## Appendix S

# Social Class and Workers' Rent, 1983-2001

# Further Details of the Data Construction Procedures and the Coding of the EGP Class Schema

Drawn from the monthly Current Populations Surveys (hereafter, CPS), the merged Outgoing Rotation Groups (hereafter, ORG) are compiled annually by the US Bureau of Labor Statistics (BLS). Each household entering the CPS is interviewed for 4 months, then ignored for 8 months, and then interviewed again for 4 more months. At the end of each of the four-month interview periods, households rotate out of the sample, returning after the first rotation but then leaving the sample permanently at the end of sixteen months. Individuals in the fourth month of each rotation group are designated as the "outgoing rotation group" and asked additional questions during the interview (such as their usual weekly earnings and usual weekly hours). Each year, the Bureau of Labor Statistics gathers together the data from all months, and creates the Merged Outgoing Rotation Group File. A household appears only once in any file year, but may reappear in the following year.

There are two advantages of using the ORG instead of the March CPS Annual Demographic supplement: (1) In each year, the ORG sample is drawn from all twelve months and is therefore three times as large as the March CPS sample (that is, 1/4 the size of the March CPS in each month but over a total of 12 months); (2) Unlike the March CPS, the ORG includes information on whether or not individuals are members of a labor union. The main limitation of the ORG data relative to the March CPS is that a lower top-code is imposed on the earnings variables (see below).

## **Choice of Time Period for Analysis**

We analyze the individual-level ORG data from 1983 through 2001. Unlike the March CPS, which asks about prior year earnings and labor force participation, the data in ORG refer to the interview year. As a result, we analyze earnings data from 1983 through 2001.

Why start with the 1983 ORG? The occupation coding from 1979 to 1982 is based on the 1970 Census Occupation Classification (hereafter, COC). And from 1983 onward, the occupation coding is based on the 1980 COC (with some minor changes in the early 1990s for the slightly revised 1990 COC). It is not possible to reconcile the 1970 and 1980 COCs without introducing substantial distortions into the individual-level data (see Technical Paper 59, US Department of Commerce, Bureau of the Census), especially when constructing our class schema (since some 1970 occupations are split across several new 1980 occupations that, by our coding, are placed within separate EGP classes).

For example, there is no separate category for supervisors in the 1970 COC, as supervisors and regular workers are typically categorized together in a single omnibus occupation (e.g., supervisors of stevedores are classified simply as stevedores; see Technical Paper 59, US Department of Commerce, Bureau of the Census). This represented a serious problem for our class schema, since, as shown below, approximately 20% of the individuals in Class II are supervisors of non-manual employees, and approximately 80% of the individuals in Class V are supervisors of manual workers. Thus, since we wanted to adopt an explicit social class definition of alternative occupations, we began analysis with the 1983 CPS, which is the

first year in which the 1980 COC is utilized.

# **Exclusions for the Construction of the Baseline Analysis Sample**

The sample size of the ORG data varies throughout the time period. As of 2001, the smallest sample size is 277,856 (ORG year 1996) and the largest sample is 348,521 (ORG year 1983). We implemented a scheme to limit the sample for our baseline analysis:

- 1. Age: We first limited the sample to all individuals between (and including) the ages 18 and 64. In 2001, for example, this age exclusion resulted in a sample of 241,869 individuals.
- 2. Work status: We then limited the sample to those who reported usual work hours of 35 or more per week (working full-time) and not working in the Armed Forces. In 2001, for example, this full-time work status exclusion resulted in a sample of 142,589 individuals.
- 3. Earnings: We then limited the sample to those who reported average weekly earnings of \$50 or more.<sup>2</sup> In 2001, for example, this earnings exclusion resulted in a sample of 129,854 individuals.
- 4. EGP class: We finally limited the sample to those who are employed in one of the 7 EGP classes described in the next section.<sup>3</sup> In 2001, for example, this class exclusion resulted in a sample of 128,833 individuals.

Over the entire 1983 to 2001 time period, our baseline analysis sample includes 2,508,500 individuals.

# Constructing Our Own Coding of the EGP Class Schema

For our measure of social class, we implemented our own coding of what has become the dominant schema in the literature – variously referred to as the EGP schema (after Erikson, Goldthorpe, Portacarero 1979), Goldthorpe's class schema (after Goldthorpe 1987), or the CASMIN coding (after Goldthorpe and Müller 1982) – which has been effectively deployed in a wide variety of substantive contexts, most prominently in studies of social mobility (e.g., Erikson and Goldthorpe 1992; Hout 1989) and voting (see Heath, Jowell, and Curtice 1985; Manza and Brooks 1999).

The following excerpts from *The Constant Flux* (Erikson and Goldthorpe 1992:41-42) describe each of the EGP classes.<sup>4</sup> Following most of the excerpts are examples, or other

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<sup>&</sup>lt;sup>1</sup> Unlike the March CPS, the ORG data do not include information on how many weeks in the past year individuals worked. Thus, there is no way to construct a full-year sample.

<sup>&</sup>lt;sup>2</sup> ORG data do not provide earnings data for self-employed individuals.

<sup>&</sup>lt;sup>3</sup> Our exclusion of those not in the EGP classes I, II, IIIa, IIIb, V, VI, and VIIa means that we exclude: (1) all of those in farming and other primary occupations (classes IVc and VIIb), (2) those who are self-employed small proprietors (IVa and IVb), (3) and those who are in occupations assigned to classes IIIa, IIIb, V, VI, and VIIa, but who report being self-employed. These exclusions match the typical approach in labor economics, wherein all farmers and self-employed workers are excluded from analysis.

<sup>&</sup>lt;sup>4</sup> We were unable to use employer size in our coding because the ORG do not have employer-size variables. This limitation only effects managers, who we then had to assign to class I. From

information, intended to give the reader a sense of each class. Our detailed coding of the unit-level 1980/1990 COC into each class is provided in Table S3 (presented at the end of the appendix).

Class I. "Higher-grade professionals, administrators, and officials; managers in large industrial establishments; large proprietors." This class includes: (1) professional occupations regardless of employer size and (2) managers regardless of employer size (excluding some service managers; see discussion below).<sup>5</sup>

Class II. "Lower-grade professionals, administrators, and officials; higher-grade technicians; managers in small industrial establishments; supervisors of non-manual employees." This class includes: (1) Occupations that are considered white collar but are not as esteemed as what are normally thought of as the professions (e.g., nurses and medical technicians); (2) private or publicly employed managers; (3) some service managers regardless of employer size; (4) supervisors of non-manual workers (e.g., supervisors of financial records processing).

*Class IIIa.* "Routine non-manual employees, higher-grade (administration and commerce)." Example: Secretaries.

*Class IIIb.* "Routine non-manual employees, lower-grade (sales and service)." Examples: Sales workers (retail and personal), attendants at amusement and recreation facilities.

*Class IVa.* "Small proprietors, artisans, etc., with employees." (This class is excluded from our analyses of labor market earnings.)

*Class IVb.* "Small proprietors, artisans, etc., without employees." (This class is excluded from our analyses of labor market earnings.)

*Class IVc.* "Farmers and small-holders; other self-employed workers in primary production." (This class is excluded from our analyses of labor market earnings.)

Class V. "Lower-grade technicians; supervisors of manual workers." Examples: Dental hygienists, supervisors of material moving equipment operators.

*Class VI.* "Skilled manual workers." Examples: Mining machine operators, tool and die makers.<sup>6</sup>

*Class VIIa.* "Semi- and unskilled manual workers (not in agriculture)." Example: Lathe and turning machine operators, textile sewing machine operators.

*Class VIIb.* "Agricultural and other workers in primary production." (This class is excluded from our analyses of labor market earnings.)

looking at the March CPS, we determined that approximately 39 percent of those managers that Goldthorpe splits across classes I and II worked for firms with less than 25 workers. It may therefore be that our class I contains more lower-level managers than might be justified by the EGP schema. On the other hand, Goldthorpe theoretical schema relies upon the number of individuals supervised rather than simply the's employer size. In this sense, the CPS simply cannot make the fine distinction that we would wish to have.

