COMPARATIVE INTERGENERATIONAL MOBILITY

INTERGENERATIONAL CLASS MOBILITY IN COMPARATIVE PERSPECTIVE

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ABSTRACT

In this paper we present a first report on our ongoing project to compile and analyze a comprehensive new set of intergenerational mobility tables for a large number of countries. A distinctive feature of our approach is that insofar as data permit we analyze multiple tables from each country. Using log-multiplicative scaled association models, we analyze 149 intergenerational class mobility tables from 35 countries, classified according to the six category classification of Erikson, Goldthorpe, and Portocarero. By using multiple tables for countries, we go a substantial way toward overcoming problems of measurement incomparability and other sorts of unreliability that have plagued previous comparative mobility analyses. This approach also permits a rigorous test of the hypothesis of "common social fluidity," the hypothesis of invariance in mobility regimes across countries and time. We do this in two ways: by assessing the proportion of the variance in various parameters of mobility tables that lies between countries, and by assessing the strength of linear trends in these parameters within countries. The between-country variance accounts for about one third of the total variance of the mobility parameters, indicating that there are significant between-country differences. We also find that within countries the extent of inequality in mobility chances is on average decreasing

at about one percent per year, in the long run a substantial rate. Since a major goal of our effort is to expand the data base for comparative mobility analysis, we present in an appendix all of the (six by six) intergenerational occupational mobility tables we have assembled to date.

INTRODUCTION

The comparative study of occupational mobility has a rather odd intellectual history: it is theoretically robust, methodologically sophisticated, and almost completely devoid of verified findings. The inconclusiveness of results may attest to the difficulty of the endeavor, which of necessity relies on the reanalysis of existing data.[1] Despite efforts by most comparative analysts to recode occupational data from different countries into a single classification, so as to effect cross-national comparisons uncontaminated by variations in occupational classification schemes, such comparisons remain vulnerable to errors resulting from imperfect comparability of measurement no matter how carefully they are carried out.[2] For this reason, it is difficult to know to what extent differences (and similarities) observed in the data reflect true variations in mobility patterns and to what extent they merely reflect classification and measurement errors.

An obvious solution to this problem is to analyze multiple data sets from each country. If between-country differences are large relative to within-country differences, confidence is gained that the between-country differences reflect true variations in social structure. Moreover, within-country averages will be more reliable indicators of the pattern for each country than will coefficients generated from a single study for each country.

The contribution of the present paper is two-fold: first to make available to researchers the most comprehensive set of intergenerational occupational mobility tables yet assembled—149 tables from 35 countries, all based on the same six category classification;[3] and, second, to carry out a first analysis of these tables, which exploits the availability of multiple tables per country to assess an important hypothesis, the hypothesis of "common social fluidity," or cross-national invariance in social mobility regimes. We assess this hypothesis in two ways: First, we determine how much of the total variability among *tables* with respect to aspects of the mobility process can be attributed to differences *between countries* and how much simply reflects variation among tables within countries.[4] Second, we partition the within-country variation into a component due to linear trends in mobility regimes over time and a component due to other factors. The component due to other factors may be taken as a measure of the size of the error intrinsic to mobility analyses that rely upon single tables per study.[5] Insofar as differences in mobility regimes

across countries are large relative to differences across tables within countries, the hypothesis of "common social fluidity" is called seriously into question. Similarly, the common social fluidity hypothesis is inconsistent with the presence of systematic trends in mobility parameters over time.

In the following section we elaborate the hypothesis of common social fluidity and our approach to assessing it. This necessitates an extended discussion of our data and of methods for achieving comparability across tables. We conclude with an assessment of the hypothesis.

THE HYPOTHESIS OF COMMON SOCIAL FLUIDITY

There are two somewhat distinctive, but partially overlapping, claims about why we should expect common mobility regimes in all industrial societies, or perhaps in all complex societies. These claims are not, in fact, based on well developed theories, but rather amount to categorical assertions. Nonetheless, they have given rise to a good deal of research and, as such, need to be taken seriously.

