teachers, n.e.c.
2.77	0.00	53.51	2.61	−0.36	60.12	Counselors, Educational and Vocational
2.77	−0.52	49.43	1.76	−0.88	51.01	Librarians
1.68	−0.61	43.04	1.84	−1.18	50.23	Archivists and Curators
3.91	0.83	65.98	3.91	−0.36	70.39	Economists
4.62	0.48	66.93	4.62	0.04	77.77	Psychologists
4.62	0.20	64.71	4.62	−0.74	74.14	Sociologists
3.91	−0.08	58.87	3.91	−0.78	68.40	Social Scientists, n.e.c.
2.97	0.65	59.61	2.46	−0.12	60.10	Urban Planners
1.92	−0.69	43.63	1.76	−1.23	49.33	Social Workers
1.07	−1.61	31.99	0.61	−2.34	35.12	Recreation Workers
2.22	−1.54	38.54	1.92	−2.01	46.99	Clergy
1.76	−1.41	37.13	1.35	−1.92	42.90	Religious Workers, n.e.c.
4.62	1.41	74.23	4.62	0.69	80.83	Lawyers
2.22	1.35	61.19	1.68	0.12	55.05	Judges
2.61	−0.08	52.03	2.61	−0.74	58.34	Authors
2.34	0.48	54.98	2.11	−0.36	56.23	Technical Writers
1.41	−0.08	45.76	0.83	−1.23	42.02	Designers
0.97	−0.56	39.66	1.61	−0.88	49.84	Musicians and Composers
2.11	−0.08	49.44	2.22	−0.36	57.06	Actors and Directors
1.23	−0.69	40.01	1.41	−1.47	45.48	Painters, Sculptors, Craft–Artists, and Artist Printmakers
1.18	−0.69	39.72	0.74	−1.61	39.55	Photographers

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
193.00	1	19,628	23.6	53.49	67.31	0.71	0.08	−1.23	33.98
194.00	1	83,993	51.1	35.55	43.89	−0.24	1.02	−0.78	43.35
195.00	1	255,144	49.0	59.75	84.62	1.65	2.34	−0.48	54.79
197.00	1	159,563	41.4	47.52	59.48	0.38	1.92	−0.36	52.29
198.00	1	54,656	79.4	54.81	68.29	0.75	0.92	−1.12	40.91
199.00	1	77,394	72.5	64.66	78.45	1.26	1.12	−1.07	42.69
TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS									
	8	35,653,850	37.4	41.55	47.99	−0.08	0.35	−1.48	35.45
Technicians and Related Support Occupations									
	7	4,182,414	53.8	54.66	69.60	0.88	1.33	−0.67	47.05
203.00	1	316,659	24.4	68.40	87.78	1.90	1.54	−0.97	46.33
204.00	1	71,755	1.7	52.23	64.29	0.58	3.50	−0.04	65.75
205.00	1	53,072	7.3	52.28	70.43	0.85	0.44	−2.34	31.23
206.00	1	126,098	27.4	58.48	74.11	1.03	1.84	−0.78	49.52
207.00	1	408,301	6.3	59.98	77.98	1.23	0.97	−1.68	38.51
208.00	1	393,899	28.6	56.67	70.14	0.84	0.78	−1.76	36.70
213.00	1	378,966	85.6	59.88	78.13	1.24	1.12	−0.24	46.84
214.00	1	15,038	79.2	39.74	45.83	−0.16	1.07	0.16	48.40
215.00	1	28,098	91.3	54.12	76.14	1.13	1.18	0.56	51.22
216.00	1	225,854	69.8	48.25	60.80	0.43	0.97	−0.61	43.85
217.00	1	308,193	82.1	51.49	65.14	0.61	1.29	−0.56	46.48
218.00	1	85,789	90.6	36.10	40.19	−0.39	0.56	−0.74	40.11
223.00	1	51,982	57.3	32.35	31.96	−0.74	0.48	−1.02	38.07
224.00	1	73,961	75.7	37.61	40.54	−0.38	0.61	−0.20	43.12
225.00	1	70,517	67.1	44.38	54.13	0.16	1.02	−0.74	43.57
226.00	1	106,168	96.5	61.02	75.75	1.11	2.11	0.88	59.83
227.00	1	44,675	77.5	64.76	84.48	1.64	1.02	0.08	47.63
228.00	1	32,347	75.7	42.83	50.43	0.02	0.74	−0.83	40.97
229.00	1	638,438	67.6	60.51	81.82	1.46	2.34	0.28	58.54
233.00	1	3,731	84.2	48.25	62.00	0.48	0.92	0.28	47.86
234.00	1	244,428	23.3	56.53	73.45	0.99	1.23	−1.12	43.26
235.00	1	504,445	71.1	40.85	47.74	−0.09	0.97	−0.56	44.06
Sales Occupations									
	7	13,151,354	52.5	38.35	44.83	−0.23	0.30	−1.24	36.24
243.00	4	3,296,516	65.7	44.15	56.74	0.27	0.40	−0.81	38.51
243.01	6	483,241	83.2	–	–	–	0.61	−1.47	36.78
243.02	6	1,700,902	58.6	–	–	–	0.24	−1.02	36.23
243.03	6	216,255	56.8	–	–	–	1.35	−1.54	42.07

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
0.44	−1.02	33.27	−0.04	−1.29	34.92	Dancers
0.88	−0.48	39.81	1.12	−1.07	45.11	Artists, Performers, and Related Workers, n.e.c.
2.61	−0.16	51.42	2.22	−0.78	55.07	Editors and Reporters
1.92	0.12	49.98	1.84	−0.74	52.29	Public Relations Specialists
0.88	−1.12	34.75	1.18	−1.29	44.51	Announcers
1.12	−0.92	37.64	1.12	−1.68	42.26	Athletes
0.71	−0.93	36.04	0.21	−1.89	34.62	
1.43	−0.37	44.35	1.22	−1.11	46.47	
1.61	−0.69	41.98	1.47	−1.07	47.86	Clinical Laboratory Technologists and Technicians
2.34	0.16	52.45	3.50	−0.04	68.60	Dental Hygienists
1.12	−1.76	31.10	0.40	−2.34	33.48	Health Record Technologists and Technicians
1.76	−0.24	46.34	1.84	−1.02	50.96	Radiologic Technicians
1.23	−1.18	36.21	0.92	−1.76	40.32	Licensed Practical Nurses
1.18	−1.12	36.34	0.65	−2.22	36.01	Health Technologists and Technicians, n.e.c.
1.18	−0.12	44.23	0.74	−0.92	42.75	Electrical and Electronic Technicians
1.29	0.44	49.18	0.52	−0.83	41.49	Industrial Engineering Technicians
1.18	0.61	49.91	0.88	0.00	48.15	Mechanical Engineering Technicians
1.07	−0.32	42.12	0.83	−1.54	40.59	Engineering Technicians, n.e.c.
1.29	−0.44	42.31	1.35	−1.23	46.12	Drafting Occupations
0.56	−0.69	36.50	0.74	−1.07	42.06	Surveying and Mapping Technicians
0.44	−0.74	35.49	0.56	−1.47	38.81	Biological Technicians
0.56	−0.04	41.62	0.69	−0.78	43.06	Chemical Technicians
1.07	−0.40	41.49	0.88	−1.54	40.96	Science Technicians, n.e.c.
2.11	0.92	57.29	1.61	−0.16	53.19	Airplane Pilots and Navigators
1.18	0.32	47.63	0.69	−0.78	43.06	Air Traffic Controllers
0.78	−0.65	37.99	0.61	−1.54	38.84	Broadcast Equipment Operators
2.46	0.44	55.33	2.11	0.00	57.89	Computer Programmers
0.97	0.56	48.49	0.52	−1.54	38.17	Tool Programmers, Numerical Control
1.61	−0.65	42.32	1.12	−1.29	44.09	Legal Assistants
0.92	−0.32	41.34	1.07	−1.23	43.94	Technicians, n.e.c.
0.54	−0.83	35.96	0.05	−1.81	33.81	
0.54	−0.46	38.19	0.15	−1.68	34.58	Supervisors and Proprietors, Sales Occupations
0.65	0.04	42.69	0.40	−0.83	40.52	Superv. and Propr., Sales Occs. (NSE, Wholesale)
0.40	−0.92	33.82	0.00	−2.22	30.89	Superv. and Propr., Sales Occs. (NSE, Retail)
1.92	1.12	57.88	0.74	−0.20	46.15	Superv. and Propr., Sales Occs. (NSE, Finance, Insur.)

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
243.04	6	175,794	69.7	–	–	–	0.56	−0.69	40.33
243.05	6	123,200	87.2	–	–	–	0.52	−1.41	36.45
243.06	6	533,195	68.3	–	–	–	0.28	−0.97	36.78
243.07	6	33,081	79.1	–	–	–	1.54	−0.92	46.58
243.08	6	30,848	73.8	–	–	–	0.44	−2.61	29.88
253.00	1	645,158	65.1	44.85	56.22	0.25	1.18	−0.20	47.45
254.00	1	758,122	49.7	48.82	60.45	0.42	1.29	−0.40	47.30
255.00	1	284,096	72.8	52.80	68.22	0.75	2.01	0.24	55.92
256.00	1	162,252	49.0	39.29	43.81	−0.24	1.35	−0.61	46.71
257.00	1	509,876	64.1	32.32	25.85	−1.03	1.02	−0.36	45.47
258.00	1	42,639	95.4	53.16	74.71	1.06	2.34	0.97	61.99
259.00	4	1,458,256	78.3	48.54	64.50	0.58	0.83	−0.22	44.69
259.01	6	1,263,597	77.4	–	–	–	0.88	−1.76	37.40
259.02	6	194,659	84.3	–	–	–	0.74	−1.68	36.74
263.00	1	326,127	90.4	34.24	36.32	−0.55	0.12	−1.18	34.55
264.00	1	387,126	18.6	30.22	26.82	−0.98	−0.16	−2.34	26.73
265.00	1	100,042	38.2	27.67	21.35	−1.27	−0.32	−2.46	24.89
266.00	1	175,838	56.4	30.62	23.85	−1.13	0.16	−1.41	33.70
267.00	1	154,214	71.6	30.79	26.85	−0.98	0.78	−1.07	40.11
268.00	1	163,478	78.2	31.58	29.46	−0.85	0.00	−1.68	31.16
269.00	1	124,077	90.5	29.93	26.32	−1.01	−0.56	−2.01	25.25
274.00	4	1,660,192	34.1	32.03	39.39	−0.42	−0.04	−1.87	29.96
274.01	6	1,359,306	30.6	–	–	–	−0.12	−2.97	23.90
274.02	6	92,932	40.6	–	–	–	0.48	−2.61	30.19
274.03	6	207,954	54.2	–	–	–	0.24	−2.01	31.30
275.00	1	182,637	35.4	33.60	29.36	−0.86	−0.48	−2.22	24.87
276.00	4	2,362,872	21.6	29.45	27.44	−0.95	−0.69	−2.59	21.41
276.01	6	1,951,798	20.4	–	–	–	−0.78	−2.61	20.65
276.02	6	351,357	25.3	–	–	–	−0.36	−1.84	27.69
276.03	6	59,717	41.3	–	–	–	−0.40	−2.34	24.91

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
0.65	−0.28	40.22	0.44	−1.47	37.82	Superv. and Propr., Sales Occs. (NSE, Other)
0.52	−0.04	41.40	0.48	−1.02	40.26	Superv. and Propr., Sales Occs. (SE, Wholesale)
0.36	−0.69	35.41	0.20	−1.54	35.61	Superv. and Propr., Sales Occs. (SE, Retail)
1.76	0.78	54.33	0.88	−0.69	44.91	Superv. and Propr., Sales Occs. (SE, Finance, Insur.)
0.48	−0.28	39.33	0.28	−1.41	36.84	Superv. and Propr., Sales Occs. (SE, Other)
1.54	0.24	48.90	0.61	−1.07	41.02	Insurance Sales Occupations
1.54	−0.08	46.44	1.02	−0.69	46.06	Real Estate Sales Occupations
2.34	0.56	55.63	1.29	−0.56	48.79	Securities and Financial Services Sales Occupations
1.54	−0.28	44.89	1.18	−0.92	46.23	Advertising and Related Sales Occupations
1.12	−0.04	44.57	0.83	−0.92	43.47	Sales Occupations, Other Business Services
2.34	1.07	59.62	1.84	−0.04	55.55	Sales Engineers
0.92	−0.03	43.62	0.58	−0.97	41.26	Sales Representatives, Mining, Manufacturing, and Wholesale
0.97	−0.04	43.76	0.56	−0.97	41.16	Sales Reps., Mining, Manuf., and Whlsl. (NSE)
0.78	−0.04	42.77	0.52	−0.92	41.05	Sales Reps., Mining, Manuf., and Whlsl. (SE)
0.12	−1.12	30.78	−0.16	−1.92	31.04	Sales Workers, Motor Vehicles and Boats
0.28	−1.61	27.81	−0.24	−2.61	27.22	Sales Workers, Apparel
0.04	−2.11	22.62	−0.56	−2.77	23.87	Sales Workers, Shoes
0.28	−1.12	31.61	0.00	−1.92	32.27	Sales Workers, Furniture and Home Furnishings
0.97	−0.92	36.84	0.40	−1.54	37.19	Sales Workers, Radio, TV, Hi-Fi, and Appliances
0.08	−1.54	27.32	−0.32	−2.61	26.59	Sales Workers, Hardware and Building Supplies
−0.56	−1.92	20.95	−0.65	−2.97	22.30	Sales Workers, Parts
0.39	−1.21	31.54	−0.27	−2.34	28.23	Sales Workers, Other Commodities
0.36	−1.41	29.79	−0.36	−2.61	26.27	Sales Workers, Other Commodities (NSE, Retail)
0.83	−0.88	36.46	0.28	−1.76	35.22	Sales Workers, Other Commodities (NSE, Other)
0.40	−0.74	35.28	0.12	−1.68	34.33	Sales Workers, Other Commodities (SE)
−0.04	−1.61	26.16	−0.74	−2.61	23.27	Sales Counter Clerks
−0.30	−1.99	21.78	−0.83	−2.77	21.76	Cashiers
−0.40	−2.11	20.34	−0.92	−2.97	20.14	Cashiers (NSE, Retail)
0.00	−1.76	25.20	−0.48	−2.61	25.30	Cashiers (NSE, Other)
0.00	−1.02	30.97	−0.65	−2.01	26.74	Cashiers (SE)