<sup>&</sup>lt;sup>5</sup> We are unable to include in Class I Goldthorpe's large proprietors (e.g., individuals of any occupation who employ 25 or more employees) because ORG do not have employer-size variables.

<sup>&</sup>lt;sup>6</sup> Class VI includes occupations that are broadly classified as "Precision production, craft, and repair occupations" in the COC; however, there are numerous exceptions.

<sup>&</sup>lt;sup>7</sup> Class VIIa includes occupations that are broadly classified as "Operators, fabricators, and laborers" in the COC; however, there are numerous exceptions.

Generating the EGP Class Schema with 1980/1990 Occupational Codes. Our decisions regarding the mapping of occupations into classes were based on three primary sources: (1) Goldthorpe and Heath (1992); (2) Goldthorpe and Müller (1982); (3) The Dictionary of Occupational Titles (U.S. Department of Labor 1991; hereafter "DOT") and ONet (U.S. Department of Labor 1998) in conjunction with Goldthorpe (2000). In this ordering, the first source was given the most weight in our decisions, with the second and third following in declining weight.

Goldthorpe and Heath (1992) map occupations from Britain's OPCS Standard Occupational Classification system into Goldthorpe's latest coding of the EGP class schema. As the most recent and authoritative source, it was almost always followed when there was a close match between the British OPCS coding of an occupational title and a corresponding occupational title in the U.S. 1980/1990 COC coding.

Despite wanting to follow Goldthorpe and Heath (1992) as closely as possible, we decided to go against their classification where we felt that US-UK differences were obvious. For example, we moved "librarians" from Class II to Class I. They have a higher average income in the US compared to the somewhat similar occupation "archivists", which Goldthorpe classified as Class I. Also, Abbot (1988) maintains that librarians in the U.S. are professionals, and we feel that the professions are, to some extent, what Class I defines.

Goldthorpe and Heath (1992) have a number of occupations that are classified as Class I if they are self-employed, but in a lower class for those who are privately/publicly employed (e.g., nurses). We eliminated this route to Class I classification because ORG do not provide employer-size information.

Many occupations remained to be classified after the close matches between Goldthorpe and Heath (1992) and the 1980/90 COC codes had been exhausted. We then proceeded to consider Goldthorpe and Müller (1982) because it was used for the 1960 COC in the U.S. We were hesitant at first, since the codes for the 1980 COC were quite different than those of the 1960 COC, but we found that there was strong agreement between Goldthorpe and Heath (1992) and Goldthorpe and Müller (1982) when occupations were present in both the 1960 COC and the 1990 British OPCS coding system. In many cases, our initial reaction was to reject some of the old Goldthorpe and Müller classifications because they were contrary to our previous beliefs. However, the DOT and ONet seemed to confirm the Goldthorpe and Müller (1982) schema even despite our beliefs. For example, we believed that the occupation "crane operator", which was not in Goldthorpe and Heath (1992), but was in Goldthorpe and Müller (1982) (as "Cranemen, derrickmen, and hoistmen") should be placed in a "higher" class than it is in Goldthorpe and Müller (1982), because we were familiar with examples of highly-paid and well-trained crane operators. But, the DOT and ONet indicated that in general, the characteristics of this job have not changed much over the past 40 years, and hence that the occupation should be coded as it was for the 1960 COC scheme (i.e., in class VI).

There was, however, one serious limitation to the Goldthorpe and Müller (1982) classification. Presumably because of the relatively coarse nature of the 1960 COC, Goldthorpe and Müller (1982) employed a collapsed 7-class representation of the full 11-class EGP schema. And while we only discuss 7 classes here, our classification is based on the complete 11-class EGP schema (that is, we drop four classes – IVa, IVb, IVc, and VIIb – from consideration in the analysis of earnings). The collapsed 7-class schema of Goldthorpe and Müller (1982) is problematic because its Class I corresponds to Classes I & II in the 11-class EGP schema that we outline above. Thus, even after our scrupulous mining of both Goldthorpe and Müller (1982)

and Goldthorpe and Heath (1992), cross-checked against the DOT and ONet databases, many occupations were still not classified.

To classify these remaining occupations, we relied on Goldthorpe's latest justification for the EGP class schema (Goldthorpe 2000), in which he says that class positions are determined by employment relations. Working within the labor market tradition, he makes categories based on the intersection of two variables: (1) the difficulty employers have in assessing incumbents' performance through monitoring and (2) the job specificity of incumbents' skills and assets. If the work done by an incumbent is easy to monitor and requires low asset specificity, then the employment relationship is described as a labor contract. Classes IIIb, VI, VIIa, and VIIb are made up of occupations in which the employment relationship is a labor contract. If the performance of an occupation's incumbents is difficult to gauge through monitoring and incumbents have high asset specificity, then the employment relationship is described as a service relationship. Classes I and II are composed of people whose employment relationship is a service relationship. The other two combinations are mixed. The remaining classes in his schema fit into the two mixed categories. Class V occupations are characterized by high specificity of human assets and low difficulty of monitoring while Class IIIa occupations are characterized by low specificity of human assets and high difficulty of monitoring.

We used the DOT occupation descriptions to obtain our own subjective measure of difficulty of monitoring. DOT Specific Vocational Preparation (SVP) ratings were used as a measure of specificity of job skills. However, because occupational specificity may sometimes be a poor measure of job specificity, we supplemented the SVP ratings with job descriptions in assessing specificity of skills. Generally speaking, this procedure placed those occupations under the general census classifications "Precision, production, craft and repair occupations" in class VI and those under "Operators, fabricators, and laborers" in class VIIa.

After these three steps – consideration of Goldthorpe and Heath (1992), the Goldthorpe and Müller (1982), and then DOT and ONet based on our reading of Goldthorpe (2000), we then compared the mean and median of income and education for each occupation to the corresponding values to which they were initially assigned.<sup>8</sup> For occupations with large deviations from the class-specific means, we then consulted the detailed occupation descriptions in the DOT for a final judgment. Only a handful of occupations were reassigned in this final state. Examples include the case of librarians, as described above.

Finally, we appealed to John Goldthorpe for his comments on the construction of our EGP class schema. First, he suggested that we examine experience-earnings profiles of the borderline occupations, as these he felt accurately capture the different employment relations typical of alternative EGP classes. Second, he made four specific suggestions: (1) move technicians (occ80=213, 214, 215, 235), fire prevention (occ80=416, 417), and production coordinators (occ80=363) from Class II to Class V; (2) move electrical and electronic equipment repairers (occ80=523, 525) from Class VI to Class V; (3) move health record technicians (occ80=205) from Class IIIa to Class V; (4) move cashiers (occ80=276) from Class IIIb to Class IIIa. After further consulting the DOT and also using a larger sample drawn from ORG to

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<sup>&</sup>lt;sup>8</sup> It may seem inappropriate to make decisions based in any way on income, which is frequently the dependent variable in our work. However, this final step convinced us that our final revisions to the coding were made necessary by national differences in occupations between the U.S. and U.K; hence, unusual income patterns merely triggered our recognition.

generate experience-earnings profiles, we implemented the first two of his suggestions, but not the last two.<sup>9</sup> Our final coding of the class schema is presented in the table at the end of this data appendix.

# **Constructing Uniform Variables Across the Entire Merged Data File**

Constructing Uniform Education Variables. The questions by which educational attainment were obtained changed in 1992. We followed Jaeger (1997) in creating uniform educational attainment variables.