In conjunction with the earliest systematic comparisons of occupational mobility rates (Lipset and Bendix 1959), Lipset and Zetterberg proposed that *observed* mobility rates should be the same in all Western industrial societies as a consequence of shifts in the occupational structure concomitant with industrialization. The shift toward a higher percentage in the labor force in nonmanual occupations, characteristic of all industrialized nations, necessarily engenders a substantial amount of upward mobility, especially when accompanied with a propensity for fertility rates of manual workers to be higher than those of nonmanual workers (Lipset and Bendix 1959, pp. 57-58). Further, with industrialization "there is a relative decline in the number of inheritable positions" (Lipset and Bendix 1959, p. 59), and hence an increase in the amount of mobility. Without specifying why the propensity for all industrialized countries to exhibit substantial upward mobility necessarily implies *similarity* in the *rate* of upward mobility, Lipset and Bendix purported to show similar rates of mobility between nonmanual and manual occupations in six capitalist industrial countries and between high and low prestige occupations in three capitalist industrial countries. Their claim has not, however, held up in subsequent studies. Moreover, if one inspects Lipset and Bendix's tables, rather than relying on their text, their claim is not even well supported by their own data. For example, their Table 2.1 (p. 25) shows a range of 29 to 45 in the percentage of sons of manual workers who became nonmanual workers (excluding those who become farmers), and a range of 13 to 32 in the percentage of sons of nonmanual workers who became manual workers (again excluding those who became farmers). Although the range of the total (non-agricultural)

mobility rate is somewhat smaller, 23 to 31%, this masks large national differences in the percentage of sons of farmers leaving agriculture (29 to 70%).

Whereas Lipset and Bendix asserted that *observed* rates of mobility should be similar in all capitalist industrial nations, Featherman, Jones, and Hauser (1975, p. 340) reviewed evidence of differences in observed mobility rates and suggested

> a new, provisional hypothesis to replace the falsified Lipset-Bendix hypothesis about total rates of mobility. This new hypothesis differs in that it is specified in terms of *circulation* mobility, and states [that] the genotypical pattern of mobility (circulation mobility) in industrial societies with a market economy and a nuclear family system is basically the same.

Grusky and Hauser (1984, p. 22) extended this idea by noting that there may be a general consistency in social fluidity patterns in all complex societies, industrialized or not, because of the "substantial uniformity [in all societies] in the economic resources and desirability of occupations...".[6]

In recent literature others, in particular Erikson and Goldthorpe (1985, 1987b), have taken up this idea of similarity in mobility patterns between societies, relabeling it the "FJH hypothesis" (after Featherman, Jones, and Hauser) or the hypothesis of "common social fluidity." They emphasize the need to statistically control for the fact that the degree of intergenerational change in the distribution of persons over occupations varies widely from country to country, which creates equally wide variations in gross mobility rates. Erikson and Goldthorpe attempt, in a limited way, to provide a theoretical rationale for the hypothesis, noting (1985, p. 13) that

> the FJH hypothesis would appear ... to be prompted by an awareness of certain general and abiding structural features of industrial societies, in the western world at least: for example, the broad consistency that they display in their distributions of income and other economic resources and in the form of their occupational division of labor.

While the Lipset-Bendix hypothesis has been fairly thoroughly discredited, the FJH hypothesis, as formulated by Erikson and Goldthorpe, is alive and well. Erikson and Goldthorpe (1985) represent this hypothesis by a log-linear model allowing country-specific marginal effects but a set of cell-specific interaction terms common to all countries, which they label the "common social fluidity model". They show that this model accounts for most of the baseline χ^2 in a nine country analysis of seven by seven mobility tables, and claim that this result confirms the FJH hypothesis. The difficulties with this approach, as others have also noted (e.g., Hope 1981a; Clogg and Shockey 1984; Yamaguchi 1987) are, first, that it is not at all parsimonious, and, second, that it does not tell us anything about the nature of the mobility regime, only that it is apparently common to all countries analyzed. Moreover, since the model does not, in fact, fit the data by conventional standards, it is difficult to decide whether the FJH

hypothesis is, indeed, adequately supported, especially in comparison with alternative hypotheses that posit systematic societal differences in mobility regimes. There are a number of such hypotheses, all of which posit systematic societal variations in the degree of "societal openness" and point to particular exogenous sources of variations in openness (see Treiman 1970; Grusky and Hauser 1984; and Treiman and Kelley 1986, for reviews), but we will not explicitly address them here, due to limitations of time and space. In this paper, we restrict ourselves to assessing the simple question of whether the hypothesis of common social fluidity is correct, or whether there are, in fact, substantial societal differences in mobility regimes and, in particular, in the degree of societal openness. In a subsequent paper we expect to consider a number of specific hypotheses regarding the sources of societal variations in openness.