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
277.00	1	196,182	34.2	22.37	18.02	−1.47	0.28	−1.35	34.90
278.00	1	98,900	60.2	19.38	15.60	−1.64	−0.69	−1.76	25.54
283.00	1	37,478	18.3	32.09	30.91	−0.79	−0.16	−1.35	31.62
284.00	1	7,498	87.2	39.19	41.44	−0.34	−0.20	−0.61	35.02
285.00	1	17,778	50.6	35.58	37.00	−0.52	0.74	−0.92	40.51
Administrative Support Occupations, Including Clerical									
	7	18,320,082	22.8	40.84	45.33	−0.20	0.17	−1.84	32.24
303.00	1	558,659	36.7	50.54	61.89	0.48	0.48	−0.74	39.48
304.00	1	33,013	62.3	53.99	72.41	0.94	1.18	0.16	49.20
305.00	1	107,570	30.7	51.83	64.66	0.59	0.97	−0.48	44.48
306.00	1	4,397	36.7	48.55	58.93	0.35	0.36	−0.40	40.24
307.00	1	188,993	69.7	41.72	44.91	−0.20	0.36	−0.32	40.64
308.00	1	622,778	39.1	50.32	60.68	0.43	0.52	−1.35	36.75
309.00	1	5,650	46.3	40.09	35.14	−0.60	−0.12	−1.76	29.89
313.00	4	3,783,271	1.3	46.08	55.61	0.22	0.20	−2.15	30.30
313.01	6	25,166	0.9	–	–	–	−0.04	−2.01	29.21
313.02	6	22,022	0.3	–	–	–	0.40	−1.68	34.17
313.03	6	134,556	0.9	–	–	–	0.04	−2.22	28.79
313.04	6	428,213	0.8	–	–	–	0.12	−2.61	27.45
313.05	6	157,222	1.5	–	–	–	0.16	−2.11	30.21
313.06	6	159,844	0.9	–	–	–	0.00	−2.22	28.49
313.07	6	170,799	1.4	–	–	–	−0.12	−2.61	25.67
313.08	6	468,431	1.0	–	–	–	0.12	−2.01	30.40
313.09	6	156,225	1.8	–	–	–	0.20	−2.22	29.98
313.10	6	37,394	1.1	–	–	–	0.12	−2.34	28.81
313.11	6	29,547	3.8	–	–	–	0.40	−1.61	34.53
313.12	6	1,565,864	1.4	–	–	–	0.36	−2.46	29.98
313.13	6	303,689	1.7	–	–	–	0.20	−2.22	29.98
313.14	6	124,299	1.9	–	–	–	−0.04	−2.22	28.20
314.00	1	77,834	9.8	46.70	61.82	0.47	0.92	−0.78	42.61
315.00	1	609,800	5.2	40.03	42.78	−0.29	0.16	−2.22	29.68
316.00	1	168,116	22.3	48.79	59.65	0.38	0.44	−2.01	32.82
317.00	1	85,014	28.1	31.93	25.21	−1.06	0.16	−2.77	26.94
318.00	1	254,022	29.4	35.34	33.95	−0.65	0.83	−1.23	39.65
319.00	1	735,421	4.0	39.02	40.00	−0.40	−0.04	−2.77	25.45
323.00	1	158,715	22.0	34.50	33.78	−0.66	0.08	−1.92	30.56
325.00	1	5,184	19.4	30.60	21.90	−1.24	0.12	−1.84	31.28

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
0.52	−0.92	34.47	0.12	−1.68	34.33	Street and Door–To–Door Sales Workers
−0.78	−1.68	21.69	−0.56	−1.92	27.84	News Vendors
0.44	−0.74	35.49	−0.28	−1.47	32.20	Demonstrators, Promoters and Models, Sales
−0.20	−0.48	34.19	−0.36	−1.92	29.47	Auctioneers
0.92	−0.32	41.34	0.56	−1.84	37.11	Sales Support Occupations, n.e.c.
0.66	−1.13	34.22	0.08	−2.13	32.49	
0.83	0.08	43.94	0.32	−1.35	37.45	Supervisors, General Office
1.41	0.52	50.46	0.88	−0.44	46.10	Supervisors, Computer Equipment Operators
2.01	0.61	54.29	0.65	−0.97	41.83	Supervisors, Financial Records Processing
0.78	0.74	48.86	0.16	−1.12	37.24	Chief Communications Operators
0.40	−0.12	40.14	0.28	−0.88	39.35	Supervisors, Distribution, Scheduling, and Adjusting Clerks
1.02	−0.69	38.90	0.24	−2.01	33.71	Computer Operators
0.04	−1.23	29.51	−0.24	−2.46	27.89	Peripheral Equipment Operators
0.74	−1.35	32.33	0.21	−2.22	32.54	Secretaries
0.00	−1.02	30.97	−0.04	−2.61	28.77	Secretaries (NSE, Agr. For., & Fish.)
4.62	−4.62	27.00	0.40	−1.84	35.80	Secretaries (NSE, Mining)
0.61	−1.35	31.57	0.04	−2.34	30.66	Secretaries (NSE, Construction)
0.52	−0.69	36.28	0.12	−2.01	32.78	Secretaries (NSE, Manufacturing)
0.44	−1.12	32.46	0.16	−1.68	34.64	Secretaries (NSE, Trans., Comm. & Util.)
0.28	−1.35	29.85	0.00	−2.22	30.89	Secretaries (NSE, Wholesale)
0.20	−1.61	27.40	−0.12	−2.61	28.15	Secretaries (NSE, Retail)
0.56	−1.35	31.35	0.12	−2.11	32.32	Secretaries (NSE, Finance, Insur.)
0.78	−1.54	31.01	0.20	−2.22	32.44	Secretaries (NSE, Bus. & Repair Serv.)
0.97	−1.29	33.95	0.12	−2.61	30.01	Secretaries (NSE, Personal Serv.)
0.56	−2.22	24.54	0.40	−2.01	34.98	Secretaries (NSE, Enter. & Rec. Serv.)
1.02	−1.54	32.26	0.36	−2.22	33.70	Secretaries (NSE, Prof., Related Serv.)
0.74	−1.23	33.17	0.20	−2.34	31.90	Secretaries (NSE, Public Admin.)
0.40	−0.83	34.57	−0.04	−1.61	33.43	Secretaries (SE)
1.54	0.36	49.85	0.83	−0.92	43.47	Stenographers
0.88	−1.47	32.01	0.12	−2.34	31.28	Typists
1.07	−1.35	34.02	0.28	−2.34	32.53	Interviewers
0.69	−2.46	23.30	−0.04	−2.97	27.10	Hotel Clerks
0.83	−0.56	38.90	0.78	−1.61	39.90	Transportation Ticket and Reservation Agents
0.61	−1.76	28.38	−0.04	−2.77	28.00	Receptionists
0.65	−1.18	33.14	−0.08	−2.22	30.28	Information Clerks, n.e.c.
1.41	−1.18	37.14	−0.16	−2.01	30.61	Classified–Ad Clerks

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
326.00	1	12,662	15.4	34.86	35.78	−0.57	0.40	−2.01	32.51
327.00	1	213,324	27.8	31.03	31.25	−0.77	0.08	−1.41	33.10
328.00	1	76,710	14.3	36.08	38.68	−0.45	0.24	−1.92	31.75
329.00	1	142,070	20.5	29.28	26.13	−1.02	0.65	−2.61	31.47
335.00	1	228,997	19.3	36.06	38.94	−0.44	−0.16	−2.46	26.09
336.00	1	131,120	21.8	31.49	26.92	−0.98	0.32	−1.76	33.18
337.00	4	1,797,497	10.5	46.64	56.48	0.26	0.20	−2.00	31.06
337.01	6	310,418	7.9	–	–	–	−0.08	−1.54	31.27
337.02	6	323,185	8.9	–	–	–	0.44	−1.54	35.18
337.03	6	980,721	11.8	–	–	–	0.24	−1.35	34.60
337.04	6	39,078	8.1	–	–	–	−0.04	−2.34	27.62
337.05	6	50,468	17.9	–	–	–	0.78	−2.01	35.43
337.06	6	93,627	7.1	–	–	–	0.04	−1.92	30.26
338.00	1	172,056	11.6	41.71	45.79	−0.17	0.12	−1.92	30.85
339.00	1	159,476	9.8	30.89	32.18	−0.73	0.00	−2.34	27.92
343.00	1	70,619	25.8	27.90	24.11	−1.12	0.00	−1.54	31.86
344.00	1	48,821	14.4	34.83	32.04	−0.74	0.04	−2.22	28.79
345.00	1	25,856	48.5	35.34	33.65	−0.66	0.00	−2.22	28.49
346.00	1	5,531	49.4	36.02	33.64	−0.67	−0.74	−1.92	24.39
347.00	1	30,701	36.2	38.51	36.04	−0.56	−0.44	−2.22	25.18
348.00	1	212,956	12.9	39.55	39.66	−0.41	−0.36	−2.01	26.81
349.00	2	–	38.9	39.11	40.27	−0.39	−0.04	−0.97	34.39
353.00	2	–	38.9	39.11	40.27	−0.39	−0.04	−0.97	34.39
353.00	3	9,599	38.9	39.11	40.27	−0.39	−0.04	−0.97	34.39
354.00	1	338,538	55.7	42.20	46.30	−0.15	0.24	0.16	42.08
355.00	1	318,059	73.5	47.04	60.53	0.42	0.20	−0.08	40.61
356.00	1	187,293	50.5	31.94	25.44	−1.05	−0.40	−2.11	26.02
357.00	1	129,674	75.0	22.30	18.01	−1.47	−0.08	−1.54	31.27
359.00	1	192,742	53.2	34.76	28.57	−0.90	−0.12	−1.41	31.62
363.00	1	240,529	53.5	41.81	46.15	−0.15	0.44	−0.69	39.38
364.00	1	596,131	70.9	32.71	26.31	−1.01	−0.65	−1.84	25.48
365.00	1	635,290	63.0	27.43	22.34	−1.21	−0.44	−1.84	27.07
366.00	1	48,131	85.5	34.00	28.04	−0.92	−0.28	−1.12	31.84
368.00	2	–	54.0	31.00	23.79	−1.14	−0.69	−1.54	26.62