Race/Ethinicity. We create a four-category race variable: (1) white, non-Hispanic, which includes those who self-identified as white for the race question but who did not self-identify as Hispanic for the ethnicity question (2) black, which includes all who self-identified as black for the race question regardless of whether or not they self-identified as non-Hispanic or Hispanic for the ethnicity question, (3) Hispanic, which includes those who self-identified as either white or other for the race question and who self-identified as Hispanic for the ethnicity question, and (4), other non-Hispanic, which includes those who self-identified as other for the race question (and, hence, primarily Asian) but who did not self-identify as Hispanic for the ethnicity question. All missing data for race was imputed by the Census bureau with its hot deck procedure, and we accepted all such imputation. However, for the Hispanic ethnicity variable, a small proportion of respondents had missing data or were coded as don't know (from a low of .27 percent in 1995 to a high of 1.94 percent in 1993 for our analytic sample of our full-time workers). We recoded these values to zero, and hence the white, non-Hispanic and other, non-Hispanic categories may contain a few Hispanic respondents. We did, however, experiment with alternative codings of race/ethnicity, and the results of consequence for the paper remained virtually identical.

*Marriage*. Our marriage dummy variable is coded as 1 for those who have every been married, and hence does not differentiate between those currently married, separated, divorced, or widowed. This decision was made for consistency with the labor economics literature on industry rents (e.g., Krueger and Summers 1988).

*Industry*. The National Bureau of Economic Research created a 2-digit detailed industry classification code, DIND, that is consistent for all the years covered in the ORG data. We used this variable in generating our industry dummy variables. One category of DIND, the unspecified metal industry, is very small. When we broke down the sample by class, no observations were in this industry in 13 years in Class I, 15 years in Class II, 11 years in Class IIIa, all years in Class IIIb, 16 years in Class V, 7 years in Class VI, and 4 years in Class VIIa. After comparing the mean earnings for all observations of this industry with that of the primary metal industry and fabricated metal industry, we decided to merge the unspecified metal industry with the fabricated metal industry in our analysis.

Income and Earnings: Adjustments for Inflation. The earnings variable we analyzed

felt we should consider moving.

<sup>&</sup>lt;sup>9</sup> We do not mean to imply that John Goldthorpe has endorsed our class schema, and indeed he urged us to feel free to make whatever decisions we thought were appropriate in the US context. However, we are tremendously grateful for his wise counsel, and extraordinarily impressed at his ability to pick out just a few occupations that rightfully should have been moved into Class V. And, of course, it was further heartening that he did not find many more occupations that he also

(EARNWKE)<sup>10</sup> was converted to constant 2000 dollars using the Bureau of Labor Statistics' Personal Consumption Expenditures Deflator (PCED), which is now favored to traditional CPI-adjustment. See <a href="http://www.bea.doc.gov/bea/dn/nipaweb/SelectedTables.asp">http://www.bea.doc.gov/bea/dn/nipaweb/SelectedTables.asp</a>, and in particular Table 7.4 which contains the deflator.

Income and Earnings: Procedures to Deal with Top-Codes. To protect the anonymity of respondents, the Bureau of Labor Statistics assigns top-codes to earnings variables. Because three top codes are used for the weekly earnings variable from 1983 through 2001, in order to generate a uniform dataset, we imposed on all years the lowest top-code for each source of income that we analyze. That is, for earnings we impose the common top-code of \$1,368 (which is the nominal 1988 ORG top-code of \$999 in 2000 dollars) on all years. For example, for the 1983 ORG there were a total of 134,668 full-time workers with positive earnings of at least \$50/week. The original top-code in this year was \$1,618 in 2000 dollars (equivalent to the nominal 1983 ORG top-code of \$999). Of these 134,668 workers, 3,142 had earnings at the original top-code, and we assigned an additional 1,788 respondents to the common top-code because they reported wage and salary income between \$1,368 and \$1,618. As a percentage of the sample over all years, 5.42 percent of workers are at the common top-code (135,591 of 2,508,500 respondents).

We then calculated yearly multipliers, using a "Pareto imputation" production (see Klein 1962:150-4). In short, Vilfredo Pareto long ago asserted that there is negative linear relationship between the log of income and the log percentage of units (e.g., persons, households) in excess of that income, such that:

$$\log P(y) = \log A - \alpha \log y$$

where P(y) is the percentage of units with income in excess of income level y, and where A and  $\alpha$  are intercept and slope parameters from the estimated regression of log P(y) on

<sup>&</sup>lt;sup>10</sup> EARNWKE is the weekly earnings variable compiled for the NBER release of the ORG data. For hourly workers, EARNWKE is the product of hourly wage and usual hours worked per week; for weekly workers, EARNWKE is self-reported earnings per week including overtime payment, tips, and commissions. We also used, for our regression models, the weight variable EARNWT. See CPS Labor Extracts (Apr 2002) for detailed description of the two variables. <sup>11</sup> The three nominal top codes are \$999 (1983-1988), \$1,923 (1989-1997), and \$2,884 (1998-2001).

<sup>&</sup>lt;sup>12</sup> From our reading of the literature, it does not appear that the changing top-codes are handled with sufficient care. Often the top-coded values are simply multiplied by a scalar. Or, in other cases, the issue is side-stepped by the use of median regression or by truncating the data. One possible criticism of our procedure is that we throw away data by replacing reported values for some years with the lower imposed top-coded values. We have sought consistency across years, and we believe that our procedure is the best at achieving consistency without truncating the data and while allowing for regressions that estimate means.

<sup>&</sup>lt;sup>13</sup> We compared the number top-coded originally and the number top-coded with the imposed lowest top-code. Before 1988, the majority of workers at the imposed common top-code were originally top-coded. However, after 1988, less than a third (less than 20% in many years) of workers at the imposed common top-code were top-coded on the original earnings variable.

log(y). This relationship can be used to calculate the mean income of all units above a certain income level:

$$mean(y_0) = \frac{\alpha y_0}{\alpha - 1}$$

where  $mean(y_0)$  is the Pareto-calculated mean of income among those whose income is greater than  $y_0$ , and  $\alpha$  is the parameter of the distribution as calculated above.

We use Pareto's hypothesized association to impute mean wage and salary income among those above the top-code. We do so separately for each year and calculated a multiplier, which is the imputed mean divided by the imputed common top-code (which is akin to simply substituting the imputed value for the top-coded respondents). Table S1 shows the number and percentage of respondents at the common imposed top-code and calculated multiplier for each year. These multiplier values are consistent with the ranges of multipliers utilized by others (see Katz and Autor, 1999).

Table S1. Respondents Top-Coded in Each Year and the Pareto-Calculated Multiplier

Year	Number of Respondents at the (Imposed) Common Top-Code	Percentage of Respondents at the (Imposed) Common Top-Code	Pareto-calculated Top- Code Multiplier
1983	4936	3.579	1.431
1984	5507	3.911	1.442
1985	5726	3.923	1.42
1986	6423	4.499	1.459
1987	6994	4.898	1.489
1988	7276	5.444	1.568
1989	5741	4.177	1.416
1990	6825	4.697	1.428
1991	6761	4.832	1.443
1992	6924	4.991	1.475
1993	7499	5.556	1.492
1994	6938	5.377	1.482
1995	7553	5.85	1.515
1996	6198	5.584	1.493
1997	6976	6.112	1.53
1998	7934	6.903	1.541
1999	9304	7.892	1.601
2000	9686	8.277	1.68
2001	11062	8.902	1.72

**Procedures to Resolve 1992 Changes in the COC.** The ORG occupation classification system changed slightly in 1992, in accordance to the Census Bureau switch from the 1980 to the 1990 COC. There were few changes, and for the most part they did not pose a problem in

the construction of our class schema. We merged and split categories as others have done (e.g., Hauser and Warren 1997). However, the introduction of two new managerial occupations was of particular importance for the class schema.

The 1990 COC introduces two new management occupational categories. The category "managers, not elsewhere classified" (hereafter "n.e.c. managers") is available over the entire 1983-2001 period. However, from 1992 onwards the occupation categories "managers, food serving and lodging establishments" (hereafter "f.s.l. managers") and "managers, service organizations, n.e.c." (hereafter "s.o. managers") were added to the 1990 COC and hence first employed in ORG in 1992. By looking at the size, mean education, and mean income of f.s.l. and s.o. managers alongside changes before and after 1992 in the size, mean education, and mean income of n.e.c. managers, we concluded that the two new management occupation classifications were formerly grouped with n.e.c. managers. Thus, we performed the following allocation scheme over the entire time series in order to split f.s.l and s.o. managers (who belong in Class II) from n.e.c. managers who belong in Class I.