Defining Societal Openness

Thus far we have been somewhat imprecise about just what we mean by "mobility rates," "mobility chances," and "openness." Unlike Lipset and Bendix, we will not deal with observed rates of mobility but—as all recent comparative analyses have done—with the chances of mobility given the marginal distributions of the two generations. Two distinct notions are involved. On the one hand, mobility is the complement of *immobility*, and refers to the probability that father and son are in different classes. Thus, societies are more mobile or more open to the extent that sons do not inherit the class positions of their fathers. Second, openness refers to the extent to which the relative mobility chances of mobile men from different class origins are *associated* with their fathers' class positions. These two notions of openness accord well with the theoretical arguments reviewed above and are readily represented by coefficients of log-multiplicative and log-linear models, as we will show below.

Methodological Developments

Methodologically, comparative mobility research has developed on two tracks. One genre, initiated by the work of Lipset and Bendix (1959), has focused on expanding the number and range of countries compared, often at the expense of both precision and detail (Miller 1960; Fox and Miller 1965; Svalastoga 1966; Cutright 1968; Hazelrigg 1974; Hazelrigg and Garnier 1976; Hardy and Hazelrigg 1978; Tyree et al. 1979; McClendon 1980a, 1980b; and Heath 1981). These studies have mainly relied on two or three category classifications (nonmanual, manual, and, sometimes, farm) and have not been overly concerned with the comparability of samples used, the way detailed occupations are aggregated to gross categories, etc. Nor, with the exception

of Tyree et al. (1979), have they been particularly sophisticated with respect to statistical methods.

The other genre consists either of comparis ons of data from a single country collected at different points in time or of comparisons of data from a small number of countries (e.g., Hauser et al. 1975; Pöntinen 1976; Erikson et al. 1979, 1982, 1983; Hope 1981b, 1982; McRoberts and Selbee 1981; Simkus 1981, 1984; Erikson 1983; Hauser 1984; Breen and Whelan 1985; Kerckhoff et al. 1985; Wanner 1986; Ganzeboom et al. 1987; Yamaguchi 1987; Ganzeboom, Luijkx, and Robert 1989; and Luijkx and Ganzeboom 1989). These studies typically are much more sophisticated, both statistically and with respect to issues of data quality and measurement comparability, than are the many-country comparisons. They also typically analyze much larger mobility tables. Such studies have been the primary locus of applications of the log-linear and log-multiplicative models that have been appearing in the sociological literature at a very rapid rate in recent years: "topological" or "levels" models (Hauser 1978, 1979); models based on a priori category scales (Hope 1981a, 1982); log-linear crossing parameter models that require only ordinal assumptions about the scaling of categories (Pöntinen 1982); log-linear association models (Duncan 1979; Goodman 1979b); log-multiplicative association models making no a priori assumptions regarding category scalings, and yielding a mobility distance metric as an outcome of the model (Goodman 1979a; Luijkx and Ganzeboom 1989); models incorporating multiple a priori category scalings representing multiple dimensions (Hout 1984; Hout and Jackson 1986); etc.

By their nature, however, cross-sectional comparisons of small numbers of societies do not lend themselves to systematic generalizations, since there are inherently (albeit implicitly) too many degrees of freedom relative to the number of observations. Hence, the substantive payoff of many of these analyses has been rather smaller than might have been expected.