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
0.92	−0.83	37.32	0.32	−2.46	32.24	Correspondence Clerks
0.32	−0.92	33.40	0.00	−1.68	33.41	Order Clerks
1.12	−0.69	39.44	0.12	−2.34	31.28	Personnel Clerks, Except Payroll and Timekeeping
0.97	−2.46	24.76	0.56	−2.77	32.75	Library Clerks
0.32	−2.01	24.84	−0.28	−2.61	26.90	File Clerks
0.88	−0.88	36.71	0.16	−2.11	32.63	Records Clerks
0.99	−1.17	35.00	0.13	−2.11	32.39	Bookkeepers, Accounting and Auditing Clerks
0.83	−1.68	30.14	−0.16	−2.46	28.51	Bookkprs., Acc./Audit. Clerks (NSE, Retail)
1.29	−1.47	34.19	0.40	−2.22	34.02	Bookkprs., Acc./Audit. Clerks (NSE, Prof., Related Serv.)
0.97	−1.12	35.26	0.12	−2.22	31.82	Bookkprs., Acc./Audit. Clerks (NSE, Other)
0.44	−0.92	34.04	−0.08	−1.54	33.45	Bookkprs., Acc./Audit. Clerks (SE, Retail)
1.35	−0.61	41.30	0.69	−1.54	39.52	Bookkprs., Acc./Audit. Clerks (SE, Prof., Related Serv.)
0.56	−0.56	37.51	0.00	−1.35	34.95	Bookkprs., Acc./Audit. Clerks (SE, Other)
0.56	−0.97	34.31	0.04	−2.11	31.70	Payroll and Timekeeping Clerks
0.65	−1.47	30.83	−0.08	−2.61	28.46	Billing Clerks
0.69	−0.48	38.85	−0.24	−2.11	29.53	Cost and Rate Clerks
0.48	−1.18	32.25	−0.04	−2.61	28.77	Billing, Posting, and Calculating Machine Operators
0.20	−2.01	24.22	−0.20	−2.34	28.80	Duplicating Machine Operators
−0.20	−1.68	24.77	−1.35	−2.34	19.73	Mail Preparing and Paper Handling Machine Operators
−0.08	−1.54	26.49	−0.65	−2.97	22.30	Office Machine Operators, n.e.c.
0.36	−1.29	30.73	−0.48	−2.22	27.12	Telephone Operators
0.28	0.00	40.42	−0.28	−1.92	30.10	Telegraphers
0.28	0.00	40.42	−0.28	−1.92	30.10	Communications Equipment Operators, n.e.c.
0.28	0.00	40.42	−0.28	−1.92	30.10	Communications Equipment Operators, n.e.c.
0.36	0.40	43.96	0.08	−0.08	41.51	Postal Clerks, Exc. Mail Carriers
0.28	0.12	41.35	0.04	−0.69	38.33	Mail Carriers, Postal Service
−0.24	−1.76	23.96	−0.56	−2.61	24.64	Mail Clerks, Exc. Postal Service
−0.04	−1.47	27.22	−0.20	−1.84	31.13	Messengers
−0.12	−0.97	30.74	−0.12	−2.22	29.97	Dispatchers
0.56	−0.16	40.70	0.28	−1.47	36.55	Production Coordinators
−0.65	−1.68	22.39	−0.65	−2.46	24.64	Traffic, Shipping and Receiving Clerks
−0.40	−1.54	24.82	−0.48	−2.46	25.98	Stock and Inventory Clerks
−0.32	−1.07	28.91	−0.12	−1.68	32.48	Meter Readers
−0.74	−1.12	26.29	−0.69	−2.34	24.90	Weighers, Measurers, and Checkers

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
368.00	3	71,934	54.0	31.00	23.79	−1.14	−0.69	−1.54	26.62
369.00	2	–	54.0	31.00	23.79	−1.14	−0.69	−1.54	26.62
373.00	1	222,150	35.3	42.89	47.37	−0.10	−0.08	−1.92	29.37
374.00	1	31,708	33.5	23.56	20.69	−1.31	−0.20	−1.41	31.02
375.00	1	336,453	29.1	47.27	59.66	0.38	0.74	−1.23	38.96
376.00	1	556,394	25.9	40.36	43.07	−0.27	0.56	−1.61	35.78
377.00	1	47,744	10.1	46.10	51.38	0.05	0.61	−2.34	32.50
378.00	1	151,824	33.8	24.30	20.20	−1.34	0.28	−1.84	32.47
379.00	4	1,352,263	17.6	33.88	30.70	−0.80	0.04	−2.03	29.71
379.01	6	10,899	13.0	–	–	–	0.20	−2.11	30.51
379.02	6	6,007	24.6	–	–	–	0.24	−1.68	32.95
379.03	6	33,518	23.6	–	–	–	−0.08	−2.22	27.90
379.04	6	159,481	18.2	–	–	–	−0.16	−2.61	25.38
379.05	6	126,993	22.3	–	–	–	−0.04	−2.34	27.62
379.06	6	65,401	20.1	–	–	–	−0.24	−2.11	27.23
379.07	6	120,320	15.4	–	–	–	−0.40	−2.61	23.56
379.08	6	186,131	15.2	–	–	–	−0.04	−2.46	26.98
379.09	6	69,324	17.8	–	–	–	0.08	−2.46	27.87
379.10	6	23,014	19.0	–	–	–	−0.24	−2.46	25.49
379.11	6	20,763	29.9	–	–	–	0.00	−2.22	28.49
379.12	6	354,508	15.4	–	–	–	0.40	−2.77	28.75
379.13	6	175,904	18.2	–	–	–	0.12	−2.61	27.45
383.00	1	476,928	9.8	43.28	46.96	−0.12	0.00	−2.97	24.79
384.00	1	28,137	26.5	43.14	51.33	0.05	0.74	−1.68	36.74
385.00	1	580,035	12.9	41.18	50.98	0.04	0.20	−2.46	28.77
386.00	1	137,982	33.3	37.50	38.74	−0.45	0.56	−1.18	37.92
387.00	1	254,548	10.9	43.06	48.89	−0.04	0.16	−2.34	29.11
389.00	1	649,163	28.5	33.03	35.03	−0.60	0.56	−1.35	37.07
SERVICE OCCUPATIONS									
	8	14,440,230	42.1	32.32	31.25	−0.85	−0.64	−2.21	24.14
Private Household Occupations									
	7	471,722	4.9	25.41	21.01	−1.31	−1.26	−2.70	16.87
403.00	1	1,610	10.7	23.25	15.79	−1.62	−1.47	−2.34	16.77

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
−0.74	−1.12	26.29	−0.69	−2.34	24.90	Weighers, Measurers, Checkers, and Samplers
−0.74	−1.12	26.29	−0.69	−2.34	24.90	Samplers
0.16	−1.29	29.68	−0.20	−2.46	28.20	Expediters
0.52	−0.40	38.60	−0.52	−2.34	26.25	Material Recording, Scheduling and Distributing Clerks, n.e.c.
1.68	−0.28	45.63	0.44	−1.76	36.50	Insurance Adjusters, Examiners, and Investigators
1.12	−0.69	39.44	0.36	−2.11	34.20	Investigators and Adjusters, Except Insurance
1.84	−1.68	35.43	0.52	−2.46	33.86	Eligibility Clerks, Social Welfare
0.69	−1.23	32.94	0.12	−2.34	31.28	Bill and Account Collectors
0.46	−1.23	31.72	−0.03	−2.34	30.08	General Office Clerks
0.28	−1.68	27.25	0.16	−2.34	31.59	General Office Clerks (Agr. For., & Fish.)
0.36	−1.07	32.44	0.20	−2.01	33.40	General Office Clerks (Mining)
0.28	−0.61	35.67	−0.16	−1.92	31.04	General Office Clerks (Construction)
0.12	−0.74	33.81	−0.24	−2.11	29.53	General Office Clerks (Manufacturing)
0.24	−0.44	36.78	−0.12	−1.68	32.48	General Office Clerks (Trans., Comm. & Util.)
−0.08	−1.29	28.45	−0.28	−2.22	28.72	General Office Clerks (Wholesale)
0.00	−1.76	25.20	−0.48	−2.61	25.30	General Office Clerks (Retail)
0.52	−1.35	31.13	−0.16	−2.34	29.11	General Office Clerks (Finance, Insur.)
0.61	−1.35	31.57	−0.04	−2.11	31.08	General Office Clerks (Bus. & Repair Serv.)
0.16	−1.68	26.62	−0.32	−2.61	26.59	General Office Clerks (Personal Serv.)
0.16	−2.01	24.01	−0.08	−2.46	29.13	General Office Clerks (Enter. & Rec. Serv.)
0.97	−1.84	29.66	0.32	−2.46	32.24	General Office Clerks (Prof., Related Serv.)
0.65	−1.23	32.71	0.04	−2.46	30.06	General Office Clerks (Public Admin.)
0.88	−2.01	27.78	−0.08	−2.97	26.79	Bank Tellers
1.12	−1.18	35.64	0.61	−1.92	37.05	Proofreaders
0.92	−1.54	31.74	0.08	−2.61	29.70	Data-Entry Keyers
1.02	−0.40	41.22	0.36	−1.76	35.86	Statistical Clerks
1.02	−1.68	31.15	0.04	−2.46	30.06	Teachers' Aides
0.88	−0.48	39.81	0.44	−1.84	36.12	Administrative Support Occupations, n.e.c.
−0.38	−1.91	22.42	−0.76	−2.45	24.20	
−0.87	−2.17	17.69	−1.31	−2.72	18.57	
0.08	−0.36	36.59	−1.76	−2.97	13.57	Launderers and Ironers

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
404.00	1	8,295	11.1	29.98	22.22	−1.22	−1.07	−2.46	19.17
405.00	1	29,572	4.5	33.93	32.97	−0.69	−1.61	−2.61	14.40
406.00	1	131,991	2.7	29.25	25.47	−1.05	−0.56	−2.97	20.53
407.00	1	300,254	5.7	22.77	17.86	−1.48	−1.54	−2.61	14.92
Protective Service Occupations									
	7	1,959,742	84.6	48.67	58.77	0.39	0.44	−0.85	39.29
413.00	1	28,830	98.1	59.87	80.70	1.39	1.12	0.40	49.99
414.00	1	58,604	87.9	61.84	83.19	1.55	1.29	0.56	52.07
415.00	1	43,345	86.0	37.64	45.45	−0.18	0.40	−0.83	38.40
416.00	1	15,753	87.7	60.42	73.15	0.98	0.52	−0.44	41.28
417.00	1	219,013	97.7	52.87	61.47	0.46	0.61	−0.65	40.87
418.00	1	507,533	88.3	59.99	77.08	1.18	1.18	0.04	48.62
423.00	1	118,189	81.5	48.32	58.26	0.33	0.69	−0.74	41.09
424.00	1	176,097	81.5	39.81	43.50	−0.26	0.16	−0.97	35.88
425.00	1	43,652	27.9	32.33	33.62	−0.67	−1.41	−2.01	18.84
426.00	1	702,037	83.7	42.11	49.24	−0.03	−0.08	−1.54	31.27
427.00	1	46,689	52.7	37.16	36.04	−0.56	0.04	−2.46	27.58
Service Occupations, Except Protective and Household									
	7	12,008,766	36.6	29.92	27.16	−1.03	−0.79	−2.42	21.96
433.00	1	256,317	43.2	35.16	35.71	−0.58	−0.24	−2.11	27.23
434.00	1	288,843	51.5	24.53	20.54	−1.32	−0.12	−2.46	26.39
435.00	1	1,280,050	20.2	28.08	19.57	−1.38	−0.36	−2.77	23.05
436.00	2	–	51.6	30.00	26.36	−1.00	−1.23	−2.77	16.42
436.00	3	1,732,977	51.6	30.00	26.36	−1.00	−1.23	−2.77	16.42
437.00	2	–	51.6	30.00	26.36	−1.00	−1.23	−2.77	16.42
438.00	1	185,253	28.3	23.02	17.86	−1.48	−1.12	−2.97	16.29
439.00	1	179,633	24.0	24.08	19.27	−1.39	−1.02	−2.77	18.02
443.00	1	303,420	56.2	21.12	18.97	−1.41	−1.02	−2.77	18.02
444.00	1	594,950	47.0	16.78	12.61	−1.87	−1.35	−2.77	15.54
445.00	1	171,137	2.6	44.56	48.15	−0.07	0.28	−2.61	28.65
446.00	1	206,782	20.3	50.86	65.12	0.61	−0.36	−2.22	25.80
447.00	1	1,628,210	12.9	41.71	45.98	−0.16	−0.48	−2.34	24.29
448.00	1	158,565	71.8	35.62	32.74	−0.70	−0.61	−1.35	28.23
449.00	1	592,010	20.3	20.05	12.61	−1.87	−1.68	−2.61	13.85
453.00	4	2,135,885	69.2	22.33	17.16	−1.53	−1.29	−2.05	19.56

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
−0.56	−1.76	22.25	−1.18	−2.61	19.80	Cooks, Private Household
−1.18	−1.68	19.62	−1.61	−2.77	15.64	Housekeepers and Butlers
−0.83	−2.22	17.24	−0.56	−2.97	22.97	Child Care Workers, Private Household
−0.88	−2.22	17.00	−1.61	−2.61	16.41	Private Household Cleaners and Servants
0.43	−0.77	35.85	0.41	−1.34	38.92	
1.12	0.40	47.99	1.47	−0.12	52.32	Supervisors, Firefighting and Fire Prevention Occupations
1.35	0.69	51.49	0.78	−0.40	45.57	Supervisors, Police and Detectives
0.44	−0.78	35.14	0.32	−1.18	38.25	Supervisors, Guards
0.56	−0.32	39.45	−0.04	−1.76	32.74	Fire Inspection and Fire Prevention Occupations
0.61	−0.61	37.40	0.88	−1.35	41.85	Firefighting Occupations
1.18	0.12	46.08	1.02	−0.48	47.06	Police and Detectives, Public Service
0.74	−0.65	37.75	0.52	−1.18	39.86	Sheriffs, Bailiffs, and Other Law Enforcement Officers
0.12	−0.92	32.36	0.32	−1.41	37.16	Correctional Institution Officers
−1.29	−1.61	19.60	−1.47	−2.22	19.29	Crossing Guards
−0.12	−1.47	26.80	−0.08	−1.92	31.66	Guards and Police, Exc. Public Service
0.16	−2.22	22.41	−0.08	−2.97	26.79	Protective Service Occupations, n.e.c.
−0.49	−2.09	20.43	−0.94	−2.63	22.01	
0.12	−1.61	26.98	−0.56	−2.61	24.64	Supervisors, Food Preparation and Service Occupations
0.24	−2.11	23.66	−0.48	−2.77	24.53	Bartenders
0.24	−2.34	21.91	−0.52	−2.97	23.31	Waiters and Waitresses
−1.07	−2.61	12.92	−1.47	−2.97	15.80	Cooks, Except Short Order
−1.07	−2.61	12.92	−1.47	−2.97	15.80	Cooks
−1.07	−2.61	12.92	−1.47	−2.97	15.80	Short-Order Cooks
−0.97	−2.77	12.15	−1.18	−3.20	17.04	Food Counter, Fountain and Related Occupations
−0.69	−2.46	16.03	−1.12	−2.97	18.55	Kitchen Workers, Food Preparation
−1.12	−2.77	11.35	−0.92	−2.77	21.04	Waiters'/Waitresses' Assistants
−1.35	−2.77	10.17	−1.35	−2.77	17.68	Miscellaneous Food Preparation Occupations
0.69	−1.41	31.55	0.28	−2.61	31.25	Dental Assistants
0.16	−1.54	27.73	−0.48	−2.46	25.98	Health Aids, Except Nursing
0.16	−1.84	25.39	−0.61	−2.34	25.58	Nursing Aides, Orderlies and Attendants
−0.40	−1.07	28.49	−1.12	−2.61	20.22	Supervisors, Cleaning and Building Service Workers
−1.29	−2.22	14.82	−1.84	−2.77	13.84	Maids and Housemen
−1.15	−1.91	17.96	−1.57	−2.46	17.41	Janitors and Cleaners