The allocation strategy we adopted proceeded in 2 steps:

Step 1. Limiting the sample to cases for which the variable of interest was relevant, we performed a logistic regression where the outcome variable was the dichotomous variable for f.s.l. managers to be allocated (e.g., f.s.l. manager=1 instead of f.s.l. manager=0). For the entire time period, we allocated a value of 1 to those observations with the predicted values from the logistic regression model above a threshold and 0 to all others. The threshold was determined by the average percentage of cases in years for which the outcome is observed. In other words, since f.s.l. managers account for 13.87% of those who were f.s.l. managers, s.o. managers, or n.e.c. managers between 1992 and 2001, we allocated the 13.87% of relevant observations that had the highest predicted values from the logistic regression. The predictor variables included 45 industry dummy variables, education and its square, experience, its square, and its cube, a gender dummy variable, a black dummy variable, a dummy variable for other races, three region dummy variables, along with interactions between gender and marital status, education (and its square), and experience (and its square and cube).

Step 2. Excluding observations that were allocated as f.s.l. managers from step 1, we performed a second logistic regression where the outcome variable was the dichotomous variable for s.o. managers to be allocated (e.g., s.o. manager=1 instead of s.o. manager=0). The allocation procedure is similar to that in step 1. We allocated the 8.08% of relevant observations that had the highest predicted values from the logistic regression to be s.o. managers, because s.o. managers account for 8.08% of those who were f.s.l. managers, s.o. managers, or n.e.c. managers between 1992 and 2001. The independent variables are the same as described in step 1.

To estimate the relative validity of this allocation procedure, we compared the allocated values to the original values over the years that both the original and allocated variables were available. As shown in Table S2, the procedure was largely successful. For example, we found that 77% of those people allocated to the status of f.s.l. manager over the 1992-2001 period were actually coded as f.s.l. managers in the original data.

Table S2. Percentages of Allocated Values that Match Observed Values in Years that Both Observed and Allocated Values are Available

% of Allocated Values that Would Match Observed Values if

% of Allocations that Match Observed Values After

	Allocations were Purely Random <sup>1</sup>	Employing Our Allocation Scheme
f.s.l. managers	14.21	76.52
s.o. managers	8.69	70.30
n.e.c. managers	78.09	93.14

Note: Purely random allocation is a procedure in which we first randomly arranged the order of the observations, then allocated the top 13.87% to be f.s.l. managers, the next 8.08% to be s.o. managers, and the rest to be n.e.c. managers.

Using two separate logistic regressions to allocate managerial status has a potential problem, since among all individuals reported as n.e.c. managers, individuals could be allocated to a status as an f.s.l. manager *and* as an s.o. manager. Our sequencing of the allocation procedure allocated f.s.l. managers first and then s.o. managers to overcome this problem. An alternative way to solve this problem is to allocate the observations based on a multinomial logistic regression model. We tried this method, but it did not produce an allocation that matched the observed data as well as our two-step procedure. Moreover, running two logistic regressions separately, we found that no individual (out of those that were allocated to either f.s.l. manager or s.o. manager) would have been allocated to both manager types if given the chance. Finally, for our purposes, it does not really matter which of the two managerial occupations the observations are allocated to because f.s.l. managers and s.o. managers are both in Class II.

Table S3 shows how our coding of the EGP class schema is related to the 1980 and 1990 COC codes. It also lists the number of respondents included in each category in the first and last year of our time series, namely 1983 and 2001, as an example of the distribution of observations in ORG by Class and by occupation.

Table S3. EGP Class Schema, 1980 and 1990 COC Codes, and ORG Distribution

	1980 COC	<sup>1</sup> 1990 COC <sup>1</sup>	N <sub>1983</sub> <sup>2</sup> (134,668)	N <sub>2001</sub> <sup>2</sup> (128,833)
Class I			14.24	19.71
Legislators	3	3	4	0
Chief exec., general administration, public administration	4	4	31	28
Administrators and officials, public administration	5	5	827	1035
Administrators, protective services	6	6	111	84
Financial managers <sup>3</sup>	7	7	622	919
Personnel and labor relations managers <sup>3</sup>	8	8	207	291
Purchasing managers <sup>3</sup>	9	9	145	177
Managers, marketing, advertising; and public relations <sup>3</sup>	13	13	659	918
Administrators, education and related fields <sup>3</sup>	14	14	769	980
Managers, medicine and health <sup>3</sup>	15	15	162	912
Managers and administrators, n.e.c.	19	22	5491	7500
Accountants and auditors	23	23	1712	1825
Underwriters	24	24	56	133
Other financial officers	25	25	887	980

Management analysts	26	26	127	337
Architects	43	43	122	194
Aerospace engineers	44	44	138	90
Metallurgical and materials	45	45	45	31
Mining engineers	46	46	22	4
Petroleum engineers	47	47	62	27
Chemical engineers	48	48	133	85
Nuclear engineers	49	49	29	17
Civil engineers	53	53	380	349
Agricultural engineers	54	54	8	0
Electrical and electronic engineers	55	55	769	864
Industrial engineers	56	56	365	311
Mechanical engineers	57	57	422	397
Marine and naval architects	58	58	23	9
Engineers, n.e.c.	59	59	337	281
Surveyors and mapping scientists	63	63	57	29
Computer systems analysts and scientists	64	64	462	2010
Operations and systems researchers and analysts	65	65	241	296
Actuaries	66	66	18	22
Statisticians	67	67	49	40
Mathematical scientists, n.e.c.	68	68	19	7
Physicists and astronomers	69	69	61	30
Chemists, except biochemists	73	73	182	184
Atmospheric and space scientists	74	74	22	19
Geologists and geodesists	75	75	105	62
Physical scientists, n.e.c.	76	76	15	59
Agricultural and food scientists	77	77	57	51
Biological and life scientists	78	78	109	159
Forestry and conservation scientists	79	79	88	52
Medical scientists	83	83	31	113
Physicians Physicians	84	84	409	626
Dentists	85	85	24	57
Veterinarians	86	86	27	26
Optometrists	87	87	4	13
Podiatrists	88	88	2	3
Health diagnosing practitioners, n.e.c.	89	89	5	12
Pharmacists	96	96	202	210
Earth, environmental, and marine science post-secondary				
teachers	113	113	7	7
Biological science post-secondary teachers	114	114	43	44
Chemistry post-secondary teachers	115	115	22	30
Physics post-secondary teachers	116	116	11	14
Natural science post-secondary teachers, n.e.c.	117	117	1	4
Psychology post-secondary teachers	118	118	29	17
Economics post-secondary teachers	119	119	33	15
History post-secondary teachers	123	123	26	16
Political science post-secondary teachers	124	123	19	10
Sociology post-secondary teachers	125	125	14	11
Social science post-secondary teachers, n.e.c.	126	126	10	9
Engineering post-secondary teachers	127	127	47	24
Engineering post-secondary teachers	14/	14/	+/	∠4