Given this, the convergence of the two lines of inquiry in single studies is a welcome development, and one to which we wish to contribute. Increasingly, studies are appearing that attempt to compare fairly large numbers of societies but that at the same time are attentive to issues of data quality, measurement comparability and precision, and appropriate statistical methods. The recent work of Erikson and Goldthorpe (1985, 1987a, 1987b, reviewed above in conjunction with discussion of the FJH hypothesis), extending the three-country comparisons of Erikson, Goldthorpe, and Portocarero (1979, 1982, 1983) to nine countries; the 1984 paper by Grusky and Hauser, which applies log-linear and log-multiplicative models incorporating exogenous variables to three by three tables from 16 countries; and the 10 country analysis of 16 by 16 tables using scaled association models by Treiman and Kelley (1986) are all cases in point. We propose to continue in this vein by fitting scaled

association models to 149 tables from 35 countries all coded into the six category version of the Erikson-Goldthorpe-Portocarero (EGP) classification.

In one sense our analysis merely extends the work of Grusky and Hauser, Erikson and Goldthorpe, and Treiman and Kelley; however, it differs in important respects. It differs from Grusky and Hauser in the precision and detail with which classes are measured: by increasing the number of categories from three to six, we increase the number of cells in the table by a factor of four, from nine to 36; and we do not accept at face value the aggregations of other analysts but, wherever possible, recode unit data into a standard classification in order to achieve greater cross-national comparability in the assignment of specific occupation titles to aggregate categories.[7] Erikson and Goldthorpe and Treiman and Kelley go even further in this direction, restricting their analysis to studies for which they have detailed unit record data and hence can create their own mobility tables. Our analysis differs from that of Erikson and Goldthorpe and Treiman and Kelley by more than tripling the number of countries included, to 35. Since the contextual determinants of mobility regimes are in all probability multivariate, only a little can be learned from the analysis of a small number of societies. While the existence of differences between the mobility regimes of as few as two societies can be conclusively shown by standard chi-square tests, it is difficult in such cases to identify what it is that generates the observed differences, especially given the essentially multivariate nature of the mobility process and the error prone nature of the data representing it; and even when explanatory factors can be identified, they cannot be confirmed or disconfirmed in a rigorous way. We have attempted to overcome this limitation by analyzing data from enough societies to be able to systematically relate variations in parameters of mobility models to variations in other societal attributes, a task we reserve for a subsequent paper.

Everything has its cost, however. In order to include so many countries, we have been less stringent in our standards regarding data comparability than Erikson and Goldthorpe and Treiman and Kelley, although rather more stringent than other investigators utilizing large samples of countries. We will have more to say about this below.

The final, and most important difference between our analysis and that of previous investigators is that rather than utilizing a single table for each country we utilize as many tables per country as we have been able to locate. Mobility tables have to be treated as fallible measures of the true mobility regime of a country. Analysts should therefore strive for as many independent measurements per country as possible, and analyze their entire set of tables via statistical models that allow for explicit inferences about error. By including more than one table per country in a multi-country analysis, it is possible to distinguish within-country from between-country differences in mobility parameters. Moreover, this strategy enables us to test the hypothesis that within

countries societal openness has increased over time. We will have more to say about these points below.

METHODS

Our basic strategy of data compilation was to locate or construct cross-classifications of father's occupation by son's current occupation for representative national samples of men age 21-64, for as many data sets from as many countries as possible, with the restriction that the tables conform to our six category modification of Goldthorpe's class category scheme. In this section we first describe the six category classification scheme; we then discuss the data; and we conclude with a discussion of the statistical methods we employ in our analysis.

Classification of Occupational Positions

In order to analyze occupational mobility tables, it is necessary that they all be based on the same classification. In our analysis we utilize a six category modification of the class scheme originally introduced by Goldthorpe for the analysis of the Oxford Mobility Inquiry (Goldthorpe et al. 1978) and later elaborated by Erikson, Goldthorpe, and Portocarero (1979). This classification initially consists of 10 categories, but we use a six-fold collapse of it:

Original classification		Our classification
I.	Large proprietors, higher professionals and managers	1
II.	Lower professionals and managers	
III.	Routine non-manual workers	2
IVa.	Small proprietors with employees	3
IVb.	Small proprietors without employees	
V.	Lower grade technicians and manual supervisors	4
VI.	Skilled manual workers	
VIIa.	Unskilled and semiskilled manual workers	5
IVc.	Self employed farmers	6
VIIb.	(Unskilled) agricultural workers	