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	Nakao-Treas Prestige Scores: %5+	Nakao-Treas Prestige Scores: Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	1980/1990-basis: Total: Logit (% $14.30/hour +)	1980/1990-basis: Total: TSEI
453.01	6	248,643	83.2	–	–	–	−1.41	−1.76	20.12
453.02	6	190,080	77.7	–	–	–	−1.47	−1.54	20.72
453.03	6	1,538,563	68.1	–	–	–	−1.29	−1.54	22.10
453.04	6	158,599	48.3	–	–	–	−0.78	−0.97	28.77
454.00	1	9,560	83.5	27.59	17.92	−1.48	−1.18	−1.61	22.61
455.00	1	47,367	94.4	32.34	26.61	−0.99	−0.52	−1.68	27.22
456.00	1	59,495	30.4	36.75	41.43	−0.34	0.20	−1.61	33.01
457.00	1	78,821	80.7	35.71	34.70	−0.62	−0.69	−1.84	25.15
458.00	1	683,099	10.3	36.08	37.11	−0.52	−0.40	−2.11	26.02
459.00	1	114,248	63.0	25.33	20.54	−1.32	−0.20	−1.76	29.30
461.00	3	36,768	46.0	28.63	23.08	−1.17	0.40	−1.84	33.39
462.00	3	24,826	67.7	20.03	17.05	−1.54	−0.32	−2.01	27.12
463.00	2	36,768	46.0	28.63	23.08	−1.17	0.40	−1.84	33.39
463.00	3	100,878	20.2	42.05	48.94	−0.04	1.07	−0.08	47.23
464.00	2	24,826	67.7	20.03	17.05	−1.54	−0.32	−2.01	27.12
464.00	3	35,311	89.8	27.26	19.71	−1.37	−0.12	−1.68	30.27
465.00	2	100,878	20.2	42.05	48.94	−0.04	1.07	−0.08	47.23
465.00	3	42,536	15.9	46.50	52.34	0.09	−0.08	−2.11	28.43
466.00	2	35,311	89.8	27.26	19.71	−1.37	−0.12	−1.68	30.27
466.00	3	386,121	1.4	35.76	30.43	−0.81	−0.40	−2.97	21.79
467.00	2	42,536	15.9	46.50	52.34	0.09	−0.08	−2.11	28.43
467.00	3	291,627	4.2	35.76	30.43	−0.81	−0.16	−2.77	24.56
468.00	2	863,649	4.5	36.00	30.43	−0.81	−0.35	−2.78	23.09
468.00	3	185,901	11.2	35.76	30.43	−0.81	−0.56	−2.46	23.02
469.00	1	198,176	31.7	25.41	23.43	−1.16	−0.32	−2.22	26.10
FARMING, FORESTRY, AND FISHING OCCUPATIONS									
	7,8	2,675,596	85.1	32.97	36.24	−0.62	−0.95	−1.90	23.34
473.00	1	745,055	87.1	40.39	55.98	0.24	−0.65	−1.41	27.60
474.00	1	32,189	90.1	37.39	42.73	−0.29	−0.12	−1.18	32.77
475.00	1	222,741	88.3	47.59	60.53	0.42	−0.48	−1.41	28.88
476.00	1	16,822	75.6	47.59	60.53	0.42	0.20	−1.41	33.99
477.00	1	39,432	86.8	44.17	53.33	0.13	−0.78	−1.54	25.95
479.00	1	612,542	82.7	23.28	18.87	−1.42	−1.54	−2.61	14.92
483.00	1	766	80.5	30.52	26.13	−1.02	−0.97	−2.34	20.57
484.00	1	31,573	52.5	25.83	20.95	−1.29	−1.07	−2.46	19.17
485.00	1	61,938	91.9	36.10	35.51	−0.58	−0.12	−1.47	31.30
486.00	1	600,464	92.7	28.57	22.94	−1.18	−1.02	−2.11	21.30
487.00	1	96,514	36.8	21.16	21.59	−1.26	−0.28	−2.46	25.19

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
−1.35	−1.23	22.23	−1.84	−2.22	16.42	Janitors and Cleaners (NSE, Manufacturing)
−1.41	−2.46	12.27	−1.76	−2.77	14.47	Janitors and Cleaners (NSE, Retail)
−1.12	−2.11	16.52	−1.61	−2.61	16.41	Janitors and Cleaners (NSE, Other)
−0.56	−1.12	27.21	−1.07	−1.76	24.61	Janitors and Cleaners (SE)
−1.29	−1.54	20.14	−0.88	−2.11	24.50	Elevator Operators
−0.52	−1.68	23.06	−0.40	−2.46	26.62	Pest Control Occupations
0.36	−1.02	32.84	0.12	−2.01	32.78	Supervisors, Personal Service Occupations
−0.78	−1.68	21.69	−0.36	−2.34	27.54	Barbers
−0.12	−1.35	27.78	−0.40	−2.34	27.22	Hairdressers and Cosmetologists
−0.20	−1.61	25.33	−0.16	−1.92	31.04	Attendants, Amusement and Recreation Facilities
0.36	−1.54	28.77	0.44	−2.11	34.84	Guides
−0.61	−2.01	20.01	0.20	−2.22	32.44	Ushers
0.36	−1.54	28.77	0.44	−2.11	34.84	Guides
0.78	−0.08	42.47	1.18	−0.04	50.36	Public Transportation Attendants
−0.61	−2.01	20.01	0.20	−2.22	32.44	Ushers
−0.12	−1.68	25.18	−0.32	−1.84	30.18	Baggage Porters and Bellhops
0.78	−0.08	42.47	1.18	−0.04	50.36	Public Transportation Attendants
0.65	−1.29	32.26	−0.20	−2.34	28.80	Welfare Service Aides
−0.12	−1.68	25.18	−0.32	−1.84	30.18	Baggage Porters and Bellhops
−0.32	−2.34	19.02	−0.40	−2.97	24.28	Family Child Care Providers
0.65	−1.29	32.26	−0.20	−2.34	28.80	Welfare Service Aides
0.52	−2.01	25.92	−0.20	−2.77	26.76	Early Childhood Teacher's Assistants
0.02	−2.19	21.86	−0.37	−2.78	25.36	Child Care Workers, Except Private Household
−0.08	−2.22	21.17	−0.61	−2.46	24.98	Childcare Workers, n.e.c.
−0.08	−2.01	22.77	−0.44	−2.34	26.90	Personal Service Occupations, n.e.c.
−1.00	−1.86	19.52	−0.62	−2.31	26.05	
−0.69	−1.35	24.76	−0.40	−1.92	29.15	Farmers, Except Horticultural
−0.20	−1.12	29.13	0.28	−2.01	34.02	Horticultural Specialty Farmers
−0.52	−1.35	25.67	−0.24	−1.84	30.81	Managers, Farms, Except Horticultural
0.16	−1.23	30.13	0.40	−2.11	34.52	Managers, Horticultural Specialty Farms
−0.78	−1.47	23.32	−0.74	−2.34	24.55	Supervisors, Farm Workers
−1.61	−2.61	10.10	−1.18	−2.97	18.13	Farm Workers
−1.07	−2.77	11.63	−0.65	−1.41	29.56	Marine Life Cultivation Workers
−1.23	−2.34	14.21	−0.83	−2.77	21.79	Nursery Workers
−0.12	−1.41	27.30	0.04	−2.61	29.39	Supervisors, Related Agricultural Occupations
−1.07	−2.11	16.80	−0.48	−2.22	27.12	Groundskeepers and Gardeners, Except Farm
−0.44	−2.11	20.12	−0.20	−2.77	26.76	Animal Caretakers, Except Farm

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
488.00	1	35,667	34.3	30.69	25.89	−1.03	−2.01	−2.77	10.51
489.00	1	4,055	55.2	49.45	65.49	0.63	−0.48	−1.76	27.16
494.00	1	11,811	96.2	43.53	51.79	0.07	−0.78	−0.69	30.15
495.00	1	17,453	83.9	38.54	37.96	−0.48	−0.28	−1.68	29.07
496.00	1	95,562	96.8	31.10	26.64	−0.99	−1.54	−1.47	20.55
497.00	1	5,492	95.9	42.63	52.00	0.08	−0.61	−0.32	33.36
498.00	1	43,995	94.3	34.46	37.84	−0.49	−1.02	−1.02	26.72
499.00	1	1,525	82.8	22.78	15.89	−1.62	−0.08	−1.84	29.79
PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS									
	7,8	12,811,525	90.6	41.37	46.43	−0.15	−0.63	−0.76	31.51
503.00	1	260,168	91.6	49.82	62.82	0.51	−0.04	0.12	39.80
505.00	4	879,332	98.1	39.64	38.74	−0.45	−0.88	−1.36	26.16
505.01	6	298,570	98.8	–	–	–	−0.78	−2.01	23.59
505.02	6	274,306	98.5	–	–	–	−1.02	−1.68	23.44
505.03	6	139,820	95.1	–	–	–	−0.78	−1.61	25.60
505.04	6	166,636	98.7	–	–	–	−0.97	−1.35	25.46
506.00	1	1,408	97.1	34.05	29.52	−0.85	−0.36	−1.76	28.09
507.00	1	255,257	99.2	43.64	54.46	0.18	−0.97	−1.02	27.09
508.00	1	131,768	96.0	52.86	63.94	0.56	0.36	−0.04	42.01
509.00	1	55,233	98.6	27.75	23.85	−1.13	−0.83	−1.54	25.60
514.00	1	205,087	98.0	31.43	28.04	−0.92	−1.29	−1.23	23.63
515.00	1	31,209	92.9	52.86	63.94	0.56	0.08	−0.08	39.72
516.00	1	148,721	99.1	44.82	53.15	0.12	−0.88	−0.56	30.10
517.00	1	26,552	99.0	36.41	36.52	−0.54	−0.83	−1.84	24.12
518.00	1	318,216	96.1	29.51	27.91	−0.93	−0.83	−0.69	29.81
519.00	1	23,110	96.0	25.88	16.67	−1.56	−1.18	−0.44	28.43
523.00	1	164,872	91.6	38.88	38.53	−0.46	0.28	−0.65	38.38
525.00	1	86,355	86.8	51.43	68.42	0.76	1.23	−0.04	48.65
526.00	1	48,615	96.1	37.61	31.58	−0.76	−0.36	−1.07	31.49
527.00	1	49,629	93.5	41.28	46.79	−0.13	−0.20	0.78	41.91
529.00	1	186,031	85.7	36.38	40.45	−0.38	−0.04	0.52	41.80
533.00	1	65,282	94.9	38.53	37.61	−0.50	−0.08	−0.16	38.14