Mathematical science post-secondary teachers	128	128	53	33
Computer science post-secondary teachers	129	129	12	24
Medical science post-secondary teachers	133	133	19	15
Health specialties post-secondary teachers	134	134	66	48
Business, commerce, and marketing post-secondary teachers	135	135	41	20
Agriculture and forestry post-secondary teachers	136	136	8	9
Art, drama, and music post-secondary teachers	137	137	48	39
Physical education post-secondary teachers	138	138	19	3
Education post-secondary teachers	139	139	15	18
English post-secondary teachers	143	143	63	45
Foreign language post-secondary teachers	144	144	32	24
Law post-secondary teachers	145	145	7	14
Social work post-secondary teachers	146	146	7	3
Theology post-secondary teachers	147	147	16	20
Trade and industrial post-secondary teachers	148	148	12	3
Home economics post-secondary teachers	149	149	8	1
Teachers, postsecondary, n.e.c.	153	153	4	5
Postsecondary teachers, subject not specified	154	154	157	393
Librarians	164	164	283	234
Archivists and curators	165	165	31	35
Economists	166	166	178	150
	167	167	167	212
Psychologists Social prints	168	168	3	2
Sociologists Social activation and a	169	169	22	44
Social scientists, n.e.c.			23	
Urban planners	173	173		20
Lawyers	178	178	555	800
Judges	179	179	62	0
Airplane pilots and navigators	226	226	95 	92
Ship captains & mates, except fishing boats	828	828	57	26
Marine engineers	833	833	0	3
Class II			19.32	22.39
Managers, properties and real estate	16	18	267	438
Postmasters and mail superintendents	17	16	71	0
Funeral directors	18	19	41	49
Mangers, food serving and lodging establishments	19	17	979	1207
Managers, service organizations, n.e.c.	19	21	498	779
Personnel, training, and labor relations specialists	27	27	539	772
Purchasing agents and buyers, farm products	28	28	27	12
Buyers, wholesale and retail trade except farm products	29	29	284	227
Purchasing agents and buyers, n.e.c.	33	33	350	322
Business and promotion agents	34	34	85	21
Construction inspectors	35	35	96	74
Inspectors and compliance officers, exc. construction	36	36	286	308
Management related occupations, n.e.c.	37	37	311	591
Registered nurses	95	95	1846	2249
Dietitians	97	97	105	94
Inhalation therapists	98	98	109	95
Occupational therapists	99	99	46	49
Physical therapists	103	103	67	146
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	104	104	<i>c.</i> 1	105
Speech therapists	104	104	64	105
Therapists, n.e.c.	105	105	67	92
Physicians' assistants	106	106	87	77
Teachers, prekindergarten and kindergarten	155	155	350	632
Teachers, elementary school	156	156	2444	2635
Teachers,, secondary school	157	157	2198	1592
Teachers, special education	158	158	139	461
Teachers, n.e.c.	159	159	342	642
Counselors, educational and vocational	163	163	310	343
Social workers	174	174	704	993
Clergy	176	176	435	328
Authors	183	183	22	69
Technical writers	184	184	82	88
Designers	185	185	427	627
Musicians and composers	186	186	49	43
Actors and directors	187	187	61	97
Painters, sculptors, craft-artists, & artist print-makers	188	188	128	128
Dancers	193	193	8	14
Artists, performers, and related workers, n.e.c.	194	194	44	84
Editors and reporters	195	195	340	296
Public relations specialists	197	197	250	210
Announcers	198	198	56	31
Clinical laboratory technologists and technicians	203	203	417	403
Radiology technicians	206	206	145	194
Licensed practical nurses	207	207	595	399
Health Technologists and technicians,	208	208	310	797
Engineering technicians,	216	216	372	268
Drafting occupations	217	217	470	269
Surveying and mapping technicians	218	218	94	80
Biological technicians	223	223	85	129
Chemical technicians	224	224	148	84
Science technicians, n.e.c.	225	225	105	104
Air traffic controllers	227	227	95	92
Broadcast equipment operators	228	228	54	40
Computer programmers	229	229	56	44
Tool programmers, numerical control	233	233	7	20
Supervisors and proprietors, sales occupations	243	243	3269	4484
Sales engineers	258	258	57	43
Sales representatives, mining, manufacturing, wholesale	259	259	2074	1571
Auctioneers	284	284	5	1
Supervisors, general office	303	303	722	544
Supervisors, computer equipment operators	304	304	71	14
Supervisors, financial records processing	305	305	179	125
Chief communications operators	306	306	9	5
Supervisors; distribution, scheduling, and adjusting clerks	307	307	279	256
Supervisors, firefighting & fire prevention occupations	413	413	58	47
Supervisors, police and detectives	414	414	108	146
Supervisors, guards	415	415	54	73
Police and detectives, public service	418	418	780	707
Sheriffs, bailiffs, and other law enforcement officers	423	423	171	201

Class IIIa			17.73	15.28
Religious workers, n.e.c.	177	177	78	139
Health record technologists and technicians	205	205	81	20
Legal assistants	234	234	216	463
Insurance sales occupations	253	253	659	527
Real estate sales occupations	254	254	447	401
Securities & financial services sales occupations	255	255	274	540
Advertising and related sales occupations	256	256	196	230
Sales occupations, other business services	257	257	527	769
Sales support occupations, n.e.c.	285	285	14	12
Computer operators	308	308	958	373
Peripheral equipment operators	309	309	17	5
Secretaries	313	313	6155	2613
Stenographers	314	314	99	133
Typists	315	315	1249	541
Interviewers	316	316	238	147
Hotel clerks	317	317	103	117
Transportation ticket and reservation agents	318	318	169	275
Information clerks, n.e.c.	323	323	214	353
Classified-ad clerks	325	325	8	0
Correspondence clerks	326	326	25	11
Order clerks	327	327	281	366
Personnel clerks, except payroll and timekeeping	328	328	100	70
Library clerks	329	329	88	93
File clerks	335	335	375	238
Records clerks	336	336	261	234
Bookkeepers, accounting, and auditing clerks	337	337	2525	1468
Payroll and timekeeping clerks	338	338	309	221
Billing clerks	339	339	221	250
Cost and rate clerks	343	343	150	53
Billing, posting, and calculating machine operators	344	344	86	149
Duplicating machine operators	345	345	23	31
Mail preparing and paper handling machine operators	346	346	11	13
office machine operators, n.e.c.	347	347	47	15
Telephone operators	348	348	386	144
Communications equipment operators, n.e.c.	349, 353	353	23	14
Postal clerks, exc. mail carriers	354	354	448	371
Mail carriers, postal service	355	355	477	415
Mail clerks, exc. postal service	356	356	262	150
Messengers	357	357	126	106
Dispatchers	359	359	271	293
Traffic, shipping, and receiving clerks	364	364	704	758
Meter readers	366	366	87	59
Weighers, measurers, checkers, and samplers	368, 369	368	142	63
Expediters	373	373	171	305
Material recording, scheduling, & distributing clerks, n.e.c.	374	374	43	18
Insurance adjusters, examiners, and investigators	375	375	349	619
Investigators and adjusters, except insurance	376	376	527	1351
Eligibility clerks, social welfare	377	377	116	107
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Bill and account collectors	378	378	164	248
General office clerks	379	379	910	816
Bank tellers	383	383	733	415
Proofreaders	384	384	38	28
Data-entry keyers	385	385	493	743
Statistical clerks	386	386	145	107
Teachers aides	387	387	320	589
Administrative support occupations, n.e.c.	389	389	742	1097
Inspectors, agricultural products	489	489	1	3
Class IIIb			4.60	4.95
Recreation workers	175	175	99	111
Sales workers, motor vehicles and boats	263	263	374	359
Sales workers, apparel	264	264	323	155
Sales workers, shoes	265	265	85	43
Sales workers, furniture and home furnishings	266	266	131	166
Sales workers, radio, television, hi-fi, and appliances	267	267	149	233
Sales workers, hardware and building supplies	268	268	256	274
Sales workers, parts	269	269	263	182
Sales workers, other commodities	274	274	1133	879
Sales counter clerks	275	275	135	120
Cashiers	276	276	1539	1627
Street and door-to-door sales workers	277	277	122	124
News vendors	278	278	21	33
Receptionists	319	319	755	964
Housekeepers and butlers	405	405	36	11
Dental assistants	445	445	191	180
Attendants, amusement and recreation facilities	459	459	173	238
Welfare service aides	467	465	0	423
Child care workers, except private household	468	466, 467, 468	279	126
Personal service occupations, n.e.c.	469	469	128	127