The EGP scheme (as it is commonly known) can be seen as a typology formed from four different job attributes:

a. *Sector:* nonmanual workers, manual workers, farm.
b. *Employment:* self-employed vs. salaried.

    c.   *Skill level:*   manual and nonmanual occupations are each divided into three strata.

    d.   *Supervisory status:*   for supervisors and managers this is measured by the number of people supervised (none, few, and many), while for the self-employed it pertains to the number of employees (also, none, few, and many).[8]

Given the 3*2*3*3 = 54 categories that are implicitly defined by these four criteria, the original ten-category EGP scheme amounts to a rather highly aggregated typology of the logical combinations. According to its original author (Goldthorpe 1980, 1983), the scheme is particularly meant to take into account the similarity of the situation of different groups in the labor market and work place. According to Goldthorpe, each of the categories in the ten-category scheme, which represent the outcome of successive aggregation of more detailed categories, retains a high degree of homogeneity with respect to these criteria. The validity of the homogeneity assumption—albeit with respect to mobility chances rather than labor market status or work place position—was explicitly tested by Hout and Jackson (1986) who in their analysis of Irish data began with a more detailed mobility table and then tested its collapsibility in terms of Goodman's (1981) criteria. Their analysis generally supports the assumption of homogeneity within the categories of the 10 category EGP scheme, with only four exceptions, three of which apparently pertain to peculiarities of the Irish occupational structure. The one deviation of more general relevance is the distinction between self-employed and salaried workers in categories I and II, but this pertains to a rather small category.

This EGP class scheme has several advantages for our purposes. First, it is currently the most widely used class scheme, so there are more published tables based on this scheme than on any other. Second, the utility of the EGP scheme for mobility analysis has amply been demonstrated by previous research. The categories have been shown to behave in an expected and orderly way, in the sense that the differences in the mobility chances of men from different classes are quite large and are in accordance with theory. For example, an analysis of trends in occupational mobility in the Netherlands using the ten-category EGP scheme (Ganzeboom et al. 1987) shows that each of the ten classes is clearly distinct with respect to mobility chances. If estimated with a scaled association model, all of the classes except two are about equally spaced on the mobility dimension—the exception, not surprisingly, involving self-employed farmers. Among those who are mobile, the destinations of the sons of farmers and the sons of unskilled workers are very similar. But the inheritance patterns of the two categories are very different, so they cannot be regarded as one homogeneous class. Third, the EGP scheme summarizes and assimilates other classifications. The traditional trichotomy between nonmanual, manual, and farm workers is to a large extent preserved;[9] and the distinction between self-

employed workers and employees is taken into account as is the level of skill and supervisory power.

The Six Category Scheme

We will not use the full EGP scheme in this paper, but rather a six category collapse of it. The reduction in detail is necessary to attain comparability across countries with respect to the detailed occupations included in each category. We collapse classes I and II into a single category: "higher nonmanuals," IVa and IVb into "small proprietors," V and VI into "skilled manuals," and IVc and VIIb into "farmers and farm workers".

There is no doubt that this aggregation obscures interesting information and combines categories that are not completely homogeneous according to substantive and formal statistical criteria. However, the advantages outweigh the disadvantages.

First, the aggregations pertain to categories that are rather small in size. Given the relatively small sample sizes of many of our studies, using the ten category classification would result in very sparse tables. This is true of categories IVa + IVb and V + VI in more societies; IVc + VIIb in the most industrialized societies, which usually have a small proportion of the labor force in agriculture; and categories I + II in less developed societies. In addition, all the aggregations are of neighbors or near neighbors on the mobility dimension estimated with a scaled association model, as we have shown in earlier analyses (Ganzeboom et al. 1987; Luijkx and Ganzeboom 1989). In this respect relatively little information is lost.

Further, the IVa + IVb collapse reduces the problem of missing information regarding the number of employees. Such information is often lacking, particularly for the fathers' generation. The six category classification does not completely solve this problem, since we still are unable to distinguish between small working proprietors (less than ten employees), who are included in new category 3, and large working proprietors (more than ten employees), who are included in new category 1. However, since many occupational classifications, including the expanded ISCO,[10] have separate categories for large business owners, this deficiency is relatively unimportant.