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
−1.76	−2.46	10.45	−2.22	−2.97	9.94	Graders and Sorters, Agricultural Products
−0.08	−1.47	27.01	−1.07	−2.22	22.45	Inspectors, Agricultural Products
−0.78	−0.69	29.44	−0.08	−1.41	34.05	Supervisors, Forestry and Logging Workers
−0.36	−1.61	24.49	0.16	−2.61	30.32	Forestry Workers, Except Logging
−1.61	−1.47	18.99	−1.18	−2.22	21.62	Timber Cutting and Logging Occupations
−0.69	−0.24	33.49	0.69	−2.97	32.87	Captains and Other Officers, Fishing Vessels
−1.02	−1.02	25.61	−1.07	−1.54	25.62	Fishers
0.08	−1.76	25.61	−0.92	−2.34	23.09	Hunters and Trappers
−0.62	−0.69	30.91	−0.59	−1.41	30.55	
−0.08	0.12	39.49	0.28	0.12	43.99	Supervisors, Mechanics and Repairers
−0.90	−1.36	23.62	−0.78	−1.35	28.83	Automobile Mechanics
−0.78	−1.35	24.29	−0.69	−1.54	28.61	Automobile Mech. (NSE, Retail)
−1.02	−1.76	19.85	−0.61	−1.54	29.29	Automobile Mech. (NSE, Bus. & Repair Serv.)
−0.78	−0.56	30.46	−0.74	−0.97	30.91	Automobile Mech. (NSE, Other)
−0.97	−1.54	21.81	−1.35	−2.01	21.22	Automobile Mech. (SE)
−0.40	−1.68	23.71	0.04	−4.62	20.01	Automobile Mechanic Apprentices
−0.97	−1.02	25.88	−1.07	−0.83	28.95	Bus, Truck, and Stationary Engine Mechanics
0.36	0.00	40.85	0.32	−0.97	39.21	Aircraft Engine Mechanics
−0.83	−1.54	22.56	−0.97	−1.41	27.02	Small Engine Repairers
−1.29	−1.23	22.54	−1.02	−1.68	25.36	Automobile Body and Related Repairers
0.08	0.00	39.39	−0.24	−0.88	35.31	Aircraft Mechanics, Exc. Engine
−0.88	−0.56	29.97	−0.44	−0.88	33.72	Heavy Equipment Mechanics
−0.78	−1.84	20.47	−1.84	−2.46	15.28	Farm Equipment Mechanics
−0.78	−0.69	29.44	−0.97	−1.76	25.40	Industrial Machinery Repairers
−1.23	−0.40	29.40	−0.88	−1.35	28.06	Machinery Maintenance Occupations
0.28	−0.65	35.34	0.36	−0.78	40.41	Electronic Repairers, Communications and Industrial Equipment
1.29	0.08	46.36	0.88	−0.92	43.84	Data Processing Equipment Repairers
−0.36	−1.07	28.70	−0.24	−1.92	30.41	Household Appliance and Power Tool Repairers
−0.20	0.83	44.44	0.08	0.20	42.80	Telephone Line Installers and Repairers
−0.04	0.65	43.86	0.04	−0.20	40.65	Telephone Installers and Repairers
−0.04	−0.08	38.16	−0.56	−1.35	30.52	Miscellaneous Electrical and Electronic Equipment Repairers

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
534.00	1	178,310	98.8	42.00	44.74	−0.21	−0.44	−0.88	31.85
535.00	1	29,535	88.1	35.49	37.93	−0.48	0.24	−0.97	36.47
536.00	1	25,231	94.0	39.17	43.75	−0.25	−0.40	−1.07	31.18
538.00	1	39,485	95.1	36.57	31.78	−0.75	0.44	−1.02	37.75
539.00	1	19,309	95.6	35.67	31.19	−0.77	−0.56	−0.36	33.48
543.00	1	24,377	98.4	39.02	43.48	−0.26	−0.40	0.78	40.40
544.00	1	88,017	96.8	42.75	44.44	−0.22	−0.74	0.20	34.91
547.00	1	198,110	93.2	31.55	29.78	−0.84	−0.40	−1.02	31.44
549.00	1	462,263	95.9	43.53	50.00	0.00	−0.65	−0.88	30.26
553.00	1	12,035	99.2	50.33	65.18	0.61	−0.92	−0.32	30.96
554.00	1	43,164	99.2	50.33	65.18	0.61	−0.56	−0.16	34.47
555.00	1	70,724	98.0	50.33	65.18	0.61	0.08	0.56	42.90
556.00	1	28,808	95.1	50.33	65.18	0.61	−0.78	−0.74	29.93
557.00	1	18,709	97.7	50.33	65.18	0.61	−0.61	0.04	35.13
558.00	2	604,944	97.1	54.05	73.43	0.99	−0.36	−0.20	35.84
558.00	3	604,944	97.1	54.05	73.43	0.99	−0.36	−0.20	35.84
563.00	1	165,402	98.8	36.08	36.36	−0.55	−1.41	−0.69	25.40
564.00	1	678	92.2	26.08	17.35	−1.52	−0.97	−1.84	23.04
565.00	1	48,551	98.1	31.36	27.68	−0.94	−1.07	−0.78	27.52
566.00	1	97,775	97.8	34.38	25.00	−1.07	−1.23	−1.07	24.86
567.00	4	1,169,156	98.4	38.92	42.15	−0.31	−0.78	−1.07	28.31
567.01	6	834,265	98.2	–	–	–	−0.92	−1.23	26.41
567.02	6	334,891	98.6	–	–	–	−0.52	−2.22	24.55
569.00	1	3,975	93.7	28.92	22.93	−1.18	−0.88	−1.68	24.54
573.00	1	125,815	97.6	34.26	32.14	−0.73	−1.41	−0.92	24.26
575.00	1	586,379	97.5	51.27	66.10	0.65	−0.16	−0.28	36.95
576.00	1	14,390	94.8	40.60	44.76	−0.21	−0.16	−2.22	27.31
577.00	1	116,099	98.5	46.25	51.82	0.07	−0.48	0.48	38.27
579.00	1	464,758	92.5	33.91	31.28	−0.77	−0.92	−1.35	25.83
583.00	1	16,416	74.4	31.14	23.64	−1.14	−0.36	−1.02	31.74
584.00	1	36,327	98.2	34.91	33.62	−0.67	−1.47	−0.78	24.48
585.00	1	440,157	98.7	44.75	53.57	0.14	−0.78	−0.44	31.42
587.00	1	7,191	97.3	35.49	34.48	−0.63	−0.56	−1.84	26.13

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
−0.44	−0.88	29.82	−0.56	−1.61	29.31	Heating, Air Conditioning, and Refrigeration Mechanics
0.24	−0.92	32.98	0.04	−1.54	34.37	Camera, Watch, and Musical Instrument Repairers
−0.36	−1.07	28.70	−0.74	−1.23	29.69	Locksmiths and Safe Repairers
0.44	−0.97	33.66	0.48	−1.68	37.18	Office Machine Repairers
−0.56	−0.32	33.54	−0.65	−0.97	31.61	Mechanical Controls and Valve Repairers
−0.40	0.78	43.03	0.12	−0.20	41.27	Elevator Installers and Repairers
−0.74	0.24	36.96	−1.23	−1.12	26.29	Millwrights
−0.40	−0.97	29.28	−0.65	−1.92	27.16	Specified Mechanics and Repairers, n.e.c.
−0.65	−0.88	28.71	−0.32	−1.41	32.18	Not Specified Mechanics and Repairers
−0.92	−0.32	31.66	−4.62	−1.02	0.16	Supervisors: Brickmasons, Stonemasons, and Title Setters
−0.56	−0.16	34.79	−0.78	−1.12	29.84	Supervisors, Carpenters and Related Work
0.08	0.56	43.80	−0.44	−0.36	36.14	Supervisors, Electricians and Power Transmission Installers
−0.83	−0.69	29.20	0.16	−0.97	37.96	Supervisors: Painters, Paperhangers, and Plasterers
−0.65	0.04	35.88	0.00	−1.02	36.49	Supervisors: Plumbers, Pipefitters, and Steamfitters
−0.36	−0.20	35.57	0.04	−0.88	37.48	Supervisors, n.e.c.
−0.36	−0.20	35.57	0.04	−0.88	37.48	Supervisors, Construction, n.e.c
−1.41	−0.69	26.15	−0.97	−1.54	26.42	Brickmasons and Stonemasons
−1.02	−2.01	17.83	−0.40	−0.40	36.28	Brickmason and Stonemason Apprentices
−1.07	−0.78	27.22	0.08	−1.47	34.99	Tile Setters, Hard and Soft
−1.23	−1.02	24.50	−1.07	−2.77	19.87	Carpet Installers
−0.81	−1.06	26.46	−0.51	−1.61	29.69	Carpenters
−0.92	−1.07	25.73	−0.65	−1.68	28.29	Carpenters (NSE)
−0.56	−1.02	28.02	−0.20	−1.61	32.19	Carpenters (SE)
−0.92	−1.68	20.96	−0.56	−1.54	29.63	Carpenter Apprentices
−1.47	−0.92	24.01	−1.29	−1.76	22.89	Drywall Installers
−0.16	−0.24	36.30	−0.16	−0.83	36.15	Electricians, Except Apprentices
−0.16	−2.11	21.59	0.12	−3.91	23.91	Electrician Apprentices
−0.52	0.52	40.33	−0.40	−0.48	35.89	Electrical Power Installers and Repairers
−0.97	−1.29	23.77	−0.40	−1.92	29.15	Painters, Construction and Maintenance
−0.52	−0.88	29.38	0.12	−1.41	35.60	Paperhangers
−1.47	−0.83	24.75	−0.78	−0.61	32.27	Plasterers
−0.78	−0.44	31.44	−0.56	−0.97	32.29	Plumbers, Pipefitters, and Steamfitters
−0.61	−1.92	20.72	1.12	−0.44	48.07	Plumber, Pipefitter, and Steamfitter Apprentices

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
588.00	1	61,691	98.8	37.50	33.01	−0.69	−1.54	−0.88	23.52
589.00	1	43,157	94.8	30.26	26.17	−1.01	−0.97	−1.02	27.09
593.00	1	63,348	96.5	32.59	29.06	−0.87	−1.02	−0.83	27.67
594.00	1	9,893	98.6	33.00	35.00	−0.61	−1.61	−1.12	21.76
595.00	1	157,032	98.7	37.16	35.45	−0.59	−1.54	−1.29	21.46
596.00	1	25,994	98.4	35.34	34.48	−0.63	−0.92	−0.74	28.87
597.00	1	61,315	98.0	42.96	52.87	0.11	−0.92	−0.24	31.36
598.00	1	18,414	97.7	39.82	45.13	−0.19	−1.23	−1.07	24.86
599.00	1	151,755	97.1	35.67	33.18	−0.69	−1.18	−1.29	24.19
613.00	1	48,209	96.4	44.07	51.55	0.06	−0.36	0.32	38.39
614.00	1	31,233	98.9	41.50	39.81	−0.41	−1.18	−1.29	24.19
615.00	1	8,167	95.1	37.50	42.31	−0.30	−1.23	−0.78	26.30
616.00	1	56,516	97.2	35.06	31.94	−0.74	−1.29	0.00	29.75
617.00	1	30,366	97.4	28.76	24.78	−1.08	−1.29	−0.48	27.37
628.00	5	1,245,699	82.7	47.07	62.78	0.51	−0.28	−0.26	36.11
628.01	6	1,204,955	82.6	–	–	–	−0.28	−2.46	25.19
628.02	6	40,744	85.8	–	–	–	−0.04	−1.92	29.67
633.00	2	1,245,699	82.7	47.07	62.78	0.51	−0.28	−0.26	36.11
634.00	1	136,947	97.9	42.93	49.49	−0.02	−0.32	0.08	37.51
635.00	1	2,240	93.8	32.93	29.18	−0.87	0.04	−2.34	28.21
636.00	1	38,315	77.2	31.47	26.32	−1.01	−0.88	−0.97	28.07
637.00	1	538,949	95.9	46.93	53.77	0.15	−0.69	−0.74	30.61
639.00	1	1,634	90.6	35.31	29.82	−0.84	0.00	−1.76	30.79
643.00	1	20,791	97.3	39.64	40.00	−0.40	−0.78	−0.16	32.82
644.00	1	21,209	91.8	25.87	18.26	−1.46	−0.92	−0.65	29.31
645.00	1	5,185	92.9	38.41	39.09	−0.43	−0.12	0.48	41.00
646.00	1	16,588	88.2	29.52	22.86	−1.19	−0.65	−1.07	29.28
647.00	1	55,962	67.8	44.55	56.41	0.25	−0.36	−1.41	29.81
649.00	1	16,356	63.7	38.17	40.18	−0.39	−0.44	−1.18	30.35
653.00	1	131,786	94.4	50.33	61.95	0.48	−0.78	−0.61	30.59
654.00	1	853	91.4	37.95	36.36	−0.55	−0.52	−1.61	27.58
655.00	1	2,088	77.3	35.71	40.95	−0.36	−1.68	−1.07	21.47
656.00	1	3,219	91.8	38.66	37.96	−0.48	0.08	0.48	42.49
657.00	1	67,397	93.9	43.81	50.44	0.02	−0.74	−1.54	26.29
658.00	1	30,585	75.3	38.94	40.71	−0.37	−0.83	−1.92	23.70
659.00	1	1,929	82.3	36.31	38.79	−0.45	−0.74	−1.92	24.39
666.00	1	84,275	6.7	36.08	36.79	−0.53	−0.92	−2.46	20.30
667.00	1	51,036	53.2	42.48	44.07	−0.23	−1.29	−1.92	20.20
668.00	1	67,625	76.3	34.75	29.36	−0.86	−1.23	−1.84	21.06