# **Class IVa and Class IVb**

All occupations in Classes IIIa, IIIb, V, VI, & VIIa when worker is "self-employed, not incorporated/farm" in the ORG

#### Class IVc

All occupations in Class VIIb when worker is "self-employed, not incorporated/farm" in the ORG

Class V			5.56	5.00
Photographers	189	189	108	71
Athletes	199	199	42	61
Dental hygienists	204	204	57	62
Electrical and electronic technicians	213	213	476	591
Industrial engineering technicians	214	214	16	9
Mechanical engineering technicians	215	215	26	20
Technicians, n.e.c.	235	235	359	101
Production coordinators	363	363	318	318
Fire inspection and fire prevention occupations	416	416	34	21

Firefighting occupations	417	417	348	284
Correctional institution officers	424	424	263	402
Supervisors, food preparation and service occupations	433	433	313	367
Supervisors, cleaning and building service workers	448	448	226	212
Supervisors, personal service occupations	456	456	53	102
Captains and other officers, of fishing boats	497	497	6	3
Supervisors, mechanics and repairers	503	503	490	350
Electronic repairers, communications & industrial equipment	523	523	221	236
Data processing equipment repairers	525	525	173	349
Telephone line installers and repairers	527	527	121	75
Telephone installers and repairers	529	529	467	366
Miscellaneous electrical and electronic equipment repairers	533	533	107	84
Supervisors; brickmasons, stonemasons, and tile setters	553	553	9	8
Supervisors, carpenters and related workers	554	554	44	21
Supervisors, electricians & power transmission installers	555	555	68	48
Supervisors; painters, paperhangers, and plasterers	556	556	10	10
Supervisors; plumbers, pipefitters, and steamfitters	557	557	27	14
Supervisors, n.e.c.	558	558	559	625
Supervisors, extractive occupations	613	613	119	73
Supervisors, production occupations	633	628	2280	1371
Supervisors, motor vehicle operators	803	803	55	99
Railroad conductors and yardmasters	823	823	63	61
Supervisors, material moving equipment operators	843	843	23	18
Supervisors, handlers, equipment cleaners, and laborers, n.e.c.	863	864	9	15
Class VI			12.62	10.61
Barbers	457	457	36	35
Hairdressers and cosmetologists	458	458	402	362
Automobile mechanics	505	505	1106	878
_	505 506	505 506	1106 4	878 4
Automobile mechanics				
Automobile mechanics Automobile mechanic apprentices	506	506	4	4
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics	506 507	506 507	4 559	4 451
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics	506 507 508	506 507 508	4 559 174	4 451 159
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers	506 507 508 509	506 507 508 509	4 559 174 94	4 451 159 78
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers Automobile body and related repairers	506 507 508 509 514	506 507 508 509 514	4 559 174 94 247	4 451 159 78 220
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers Automobile body and related repairers Aircraft mechanics, exc. Engine	506 507 508 509 514 515	506 507 508 509 514 515	4 559 174 94 247 25	4 451 159 78 220 29
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers Automobile body and related repairers Aircraft mechanics, exc. Engine Heavy equipment mechanics	506 507 508 509 514 515 516	506 507 508 509 514 515 516	4 559 174 94 247 25 321	4 451 159 78 220 29 222
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers Automobile body and related repairers Aircraft mechanics, exc. Engine Heavy equipment mechanics Farm equipment mechanics	506 507 508 509 514 515 516 517	506 507 508 509 514 515 516 517	4 559 174 94 247 25 321 92	4 451 159 78 220 29 222 49
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers Automobile body and related repairers Aircraft mechanics, exc. Engine Heavy equipment mechanics Farm equipment mechanics Industrial machinery repairers	506 507 508 509 514 515 516 517 518	506 507 508 509 514 515 516 517 518	4 559 174 94 247 25 321 92 921	4 451 159 78 220 29 222 49 554
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers Automobile body and related repairers Aircraft mechanics, exc. Engine Heavy equipment mechanics Farm equipment mechanics Industrial machinery repairers Machinery maintenance occupations	506 507 508 509 514 515 516 517 518 519	506 507 508 509 514 515 516 517 518 519	4 559 174 94 247 25 321 92 921 65	4 451 159 78 220 29 222 49 554 28
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers Automobile body and related repairers Aircraft mechanics, exc. Engine Heavy equipment mechanics Farm equipment mechanics Industrial machinery repairers Machinery maintenance occupations Household appliance and power tool repairers	506 507 508 509 514 515 516 517 518 519 526	506 507 508 509 514 515 516 517 518 519 526	4 559 174 94 247 25 321 92 921 65 60	4 451 159 78 220 29 222 49 554 28 44
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers Automobile body and related repairers Aircraft mechanics, exc. Engine Heavy equipment mechanics Farm equipment mechanics Industrial machinery repairers Machinery maintenance occupations Household appliance and power tool repairers Heating, air conditioning, and refrigeration mechanics	506 507 508 509 514 515 516 517 518 519 526 534	506 507 508 509 514 515 516 517 518 519 526 534	4 559 174 94 247 25 321 92 921 65 60 304	4 451 159 78 220 29 222 49 554 28 44 348
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers Automobile body and related repairers Aircraft mechanics, exc. Engine Heavy equipment mechanics Farm equipment mechanics Industrial machinery repairers Machinery maintenance occupations Household appliance and power tool repairers Heating, air conditioning, and refrigeration mechanics Camera, watch, & musical instrument repairers	506 507 508 509 514 515 516 517 518 519 526 534 535	506 507 508 509 514 515 516 517 518 519 526 534 535	4 559 174 94 247 25 321 92 921 65 60 304 46	4 451 159 78 220 29 222 49 554 28 44 348 22
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers Automobile body and related repairers Aircraft mechanics, exc. Engine Heavy equipment mechanics Farm equipment mechanics Industrial machinery repairers Machinery maintenance occupations Household appliance and power tool repairers Heating, air conditioning, and refrigeration mechanics Camera, watch, & musical instrument repairers Locksmiths and safe repairers	506 507 508 509 514 515 516 517 518 519 526 534 535 536	506 507 508 509 514 515 516 517 518 519 526 534 535 536	4 559 174 94 247 25 321 92 921 65 60 304 46 14	4 451 159 78 220 29 222 49 554 28 44 348 22 26
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers Automobile body and related repairers Aircraft mechanics, exc. Engine Heavy equipment mechanics Farm equipment mechanics Industrial machinery repairers Machinery maintenance occupations Household appliance and power tool repairers Heating, air conditioning, and refrigeration mechanics Camera, watch, & musical instrument repairers Locksmiths and safe repairers Office machine repairers	506 507 508 509 514 515 516 517 518 519 526 534 535 536 538	506 507 508 509 514 515 516 517 518 519 526 534 535 536 538	4 559 174 94 247 25 321 92 921 65 60 304 46 14 113	4 451 159 78 220 29 222 49 554 28 44 348 22 26 64
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers Automobile body and related repairers Aircraft mechanics, exc. Engine Heavy equipment mechanics Farm equipment mechanics Industrial machinery repairers Machinery maintenance occupations Household appliance and power tool repairers Heating, air conditioning, and refrigeration mechanics Camera, watch, & musical instrument repairers Locksmiths and safe repairers Office machine repairers Mechanical controls and valve repairers	506 507 508 509 514 515 516 517 518 519 526 534 535 536 538 539	506 507 508 509 514 515 516 517 518 519 526 534 535 536 538 539	4 559 174 94 247 25 321 92 921 65 60 304 46 14 113 61	4 451 159 78 220 29 222 49 554 28 44 348 22 26 64
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers Automobile body and related repairers Aircraft mechanics, exc. Engine Heavy equipment mechanics Farm equipment mechanics Industrial machinery repairers Machinery maintenance occupations Household appliance and power tool repairers Heating, air conditioning, and refrigeration mechanics Camera, watch, & musical instrument repairers Locksmiths and safe repairers Office machine repairers Mechanical controls and valve repairers Elevator installers and repairers	506 507 508 509 514 515 516 517 518 519 526 534 535 536 538 539 543	506 507 508 509 514 515 516 517 518 519 526 534 535 536 538 539 543	4 559 174 94 247 25 321 92 921 65 60 304 46 14 113 61 42	4 451 159 78 220 29 222 49 554 28 44 348 22 26 64 17 48
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers Automobile body and related repairers Aircraft mechanics, exc. Engine Heavy equipment mechanics Farm equipment mechanics Industrial machinery repairers Machinery maintenance occupations Household appliance and power tool repairers Heating, air conditioning, and refrigeration mechanics Camera, watch, & musical instrument repairers Locksmiths and safe repairers Office machine repairers Mechanical controls and valve repairers Elevator installers and repairers Millwrights	506 507 508 509 514 515 516 517 518 519 526 534 535 536 538 539 543	506 507 508 509 514 515 516 517 518 519 526 534 535 536 538 539 543	4 559 174 94 247 25 321 92 921 65 60 304 46 14 113 61 42 181	4 451 159 78 220 29 222 49 554 28 44 348 22 26 64 17 48 81
Automobile mechanics Automobile mechanic apprentices Bus, truck, and stationary engine mechanics Aircraft engine mechanics Small engine repairers Automobile body and related repairers Aircraft mechanics, exc. Engine Heavy equipment mechanics Farm equipment mechanics Industrial machinery repairers Machinery maintenance occupations Household appliance and power tool repairers Heating, air conditioning, and refrigeration mechanics Camera, watch, & musical instrument repairers Locksmiths and safe repairers Office machine repairers Mechanical controls and valve repairers Elevator installers and repairers Millwrights Specified mechanics and repairers, n.e.c.	506 507 508 509 514 515 516 517 518 519 526 534 535 536 538 539 543 544 547	506 507 508 509 514 515 516 517 518 519 526 534 535 536 538 539 543 544 547	4 559 174 94 247 25 321 92 921 65 60 304 46 14 113 61 42 181 563	4 451 159 78 220 29 222 49 554 28 44 348 22 26 64 17 48 81 445