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
−1.54	−0.88	24.04	−0.74	−1.02	30.68	Concrete and Terrazzo Finishers
−0.97	−0.97	26.27	−0.56	−2.11	26.96	Glaziers
−1.02	−0.78	27.49	−0.88	−1.54	27.17	Insulation Workers
−1.61	−1.12	21.72	−1.29	−0.65	28.07	Paving, Surfacing, and Tamping Equipment Operators
−1.54	−1.29	20.78	−0.83	−1.35	28.43	Roofers
−0.92	−0.69	28.71	−1.07	−1.84	24.23	Sheetmetal Duct Installers
−0.92	−0.24	32.29	−1.84	−1.41	20.20	Structural Metal Workers
−1.23	−1.07	24.10	−1.92	−1.18	20.61	Drillers, Earth
−1.18	−1.29	22.68	−0.74	−1.47	28.57	Construction Trades, n.e.c.
−0.36	0.36	39.90	0.52	0.04	45.55	Supervisors, Extractive Occupations
−1.18	−1.29	22.68	−0.32	−1.07	33.76	Drillers, Oil Well
−1.23	−0.74	26.73	−1.41	−2.97	16.30	Explosives Workers
−1.29	0.00	32.21	−1.07	−0.16	32.08	Mining Machine Operators
−1.35	−0.48	28.14	−0.97	−0.44	31.56	Mining Occupations, n.e.c.
−0.21	−0.07	37.29	−0.61	−1.35	30.19	Supervisors, Production Occupations
−0.24	−0.08	37.12	−0.61	−1.35	30.18	Supervisors, Production Occupations (NSE)
−0.04	−0.16	37.54	−0.12	−1.23	34.57	Supervisors, Production Occupations (SE)
−0.21	−0.07	37.29	−0.61	−1.35	30.19	Supervisors, Production Occupations
−0.32	0.08	37.93	−0.61	−1.02	31.72	Tool and Die Makers
0.00	−2.61	18.54	0.32	−0.40	41.89	Tool and Die Maker Apprentices
−0.78	−0.74	29.09	−1.35	−1.92	21.65	Precision Assemblers, Metal
−0.65	−0.69	30.14	−1.18	−1.76	23.77	Machinists
0.04	−1.84	24.78	−0.52	−1.02	32.38	Machinist Apprentices
−0.74	−0.12	34.19	−2.01	−0.56	22.77	Boilermakers
−1.02	−0.61	28.87	−0.36	−1.29	32.42	Precision Grinders, Fitters, and Tool Sharpeners
−0.16	0.56	42.57	0.61	−0.69	42.79	Patternmakers and Model Makers, Metal
−0.74	−1.02	27.10	−0.28	−1.47	32.20	Lay-Out Workers
−0.32	−1.12	28.50	−0.44	−2.34	26.90	Precious Stones and Metals Workers
−0.48	−0.83	29.97	−0.36	−2.11	28.58	Engravers, Metal
−0.74	−0.56	30.69	−1.02	−1.12	27.96	Sheet Metal Workers
−0.40	−1.54	24.82	−2.01	−2.01	15.99	Sheet Metal Worker, Apprentices
−1.68	−0.88	23.30	−1.61	−1.84	20.01	Miscellaneous Precision Metal Workers
0.04	0.61	43.93	0.48	−1.35	38.73	Patternmakers and Model Makers, Wood
−0.74	−1.47	23.56	−1.02	−2.46	21.71	Cabinet Makers and Bench Carpenters
−0.74	−1.68	21.93	−1.12	−2.61	20.22	Furniture and Wood Finishers
−0.83	−1.76	20.86	−0.28	−4.62	17.53	Miscellaneous Precision Woodworkers
−1.07	−1.68	20.17	−0.92	−2.61	21.81	Dressmakers
−1.41	−1.41	20.52	−1.18	−2.97	18.13	Tailors
−1.23	−1.68	19.33	−1.29	−2.46	19.59	Upholsterers

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
669.00	1	26,243	71.1	36.14	32.39	−0.72	−1.29	−1.92	20.20
673.00	2	–	36.7	35.00	32.56	−0.71	−0.69	−1.61	26.28
674.00	2	–	36.7	35.00	32.56	−0.71	−0.69	−1.61	26.28
674.00	3	14,294	36.7	35.00	32.56	−0.71	−0.69	−1.61	26.28
675.00	1	19,000	85.6	32.00	30.28	−0.82	−0.83	−1.23	27.12
676.00	1	20,329	76.0	27.59	21.95	−1.24	−0.08	−0.20	37.94
677.00	1	70,927	44.2	37.73	38.89	−0.44	0.08	−1.61	32.12
678.00	1	54,366	60.0	55.93	70.69	0.86	0.40	−1.12	36.93
679.00	1	27,334	49.2	31.58	27.68	−0.94	−0.97	−1.35	25.46
683.00	1	275,290	33.0	28.16	21.84	−1.24	−1.18	−2.22	19.58
684.00	1	49,944	83.5	30.00	24.55	−1.10	−1.07	−1.47	24.08
686.00	1	252,066	81.4	34.66	35.27	−0.59	−1.35	−1.47	21.99
687.00	1	140,809	55.0	34.86	32.61	−0.71	−0.92	−1.92	22.98
688.00	1	46,919	38.6	29.57	20.87	−1.30	−1.12	−2.34	19.41
689.00	1	122,955	76.6	41.80	43.81	−0.24	−0.16	−0.40	36.35
693.00	1	8,242	72.4	39.64	40.95	−0.36	−0.12	−0.74	34.96
694.00	1	58,623	94.7	38.49	38.60	−0.45	−0.12	−0.97	33.80
695.00	1	37,266	94.5	43.28	41.51	−0.34	0.08	0.88	44.45
696.00	1	154,841	95.7	40.16	41.67	−0.33	0.16	0.20	41.68
699.00	1	51,384	92.5	42.89	44.04	−0.23	−0.32	0.04	37.32
OPERATORS, FABRICATORS, ASSEMBLERS, AND LABORERS									
	8	16,557,632	74.2	31.40	27.37	−0.99	−1.15	−1.54	23.58
Machine Operators, Assemblers, and Inspectors									
	7	7,641,538	61.1	33.54	30.28	−0.84	−1.24	−1.60	22.58
703.00	1	26,972	91.5	41.30	38.24	−0.47	−1.18	−1.12	25.02
704.00	1	34,277	88.2	37.24	37.50	−0.50	−0.97	−1.07	26.84
705.00	1	5,853	84.5	32.03	20.83	−1.30	−0.88	−1.02	27.82
706.00	1	98,621	71.9	34.80	36.04	−0.56	−1.54	−1.29	21.46
707.00	1	12,162	87.1	39.56	38.83	−0.45	−1.47	−0.44	26.19
708.00	1	18,543	79.7	36.95	38.94	−0.44	−1.29	−1.54	22.10
709.00	1	112,542	84.2	22.75	16.47	−1.58	−1.47	−1.23	22.24
713.00	1	16,715	93.3	35.61	33.96	−0.65	−1.47	−0.97	23.54

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
−1.12	−1.76	19.30	−1.68	−2.77	15.07	Shoe Repairers
−0.61	−1.02	27.79	−0.78	−2.22	24.73	Apparel and Fabric Patternmakers
−0.61	−1.02	27.79	−0.78	−2.22	24.73	Miscellaneous Precision Apparel and Fabric Workers
−0.61	−1.02	27.79	−0.78	−2.22	24.73	Miscellaneous Precision Apparel and Fabric Workers
−0.83	−1.12	25.82	−0.61	−2.34	25.58	Hand Molders and Shapers, Except Jewelers
−0.20	0.00	37.95	0.32	−0.92	39.44	Patternmakers, Lay–Out Workers, and Cutters
0.24	−0.97	32.60	−0.04	−2.61	28.77	Optical Goods Workers
0.44	−0.69	35.84	0.36	−2.01	34.66	Dental Laboratory and Medical Appliance Technicians
−0.78	−0.78	28.74	−1.18	−2.22	21.62	Bookbinders
−0.74	−1.61	22.50	−1.47	−2.61	17.47	Electrical and Electronic Equipment Assemblers
−0.97	−1.35	23.30	−1.54	−2.46	17.63	Miscellaneous Precision Workers, n.e.c.
−1.29	−1.35	21.63	−1.61	−2.77	15.64	Butchers and Meat Cutters
−0.97	−1.61	21.27	−0.92	−2.61	21.81	Bakers
−1.35	−1.92	16.82	−1.02	−2.77	20.27	Food Batchmakers
0.00	−0.12	38.05	−0.78	−1.54	27.90	Inspectors, Testers, and Graders
0.40	−0.32	38.58	−1.84	−2.61	14.61	Adjusters and Calibrators
−0.12	−0.92	31.12	0.28	−1.47	36.55	Water and Sewage Treatment Plant Operators
0.08	0.92	46.62	0.24	−0.08	42.75	Power Plant Operators
0.12	0.24	41.45	0.32	−0.61	40.92	Stationary Engineers
−0.32	0.08	37.93	−0.32	−0.69	35.53	Miscellaneous Plant and System Operators
−1.08	−1.33	23.34	−1.17	−2.21	22.10	
−1.08	−1.24	24.03	−1.49	−2.40	18.62	
−1.18	−1.02	24.79	−1.68	−2.11	18.15	Lathe and Turning Machine Set–Up Operators
−0.97	−0.97	26.27	−1.07	−1.61	25.30	Lathe and Turning Machine Operators
−0.97	−0.88	27.02	−0.40	−2.22	27.77	Milling and Planing Machine Operators
−1.47	−1.02	23.24	−1.92	−2.22	15.75	Punching and Stamping Press Machine Operators
−1.47	−0.28	29.08	−1.41	−1.84	21.57	Rolling Machine Operators
−1.18	−1.35	22.22	−1.84	−2.61	14.61	Drilling and Boring Machine Operators
−1.41	−1.12	22.76	−1.54	−2.22	18.77	Grinding, Abrading, Buffing, and Polishing Machine Operators
−1.47	−0.88	24.39	−1.02	−2.61	21.04	Forging Machine Operators

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	Nakao-Treas Prestige Scores: %5+	Nakao-Treas Prestige Scores: Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	1980/1990-basis: Total: Logit (% $14.30/hour +)	1980/1990-basis: Total: TSEI
714.00	1	1,798	81.5	39.52	34.45	−0.63	−0.52	−0.65	32.35
715.00	1	24,113	82.4	29.17	21.30	−1.27	−1.12	−0.92	26.43
717.00	1	23,581	70.2	37.83	34.78	−0.62	−1.61	−1.54	19.70
719.00	1	80,735	77.7	33.74	32.74	−0.70	−1.23	−1.35	23.48
723.00	1	32,476	87.3	36.20	33.02	−0.69	−1.23	−1.54	22.54
724.00	1	17,381	95.0	39.93	46.30	−0.15	−1.12	−0.61	28.00
725.00	1	16,354	85.3	34.76	32.46	−0.72	−1.41	−1.92	19.29
726.00	1	7,341	87.1	37.02	39.42	−0.42	−1.23	−1.84	21.06
727.00	1	82,238	87.0	33.77	33.65	−0.66	−1.68	−2.22	15.78
728.00	1	4,835	71.9	29.89	21.82	−1.24	−1.84	−2.34	14.02
729.00	1	2,895	67.5	26.74	26.74	−0.98	−1.84	−2.61	12.67
733.00	1	37,173	83.7	22.18	15.32	−1.66	−0.92	−2.22	21.52
734.00	2	335,040	82.4	39.47	38.60	−0.45	−0.69	−1.07	28.95
734.00	3	335,040	82.4	39.47	38.60	−0.45	−0.69	−1.07	28.95
735.00	1	48,271	74.4	39.85	43.53	−0.26	−0.28	−0.36	35.65
736.00	1	69,971	30.3	40.21	42.45	−0.30	0.20	−1.47	33.68
737.00	1	46,202	46.5	37.03	38.68	−0.45	−0.61	−1.92	25.38
738.00	1	63,279	28.6	30.41	27.03	−0.97	−2.01	−2.77	10.51
739.00	1	54,184	34.8	34.50	28.85	−0.88	−1.68	−2.77	13.03
743.00	1	6,689	59.1	28.10	22.22	−1.22	−1.47	−2.46	16.13
744.00	1	675,693	12.2	27.50	20.91	−1.30	−2.01	−2.97	9.56
745.00	1	30,145	31.6	32.57	24.77	−1.08	−2.34	−2.97	7.13
747.00	1	125,310	35.5	28.54	22.12	−1.23	−1.84	−2.46	13.38
748.00	1	188,313	37.2	31.85	33.04	−0.69	−1.41	−2.34	17.25
749.00	1	84,257	60.2	33.29	32.58	−0.71	−1.54	−2.22	16.85
753.00	1	27,712	60.4	35.16	29.46	−0.85	−1.61	−1.68	19.00
754.00	1	227,778	41.8	25.11	19.13	−1.40	−1.54	−2.11	17.38
755.00	1	24,498	85.5	32.09	28.83	−0.88	−1.29	−1.54	22.10
756.00	1	103,077	88.9	25.82	18.45	−1.45	−1.12	−1.23	24.88

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
−0.32	−0.32	34.84	−1.54	−4.62	7.58	Numerical Control Machine Operators
−1.12	−0.69	27.65	−1.29	−2.46	19.59	Misc. Metal, Plastic, Stone, and Glass Working Machine Oper.
−1.54	−1.23	21.23	−1.84	−2.77	13.84	Fabricating Machine Operators, n.e.c.
−1.12	−1.12	24.26	−1.61	−2.61	16.41	Molding and Casting Machine Operators
−1.18	−1.47	21.24	−1.76	−2.22	17.06	Metal Plating Machine Operators
−1.12	−0.52	28.99	−1.54	−2.11	19.27	Heat Treating Equipment Operators
−1.41	−1.76	17.80	−1.47	−3.50	13.32	Miscellaneous Metal and Plastic Processing Machine Operators
−1.18	−1.76	19.02	−1.54	−2.61	16.95	Wood Lathe, Routing and Planing Machine Operators
−1.68	−2.22	12.77	−1.61	−2.77	15.64	Sawing Machine Operators
−1.92	−2.22	11.50	−1.84	−2.77	13.84	Shaping and Joining Machine Operators
−1.76	−2.77	8.03	−2.01	−2.46	13.89	Nailing and Tacking Machine Operators
−0.88	−2.11	17.83	−1.12	−2.97	18.55	Miscellaneous Woodworking Machine Operators
−0.69	−0.92	28.11	−0.74	−2.34	24.55	Printing Machine Operators
−0.69	−0.92	28.11	−0.74	−2.34	24.55	Printing Press Operators
−0.24	0.04	38.05	−0.44	−1.84	29.22	Photoengravers and Lithographers
0.16	−0.74	34.02	0.20	−2.01	33.40	Typesetters and Compositors
−0.48	−1.47	24.91	−0.74	−2.46	23.95	Miscellaneous Printing Machine Operators
−1.68	−1.92	15.09	−2.22	−3.50	7.46	Winding and Twisting Machine Operators
−1.84	−2.46	10.03	−1.68	−2.97	14.17	Knitting, Looping, Taping, and Weaving Machine Operators
−1.41	−2.11	15.02	−1.61	−3.50	12.26	Textile Cutting Machine Operators
−1.76	−2.11	13.20	−2.01	−3.20	10.46	Textile Sewing Machine Operators
−2.01	−2.77	6.69	−2.46	−3.20	6.93	Shoe Machine Operators
−1.54	−1.92	15.83	−2.01	−2.97	11.55	Pressing Machine Operators
−0.88	−1.84	19.98	−1.84	−2.97	12.94	Laundering and Dry Cleaning Machine Operators
−1.35	−2.01	16.11	−1.92	−2.77	13.17	Miscellaneous Textile Machine Operators
−1.35	−1.35	21.32	−2.11	−2.22	14.26	Cementing and Gluing Machine Operators
−1.23	−1.61	19.90	−1.92	−2.61	13.94	Packaging and Filling Machine Operators
−1.23	−1.41	21.45	−1.41	−2.22	19.79	Extruding and Forming Machine Operators
−1.12	−1.18	23.84	−1.07	−1.68	24.96	Mixing and Blending Machine Operators

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
757.00	1	66,169	88.6	29.71	24.77	−1.08	−0.56	−0.04	35.06
758.00	1	20,820	78.1	29.74	29.47	−0.85	−1.35	−1.54	21.66
759.00	1	123,986	85.9	29.83	26.14	−1.01	−1.35	−1.29	22.90
763.00	1	4,453	81.1	22.73	16.36	−1.58	−1.12	−1.61	23.02
764.00	1	8,763	73.0	24.67	19.13	−1.40	−1.54	−1.92	18.32
765.00	1	17,963	36.3	28.09	21.78	−1.25	−1.61	−1.92	17.79
766.00	1	90,147	93.8	40.26	33.65	−0.66	−1.07	−0.52	28.82
768.00	1	38,884	81.4	30.57	26.00	−1.02	−1.61	−1.47	20.03
769.00	1	162,366	72.2	33.61	26.42	−1.00	−1.54	−1.84	18.74
773.00	1	9,454	83.7	37.94	38.60	−0.45	0.32	−0.92	37.32
774.00	1	90,938	48.3	37.98	33.33	−0.68	0.04	−1.84	30.68
777.00	1	550,700	68.5	29.86	25.99	−1.02	−1.23	−1.29	23.77
779.00	1	858,790	70.2	32.84	27.30	−0.96	−1.18	−1.41	23.60
783.00	1	579,843	95.6	41.89	44.80	−0.20	−1.18	−1.02	25.53
784.00	1	24,950	32.7	33.09	29.41	−0.86	−1.61	−2.34	15.75
785.00	4	1,352,911	57.4	35.28	31.96	−0.74	−1.23	−1.48	22.86
785.01	6	1,119,269	56.4	–	–	–	−1.29	−2.46	17.52
785.02	6	199,028	61.6	–	–	–	−1.12	−0.69	27.57
785.03	6	34,614	68.3	–	–	–	−0.24	−1.68	29.38
786.00	1	13,878	65.8	25.56	21.18	−1.28	−1.54	−2.46	15.63
787.00	1	24,452	73.0	33.11	28.83	−0.88	−0.65	−1.23	28.48
789.00	1	41,130	68.2	31.31	27.03	−0.97	−0.61	−1.54	27.28
793.00	1	12,691	57.0	42.13	47.00	−0.12	−0.74	−2.11	23.45
794.00	2	–	65.4	35.00	31.00	−0.78	−1.23	−1.84	21.06
795.00	2	–	65.4	35.00	31.00	−0.78	−1.23	−1.84	21.06
795.00	3	37,243	65.4	35.00	31.00	−0.78	−1.23	−1.84	21.06
796.00	1	569,584	48.3	35.53	33.49	−0.67	−0.78	−1.29	27.19
797.00	1	55,314	66.7	38.38	38.94	−0.44	−0.12	−0.83	34.51
798.00	1	9,587	54.1	41.52	47.62	−0.09	−1.29	−1.92	20.20

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
−0.52	0.04	36.55	−0.88	−0.83	30.50	Separating, Filtering, and Clarifying Machine Operators
−1.35	−1.35	21.32	−1.35	−2.61	18.45	Compressing and Compacting Machine Operators
−1.29	−1.23	22.54	−1.47	−2.22	19.29	Painting and Paint Spraying Machine Operators
−1.12	−1.61	20.47	−1.02	−1.68	25.36	Roasting and Baking Machine Operators, Food
−1.47	−1.68	18.07	−1.68	−3.20	13.08	Washing, Cleaning, and Pickling Machine Operators
−1.18	−1.18	23.56	−1.92	−2.77	13.17	Folding Machine Operators
−1.07	−0.44	29.92	−1.18	−1.47	25.10	Furnace, Kiln, and Oven Operators, Except Food
−1.47	−1.35	20.67	−2.22	−2.34	12.88	Crushing and Grinding Machine Operators
−1.47	−1.68	18.07	−1.76	−2.61	15.24	Slicing and Cutting Machine Operators
0.28	−0.83	33.93	0.44	−1.47	37.82	Motion Picture Projectionists
0.24	−1.35	29.64	−0.16	−2.46	28.51	Photographic Process Machine Operators
−1.12	−1.02	25.07	−1.41	−2.34	19.25	Miscellaneous Machine Operators, n.e.c.
−1.07	−1.12	24.54	−1.54	−2.34	18.23	Machine Operators, Not Specified
−1.18	−0.97	25.18	−1.47	−1.92	20.67	Welders and Cutters
−1.18	−1.84	18.39	−1.84	−2.61	14.61	Solderers and Brazers
−1.06	−1.09	24.83	−1.51	−2.22	18.98	Assemblers
−1.12	−0.97	25.46	−1.61	−2.22	18.23	Assemblers (NSE, Manufacturing)
−1.02	−1.68	20.44	−1.23	−2.46	20.04	Assemblers (NSE, Other)
−0.28	−1.41	26.47	−0.20	−1.92	30.73	Assemblers (SE)
−1.41	−2.11	15.02	−1.84	−3.20	11.85	Hand Cutting and Trimming Occupations
−0.69	−0.92	28.11	−0.61	−2.61	24.31	Hand Molding, Casting, and Forming Occupations
−0.65	−1.23	25.90	−0.56	−2.46	25.32	Hand Painting, Coating, and Decorating Occupations
−0.56	−1.92	20.95	−1.02	−2.46	21.71	Hand Engraving and Printing Occupations
−1.23	−1.54	20.44	−1.29	−2.77	18.15	Hand Grinding and Polishing Occupations
−1.23	−1.54	20.44	−1.29	−2.77	18.15	Miscellaneous Hand Working Occupations
−1.23	−1.54	20.44	−1.29	−2.77	18.15	Miscellaneous Hand Working Occupations
−0.28	−0.65	32.44	−1.29	−2.34	20.19	Production Inspectors, Checkers, and Examiners
0.12	−0.44	36.16	−0.61	−1.92	27.50	Production Testers
−1.02	−1.61	21.01	−1.61	−2.34	17.68	Production Samplers and Weighers

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
799.00	1	109,498	43.7	32.80	25.57	−1.04	−1.41	−2.34	17.25
Transportation and Material Moving Occupations									
	7	4,600,242	90.2	32.25	27.94	−0.96	−1.02	−1.17	26.50
803.00	1	76,814	84.2	37.93	39.66	−0.41	0.08	−0.69	36.66
804.00	2	–	94.3	30.00	23.30	−1.16	−1.07	−1.24	25.27
804.00	5	2,615,667	94.3	30.00	23.30	−1.16	−1.07	−1.24	25.27
804.01	6	45,314	96.2	–	–	–	−1.41	−1.76	20.12
804.02	6	36,232	97.1	–	–	–	−1.61	−1.54	19.70
804.03	6	162,190	97.6	–	–	–	−1.61	−1.76	18.62
804.04	6	294,526	96.1	–	–	–	−1.35	−2.77	15.54
804.05	6	1,165,887	95.0	–	–	–	−1.07	−2.34	19.81
804.06	6	312,352	96.7	–	–	–	−1.07	−2.46	19.17
804.07	6	411,759	91.4	–	–	–	−0.83	−2.77	19.48
804.08	6	5,902	92.6	–	–	–	−0.83	−2.34	21.65
804.09	6	73,508	93.4	–	–	–	−0.97	−2.34	20.57
804.10	6	17,439	89.4	–	–	–	−0.88	−2.34	21.30
804.11	6	5,954	89.0	–	–	–	−0.69	−2.77	20.51
804.12	6	55,488	71.1	–	–	–	−0.61	−2.61	21.98
804.13	6	29,116	91.1	–	–	–	−1.07	−2.77	17.64
805.00	2	–	94.3	30.00	23.30	−1.16	−1.07	−1.24	25.27
806.00	1	133,923	90.5	23.87	17.19	−1.53	−0.52	−1.54	27.92
808.00	1	420,125	51.8	32.07	26.92	−0.98	−0.83	−1.41	26.24
809.00	1	185,204	89.4	28.15	25.22	−1.06	−0.44	−1.68	27.85
813.00	1	40,818	90.0	21.22	16.51	−1.57	−0.65	−2.11	24.11
814.00	1	3,105	94.2	24.89	16.10	−1.60	−1.07	−0.83	27.29
823.00	1	35,514	93.6	42.16	50.00	0.00	−0.44	0.83	40.31
824.00	1	43,746	97.5	41.34	54.88	0.19	−0.40	0.92	41.09
825.00	1	31,007	98.5	40.09	43.24	−0.27	−0.56	0.69	38.69
826.00	1	4,773	94.3	47.01	53.98	0.16	−0.56	0.65	38.48
828.00	1	30,343	96.9	54.48	64.52	0.59	−0.32	−0.32	35.55
829.00	1	20,829	97.0	34.16	38.37	−0.46	−0.88	−0.88	28.55
833.00	1	3,667	98.6	42.61	47.27	−0.11	−0.08	−0.04	38.73
834.00	1	5,929	88.6	27.58	18.56	−1.44	−0.88	−1.12	27.31
843.00	1	21,611	94.0	44.63	50.88	0.03	−0.36	−0.36	35.05
844.00	1	207,638	98.3	50.00	59.26	0.37	−1.29	−0.69	26.31
845.00	1	3,831	99.3	33.62	31.03	−0.78	−1.07	−0.78	27.56
848.00	1	18,516	98.0	36.22	40.82	−0.36	−1.41	−1.18	22.99
849.00	1	76,953	97.4	42.34	46.85	−0.12	−1.35	−0.20	28.33