Dei-lease and standard and in-	564	564	6	2
Brickmason and stonemason apprentices	565	565	39	66
Tile setters, hard and soft	566	566	75	78
Carpet installers	567	567	1417	1345
Carpenters	569	569	1417	1343
Carpenter apprentices	573	573	104	172
Drywall installers	575 575	575 575	104	935
Electricians		575 576	41	
Electrician apprentices	576 577	577	221	59
Electrical power installers and repairers				198
Painters, construction and maintenance	579 593	579	436	412
Paperhangers	583	583	19	7
Plasterers	584	584	40	59
Plumbers, pipefitters, and steamfitters	585	585	676	595
Plumber, pipefitter, and steamfitter apprentices	587	587	29	21
Insulation workers	593	593	80	75
Sheetmetal duct installers	596	596	48	43
Structural metal workers	597	597	105	97
Drillers, earth	598	598	26	30
Drillers, oil well	614	614	122	49
Explosives workers	615	615	19	14
Mining machine operators	616	616	84	66
Tool and die makers	634	634	235	136
Tool and die maker apprentices	635	635	11	3
Precision assemblers, metal	636	636	10	43
Machinists	637	637	805	640
Machinist apprentices	639	639	10	5
Boilermakers	643	643	68	38
Precision grinders, filers, and tool sharpeners	644	644	29	14
Patternmakers and model makers, metal	645	645	11	11
Lay-out workers	646	646	31	8
Precious stones and metals workers (jewelers)	647	647	42	41
Engravers, metal	649	649	17	8
Sheet metal workers	653	653	226	163
Sheet metal worker apprentices	654	654	7	2
Miscellaneous precision metal workers	655	655	2	1
Patternmakers and model makers, wood	656	656	6	6
Cabinet makers and bench carpenters	657	657	46	77
Furniture and wood finishers	658	658	32	28
Miscellaneous precision woodworkers	659	659	1	1
Dressmakers	666	666	76	43
Tailors	667	667	52	13
	668	668	49	45
Upholsterers Shoe repairers	669	669	27	9
Shoe repairers  Miscellaneous practicion apparel & febrio yearleses	673, 674	674	5	8
Miscellaneous precision apparel & fabric workers	675	675	22	
Hand molders and shapers, except jewelers				26
Patternmakers, lay-out workers, and cutters	676	676	36	9
Optical goods workers	677	677	77 57	84
Dental laboratory and medical appliance technicians	678	678	57	38
Bookbinders	679	679	48	24
Electrical and electronic equipment assemblers	683	683	415	356

Miscellaneous precision workers, n.e.c.	684	684	38	24
Butchers and meat cutters	686	686	463	278
Bakers	687	687	140	165
Food batchmakers	688	688	31	50
Inspectors, testers, and graders	689	689	226	192
Adjusters and calibrators	693	693	19	12
Water and sewage treatment plant operators	694	694	71	97
Power plant operators	695	695	102	60
Stationary engineers	696	696	219	148
Miscellaneous plant and system operators	699	699	89	66
Rolling machine operators	707	707	36	19
Grinding, abrading, buffing, & polishing machine operators	709	709	246	114
Furnace, kiln, and oven operators, exc. food	766	766	202	77
Welders and cutters	783	783	972	662
Locomotive operating occupations	824	824	133	84
Railroad brake, signal, and switch operators	825	825	107	11
Rail vehicle operators, n.e.c.	826	826	17	1
Operating engineers	844	844	294	337
Longshore equipment operators	845	845	2	3
Hoist and winch operators	848	848	70	24
Crane and tower operators	849	849	174	89
Excavating and loading machine operators	853	853	169	110
Grader, dozer, and scraper operators	855	855	205	77
Class VIIa			25.92	22.06
Demonstrators, promoters and models, sales	283	283	9	22
Stock and inventory clerks	365	365	858	500
Launderers and ironers	403	403	0	1
Cooks, private household	404	404	12	4
Child care workers, private household	406	406	215	149
Private household cleaners and servants	407	407	192	201
Crossing guards	425	425	2	5
Guards and police, exc. public service	426	426	825	796
Protective service occupations, n.e.c.	427	427	69	52
Bartenders	434	434	384	235
Waiters and waitresses	435	435	989	683
Cooks	436, 437	436	1488	1752
Food counter, fountain and related occupations	438	438	109	115
Kitchen workers, food preparation	439	439	114	175
Waiters'/waitresses' assistants	443	443	180	323
Miscellaneous food preparation occupations	444	444	469	433
Health aides, except nursing	446	446	388	372
Nursing aides, orderlies, and attendants	447	447	1713	1932
Maids and housemen	449	449	677	659
Janitors and cleaners	453	453	2378	2041
Elevator operators	454	454	26	10
Pest control occupations	455	455	52	60
Guides	463	461	39	30
Ushers	464	462	4	6
Public transportation attendants	465	463	58	66

Baggage porters and bellhops	466	464	41	52
Marine life cultivation workers	483	483	3	0
Groundskeepers and gardeners, except farm	486	486	529	729
Graders and sorters, agricultural products	488	488	15	37
Fishers	498	498	30	14
Concrete and terrazzo finishers	588	588	102	107
Glaziers	589	589	61	41
Paving, surfacing, and tamping equipment operators	594	594	13	20
Roofers	595	595	137	160
Construction trades, n.e.c.	599	599	257	296
Mining occupations, n.e.c.	617	617	92	34
Lathe and turning machine set-up operators	703	703	57	23
Lathe and turning machine operators	704	704	129	26
Milling and planing machine operators	705	705	32	6
Punching and stamping press machine operators	706	706	196	114
Drilling and boring machine operators	708	708	50	17
Forging machine operators	713	713	30	14
Numerical control machine operators	714	714	3	42
Misc. metal, plastic, stone, & glass mach. operators	715	715	68	23
Fabricating machine operators, n.e.c.	717	717	47	23
Molding and casting machine operators	719	719	174	84
Metal plating machine operators	723	723	71	22
Heat treating equipment operators	724	724	29	12
Misc. metal & plastic processing machine operators	725	725	24	25
Wood lathe, routing, & planing machine operators	726	726	23	9
Sawing machine operators	727	727	174	67
Shaping and joining machine operators	728	728	12	6
Nail and tacking machine operators	729	729	12	0
Miscellaneous woodworking machine operators	733	733	35	35
Printing machine operators	734	734	505	330
Photoengravers and lithographers	735	735	69	30
Typesetters and compositors	736	736	104	27
Miscellaneous printing machine operators	737	737	60	23
Winding and twisting machine operators	738	738	154	36
Knitting, looping, taping, & weaving machine operators	739	739	72	36
Textile cutting machine operators	743	743	10	3
Textile sewing machine operators	744	744	1255	384
Shoe machine operators	745	745	191	12
Pressing machine operators	747	747	217	63
Laundering and dry cleaning machine operators	748	748	218	175
Miscellaneous textile machine operators	749	749	118	35
Cementing and gluing machine operators	753	753	68	30
Packaging and filling operators	754	754	641	373
Extruding and forming machine operators	755	755	53	37
Mixing and blending machine operators	756	756	195	124
Separating, filtering, and clarifying machine operators	757	757	125	64
Compressing and compacting machine operators	758	758	39	17
Painting and paint spraying machine operators	759	759	311	183
Roasting and baking machine operators, food	763	763	9	2
Washing, cleaning, and pickling machine operators	764	764	22	10
,, asimis, cicamins, and proximis machine operators	,	, 5 .		10

Folding machine operators	765	765	38	10
Crushing and grinding machine operators	768	768	80	54
Slicing and cutting machine operators	769	769	323	158
Motion picture projectionists	773	773	10	5
Photographic process machine operators	774	774	127	74
Miscellaneous machine operators, n.e.c.	777	777	1524	1258
Machine operators, not specified	779	779	521	492
Solderers and brazers	784	784	68	25
Assemblers	785	785	1549	1295
Hand cutting and trimming occupations	786	786	31	12
Hand molding, casting, and forming occupations	787	787	34	19
Hand painters, coating, and decorating occupations	789	789	44	17
Hand engraving and printing occupations	793	793	23	13
Miscellaneous hand working occupations	795	795	96	51
Production inspectors, checkers, and examiners	796	796	1136	586
Production testers	797	797	100	86
Production samplers and weighers	798	798	17	5
Graders, and sorters, exc. agricultural	799	799	165	129
Truck drivers	804, 805	804	3477	3030
Driver-sales workers	806	806	320	180
Bus drivers	808	808	351	427
Taxi cab drivers and chauffeurs	809	809	152	188
Parking lot attendants	813	813	52	44
Motor transportation occupations, n.e.c.	814	814	6	13
Sailors and deckhands	829	829	30	14
Bridge, lock, and lighthouse tenders	834	834	11	2
Industrial truck and tractor equipment operators	856	856	656	633
Miscellaneous material moving equipment operators	859	859	277	83
Helpers, mechanics and repairers	864	865	43	24
Helpers, construction trades	865	866	216	97
Helpers, surveyor	866	867	18	8
Helpers, extractive occupations	867	868	5	2
Construction laborers	869	869	994	1009
Production helpers	873	874	106	59
Garbage collectors	875	875	94	58
Stevedores	876	876	34	11
Stock handlers and baggers	877	877	634	737
Machine feeders and offbearers	878	878	142	83
Freight, stocks, and material handlers, n.e.c.	883	883	696	672
Garage and service station related occupation	885	885	343	160
Vehicle washers and equipment washers	887	887	247	274
Hand packers and packagers	888	888	404	377
Laborers, except construction	889	889	1580	1293
Class VIIb				
Farmers (except horticultural)	473	473		
Horticultural specialty Farmers	474	474		
Managers, Farms (except horticultural)	475	475		
Managers, Horticultural specialty Farmers	476	476		
Supervisors, farm workers	477	477		

Farm workers	479	479	
Nursery workers	484	484	
Supervisors, related agricultural occupations	485	485	
Animal caretakers, except farms	487	487	
Supervisors, forestry and logging workers	494	494	
Forestry workers, except logging	495	495	
Timber cutting and logging occupations	496	496	
Hunters and trappers	499	499	

### Notes:

- 1. COC80 is the value assigned to the occupation(s) in the (3-digit) occupational classification system used in the ORG from 1983-1991. COC90 contains the corresponding values for the period 1992-2001.
- $2.\ N_{1983}$  is the number of people in the occupational category in our sample in 1983.  $N_{2001}$  is the corresponding value for 2001. The numbers in parentheses are the sample sizes for each year.
- 3. Among these six types of managers, those who work at establishments with less than 25 employees should be allocated into Class II. However, as ORG do not provide employer size information, we were not able to make such allocation.

# **Additional References Cited in the Supplement**

- Abbot, Andrew. 1988. *The System of Professions: An Essay on the Expert Division of Labor.* Chicago: University of Chicago Press.
- Autor, David H., Lawrence F. Katz, and Alan B. Krueger. 1998. "Computing Inequality: Have Computers Changed the Labor Market?" *Quarterly Journal of Economics* 113:1169-1213.
- Erikson, Robert and John H. Goldthorpe. 1992. The Constant Flux. Oxford: Clarendon Press.
- Erikson, Robert, John H. Goldthorpe, and Lucianne Portocarero. 1979. "Intergenerational Class Mobility in Three Western European Societies: England, France, and Sweden." *British Journal of Sociology* 30:415-30.
- Goldthorpe, John H. 1987. *Social Mobility and Class Structure in Britain. Second Edition.*Oxford: Clarendon Press.
- Goldthorpe, John H. 2000. On Sociology: Numbers, Narratives, and the Integration of Research and Theory. Oxford: Oxford University Press.
- Goldthorpe, John H. and Anthony Heath. 1992. *Revised Class Schema 1992*. Centre for Research into Elections and Social Trends, Working Paper No. 13.
- Goldthorpe, John H. and Walter Müller. 1982. Social Mobility and Class Formation in Industrial Nations: Proposal for a Comparative Research Project. Oxford/Mannheim.
- Heath, Anthony, Roger Jowell, and John Curtice. 1985. *How Britain Votes*. London: Pergamon.
- Jaeger, David A. 1997. "Reconciling the Old and New Census Bureau Education Questions: Recommendations for Researchers." *Journal of Business & Economic Statistics* 15:300-309.
- Katz, Lawrence F. and David H. Autor. 1999. "Changes in the Wage Structure and Earnings Inequality." Pp. 1463-1555 in Orley C. Ashenfelter and David Card, eds., *Handbook of Labor Economics, Volume 3*. Amsterdam: Elsevier.
- Klein, Lawrence. 1962. *An introduction to econometrics*. Englewood Cliffs, N.J., Prentice-Hall.
- Lerman, Robert I. 1997. "Reassessing Trends in U.S. Earnings Inequality." *Monthly Labor Review* December:17-25.
- Manza, Jeff and Clem Brooks. 1999. *Social Cleavages and Political Change: Voter Alignments and U.S. Party Coalitions*. Oxford: Oxford University Press.

- National Bureau of Economic Research. 2002. "CPS Labor Extracts: 1979 2001." Cambridge, MA: NBER
- U.S. Department of Commerce (Bureau of the Census). 1989. "The Relationship between the 1970 and 1980 Industry and Occupation Classification Systems (Technical Paper 59)," Washington, DC: U.S. Dept. of Commerce, Bureau of the Census.
- U.S. Department of Labor. 1991. *Dictionary of Occupational Titles, Fourth Edition*. Chicago: VGM Career Horizons.
- U.S. Department of Labor. 1998. *O\*NET Dictionary of Occupational Titles*. Indianapolis: JIST Works, Inc.