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
−1.02	−1.92	18.55	−1.76	−2.77	14.47	Graders and Sorters, Except Agricultural
−1.04	−1.09	25.49	−0.72	−1.78	27.79	
0.08	−0.61	34.64	0.08	−1.29	35.85	Supervisors, Motor Vehicle Operators
−1.12	−1.20	23.70	−0.66	−1.92	27.11	Truck Drivers, Heavy
−1.12	−1.20	23.70	−0.66	−1.92	27.11	Truck Drivers
−1.41	−1.84	17.17	−0.65	−2.46	24.64	Truck Drivers (Agr. For., & Fish.)
−1.68	−0.97	22.54	−0.36	−0.69	35.22	Truck Drivers (Mining)
−1.61	−1.35	19.96	−1.29	−1.68	23.24	Truck Drivers (Construction)
−1.35	−1.23	22.23	−0.97	−1.76	25.40	Truck Drivers (Manufacturing)
−1.12	−0.88	26.22	−0.52	−1.54	29.96	Truck Drivers (Trans., Comm. & Util.)
−1.07	−1.54	21.28	−0.88	−1.76	26.16	Truck Drivers (Wholesale)
−0.83	−1.84	20.23	−0.65	−2.77	23.20	Truck Drivers (Retail)
−0.83	−1.84	20.23	−0.48	−2.34	26.58	Truck Drivers (Finance, Insur.)
−0.97	−1.84	19.48	−0.69	−2.46	24.30	Truck Drivers (Bus. & Repair Serv.)
−0.83	−1.76	20.86	−1.47	−2.77	16.70	Truck Drivers (Personal Serv.)
−0.74	−1.29	24.99	−0.32	−2.34	27.86	Truck Drivers (Enter. & Rec. Serv.)
−0.56	−1.92	20.95	−0.65	−2.34	25.24	Truck Drivers (Prof., Related Serv.)
−1.18	−1.68	19.62	−0.16	−2.34	29.11	Truck Drivers (Public Admin.)
−1.12	−1.20	23.70	−0.66	−1.92	27.11	Truck Drivers, Light
−0.48	−1.47	24.91	−0.88	−2.34	23.46	Driver–Sales Workers
−0.65	−1.02	27.57	−1.07	−1.92	23.83	Bus Drivers
−0.44	−1.61	24.07	−0.52	−2.34	26.25	Taxicab Drivers and Chauffeurs
−0.69	−2.11	18.78	−0.40	−2.11	28.26	Parking Lot Attendants
−1.07	−0.78	27.22	−0.97	−0.88	29.52	Motor Transportation Occupations, n.e.c.
−0.48	0.97	44.08	0.28	−0.88	39.35	Railroad Conductors and Yardmasters
−0.44	0.97	44.30	0.12	0.00	42.19	Locomotive Operating Occupations
−0.56	0.69	41.46	−0.12	0.16	41.07	Railroad Brake, Signal, and Switch Operators
−0.52	0.69	41.68	−0.78	0.16	35.83	Rail Vehicle Operators, n.e.c.
−0.36	−0.28	34.94	0.20	−0.97	38.27	Ship Captains and Mates, Except Fishing Boats
−0.92	−0.88	27.28	0.24	−1.29	37.09	Sailors and Deckhands
−0.08	−0.04	38.26	−0.12	−0.12	39.78	Marine Engineers
−0.83	−1.02	26.63	−0.97	−1.76	25.40	Bridge, Lock and Lighthouse Tenders
−0.40	−0.36	34.10	0.16	−0.65	39.46	Supervisors, Material Moving Equipment Operators
−1.35	−0.65	26.81	−0.44	−1.18	32.31	Operating Engineers
−1.07	−0.64	28.33	−1.30	−1.91	22.15	Longshore Equipment Operators
−1.41	−1.18	22.34	−0.44	−1.35	31.51	Hoist and Winch Operators
−1.35	−0.20	30.36	−1.02	−0.28	31.93	Crane and Tower Operators

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	%5+	Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	TSEI
853.00	1	86,712	98.3	37.73	36.70	−0.53	−1.54	−0.78	23.98
855.00	1	54,190	98.9	34.46	33.04	−0.69	−1.76	−1.07	20.90
856.00	1	394,970	93.4	35.16	29.91	−0.83	−1.41	−1.41	21.84
859.00	1	84,357	87.7	26.75	24.30	−1.11	−1.07	−0.78	27.56
Handlers, Equipment Cleaners, Helpers, and Laborers									
	7	4,315,852	80.2	26.70	21.62	−1.30	−1.14	−1.84	22.22
863.00	2	14,111	89.0	26.77	24.53	−1.10	−0.28	−0.61	34.42
864.00	2	17,567	94.6	33.38	32.95	−0.70	−1.29	−1.68	21.40
864.00	3	14,111	89.0	26.77	24.53	−1.10	−0.28	−0.61	34.42
865.00	2	64,946	96.0	29.50	26.32	−1.01	−1.35	−2.01	19.30
865.00	3	17,567	94.6	33.38	32.95	−0.70	−1.29	−1.68	21.40
866.00	2	4,000	87.7	37.86	42.86	−0.28	−0.20	−2.01	28.02
866.00	3	64,946	96.0	29.50	26.32	−1.01	−1.35	−2.01	19.30
867.00	2	2,227	90.1	38.02	32.29	−0.72	−0.83	−0.97	28.42
867.00	3	4,000	87.7	37.86	42.86	−0.28	−0.20	−2.01	28.02
868.00	3	2,227	90.1	38.02	32.29	−0.72	−0.83	−0.97	28.42
869.00	1	892,448	96.5	36.43	33.33	−0.68	−1.12	−1.29	24.60
873.00	2	30,218	77.3	30.80	24.07	−1.12	−1.35	−2.01	19.30
874.00	3	30,218	77.3	30.80	24.07	−1.12	−1.35	−2.01	19.30
875.00	1	52,033	96.7	27.72	28.70	−0.89	−1.61	−1.29	20.94
876.00	1	9,678	97.4	37.26	32.69	−0.71	−0.97	0.61	35.18
877.00	4	867,744	70.1	22.95	16.52	−1.57	−1.02	−2.38	20.00
877.01	6	710,608	71.6	–	–	–	−0.97	−1.29	25.76
877.02	6	157,136	63.4	–	–	–	−1.02	−2.46	19.56
878.00	1	75,240	66.4	36.70	35.45	−0.59	−1.41	−1.84	19.72
883.00	1	493,522	89.1	26.86	19.94	−1.35	−0.88	−1.54	25.25
885.00	1	227,576	89.1	21.44	15.13	−1.67	−1.18	−2.22	19.58
887.00	1	186,810	87.3	19.38	12.89	−1.85	−1.35	−2.22	18.29
888.00	1	291,149	35.3	22.05	13.76	−1.78	−1.47	−2.46	16.13
889.00	4	1,086,583	78.4	23.95	19.74	−1.37	−1.18	−1.78	21.75
889.01	6	30,695	77.9	–	–	–	−1.41	−1.92	19.29
889.02	6	16,665	96.4	–	–	–	−1.41	−2.61	15.90
889.04	6	459,409	73.5	–	–	–	−1.47	−2.77	14.60
889.05	6	115,857	89.9	–	–	–	−0.97	−2.34	20.57

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
−1.54	−0.78	24.77	−1.29	−1.18	25.59	Excavating and Loading Machine Operators
−1.76	−1.07	21.36	−1.12	−1.12	27.15	Grader, Dozer, and Scraper Operators
−1.47	−1.41	20.19	−1.18	−1.76	23.77	Industrial Truck and Tractor Equipment Operators
−1.07	−0.64	28.33	−1.30	−1.91	22.15	Miscellaneous Material Moving Equipment Operators
−1.12	−1.74	19.84	−1.09	−2.31	22.22	
−0.32	−0.56	32.90	0.04	−0.92	37.26	Supervisors: Handlers, Equipment Cleaners, and Laborers, n.e.c.
−1.29	−1.76	18.43	−1.02	−1.35	26.91	Helpers, Mechanics and Repairers
−0.32	−0.56	32.90	0.04	−0.92	37.26	Supervisors, Handlers, Equipment Cleaners, and Laborers, n.e.c.
−1.35	−2.01	16.11	−0.97	−2.34	22.70	Helpers, Construction Trades
−1.29	−1.76	18.43	−1.02	−1.35	26.91	Helpers, Mechanics and Repairers
−0.32	−1.92	22.24	0.88	−4.62	26.59	Helpers, Surveyor
−1.35	−2.01	16.11	−0.97	−2.34	22.70	Helpers, Construction Trades
−1.18	−0.92	25.56	2.61	−1.54	54.59	Helpers, Extractive Occupations
−0.32	−1.92	22.24	0.88	−4.62	26.59	Helpers, Surveyor
−1.18	−0.92	25.56	2.61	−1.54	54.59	Helpers, Extractive Occupations
−1.18	−1.29	22.68	−0.74	−1.76	27.24	Construction Laborers
−1.35	−1.84	17.49	−1.41	−2.77	17.20	Production Helpers
−1.35	−1.84	17.49	−1.41	−2.77	17.20	Production Helpers
−1.68	−1.29	20.04	−0.74	−1.41	28.86	Garbage Collectors
−1.02	0.61	38.37	0.44	−0.20	43.79	Stevedores
−0.95	−2.24	16.45	−1.12	−2.77	19.51	Stock Handlers and Baggers
−0.97	−2.46	14.57	−1.07	−2.77	19.87	Stock Handlers and Baggers (Retail)
−0.92	−1.61	21.52	−1.29	−2.61	18.92	Stock Handlers and Baggers (Other)
−1.35	−1.68	18.72	−1.68	−2.46	16.51	Machine Feeders and Offbearers
−0.88	−1.47	22.83	−0.83	−2.01	25.33	Freight, Stock, and Material Movers, Hand, n.e.c.
−1.23	−2.22	15.12	−0.92	−2.46	22.49	Garage and Service Station Related Occupations
−1.35	−2.22	14.51	−1.29	−2.22	20.73	Vehicle Washers and Equipment Cleaners
−1.23	−2.11	15.95	−1.68	−2.77	15.07	Hand Packers and Packagers
−1.15	−1.64	20.08	−1.38	−2.46	18.92	Laborers, Except Construction
−1.41	−2.11	15.02	−1.47	−2.77	16.70	Laborers, Exc. Construction (Agr. For., & Fish.)
−1.41	−0.88	24.72	−1.02	−1.29	27.19	Laborers, Exc. Construction (Mining)
−1.41	−1.54	19.51	−1.68	−2.46	16.51	Laborers, Exc. Construction (Manufacturing)
−0.97	−1.23	24.21	−0.97	−1.92	24.62	Laborers, Exc. Construction (Trans., Comm. & Util.)

continued

Appendix—

Census Code	FLAG	Number of Occup. Incumbents in 1990	% Male	Nakao-Treas Prestige Scores: Prestige Score	Nakao-Treas Prestige Scores: %5+	Nakao-Treas Prestige Scores: Logit %5+	1980/1990-basis: Total: Logit (% 1 Yr. Col. +)	1980/1990-basis: Total: Logit (% $14.30/hour +)	1980/1990-basis: Total: TSEI
889.06	6	161,490	84.2	–	–	–	−1.12	−2.46	18.78
889.07	6	140,230	76.5	–	–	–	−0.97	−2.22	21.15
889.08	6	15,317	84.7	–	–	–	−1.07	−2.34	19.81
889.09	6	49,778	82.0	–	–	–	−1.07	−2.46	19.17
889.10	6	14,181	67.9	–	–	–	−1.29	−2.34	18.16
889.11	6	10,824	86.2	–	–	–	−0.88	−1.92	23.34
889.12	6	39,542	67.5	–	–	–	−0.65	−2.01	24.60
889.13	6	32,595	85.0	–	–	–	−0.78	−1.92	24.04

Guide to Using this Appendix

This appendix may be used with the 1980 census occupational classification, the 1990 cation which splits some 1990–basis occupation categories by industry and/or class of worker

	1980 Classification	1990 Classification, No Split Occupation Categories
Flag = 1	Use	Use
Flag = 2	Use	X
Flag = 3	X	Use
Flag = 4	Use	Use
Flag = 5	X	Use
Flag = 6	X	X
Flag = 7	X	X
Flag = 8	X	X

Continued

SEIs and Component Data						
Males			Females			
Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	MSEI	Logit (% 1 Yr. Col. +)	Logit (% $14.30/ hour +)	FSEI	Occupational Title
−1.07	−1.92	18.28	−1.41	−2.61	17.97	Laborers, Exc. Construction (Wholesale)
−0.92	−1.92	19.06	−1.18	−2.77	19.03	Laborers, Exc. Construction (Retail)
−1.18	−1.68	19.62	−0.56	−2.34	25.92	Laborers, Exc. Construction (Finance, Insur.)
−1.07	−2.01	17.56	−0.92	−2.46	22.49	Laborers, Exc. Construction (Bus. & Repair Serv.)
−1.23	−2.34	14.21	−1.35	−2.22	20.27	Laborers, Exc. Construction (Personal Serv.)
−0.92	−1.84	19.73	−0.44	−2.34	26.90	Laborers, Exc. Construction (Enter. & Rec. Serv.)
−0.61	−1.84	21.39	−0.69	−2.46	24.30	Laborers, Exc. Construction (Prof., Related Serv.)
−0.78	−1.92	19.80	−0.61	−2.34	25.58	Laborers, Exc. Construction (Public Admin.)

census occupational classification, or a revised version of the 1990 census occupational classifi-classification.

1990 Classification, With Split Occupation Categories	
Use	Line identical in 1980 and 1990 classifications and not involved in splits.
X	Line unique to 1980 classification and not involved in splits.
Use	Line unique to 1990 classification and not involved in splits.
X	Line identical in 1980 and 1990 classifications; should be omitted if splitting.
X	Line unique to 1990 classification; should be omitted if splitting.
Use	Split category, only to be used with 1990 classification.
X	Major categories of 1990–basis occupations (13 categories)
X	Major categories of 1990–basis occupations (6 categories)

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