There are two additional advantages to the IVc + VIIb collapse. First, it enables us to evade the problem of the non-comparability of self-employed farmers in Western countries with cooperative and collectivized farm workers in the socialist world. Second, it correctly ignores the apparent downward mobility that occurs when the sons of farmers work as agricultural laborers or unpaid family workers while waiting to inherit the farm.

There is one difficulty that the six category collapse is not able to overcome. If there is no independent information on self-employment in a data set, the assignment of cases to classes IVa and IVb, and hence to new category 3, is

problematic, in particular for self-employed manual occupations, which—in contrast to self-employed sales occupations—usually are not defined by job titles. Nothing can be done about this, short of omitting those studies lacking information on self-employment. Fortunately, most of the surveys used here contain this information.

In sum, we are confident that relatively little information is lost by the collapse of the EGP scheme to six categories and that the collapsed scheme still preserves most of the advantages mentioned above. Moreover, given the deficiencies in the original occupational classifications that we recoded, the use of the six category scheme results in a substantial improvement in comparability relative to the ten category scheme.

Coding Procedures

Given the comparability problems that have plagued so many of the earlier comparative analyses of intergenerational occupational mobility data (see Goldthorpe's critique 1985), it is of some importance to dwell on the concrete procedures we used to try to maximize measurement comparability. We created most of our tables from unit record data that contain detailed occupational codes for respondents and their fathers. For the most part, the occupational data were originally coded using a local occupational classification scheme. The first step of our procedure, therefore, was to match each local occupational title to the categories in Treiman's expansion of the International Standard Classification of Occupations [ISCO] (International Labour Office 1968; Treiman 1977, Appendix A). We then recoded the data into the EGP-categories using a standard recoding that had been developed by Ganzeboom et al. (1987) and Luijkx and Ganzeboom (1989) to map the near-ISCO Netherlands' classification (CBS 1971) into the EGP categories. This mapping is shown in Appendix 1.

The mapping of occupational codes into the EGP classification uses three separate pieces of information: (a) the detailed occupational title coded into an (expanded) ISCO category; (b) whether or not the person is self-employed; and (c) the number of persons supervised. Items (b) and (c) are usually secured from separate variables in the data set, but occasionally this information is contained in the original occupational titles themselves.

The recoding into the EGP classification required one major and several correction steps. In the first and major step, the expanded ISCO titles were provisionally sorted into the 10 EGP categories. Next, self-employed manual occupations were distinguished and sorted into categories IVa or IVb (self-employed with and without employees). In the next step, employed manual workers with supervisory status (that is, with more than 10 subordinates) were promoted to VI (manual supervisors). Then farm laborers (VIIa) with self-employment status were moved to IVa (self-employed farmers). Next,

Table 1. Intergenerational Class Mobility in 35 Countries, 149 Tables: Sources and Notes on the Peculiarities of the Samples and Data

Name	Source	Remarks on sample
Australia		
AUS65	Broom & Jones, 1976	
AUS67	Aitkin, Kahan & Stokes, 1967	
AUS67l	Aitkin, Kahan & Stokes, 1967	Inlaws.
AUS73	Jones & Davis, 1986	
AUS87	McAllister & Mughan, 1987	
Austria		
AUT69n	Verba, Nie & Kim, 1966-1971	
AUT74p	Barnes & Kaase, 1973-1976	
AUT78	Haller, 1982	Minicensus, imputed N.
Belgium		
BEL71e	Inglehart & Rabier, 1971	Skill levels distinguished with help of education
BEL75	Reszohazy, 1975	French speaking Belgians.
BEL76	Reszohazy, 1976	French speaking Belgians.
Brazil		
BRA73	IBGE, 1973	10% sample
Canada		
CAN73	Boyd et al. 1973	Except Quebec.
CAN82w	Wright, 1981-1983	Except Quebec.
CAN84	Lambert et al., 1984	Except Quebec.
Czechoslovakia		
CSK67	Jungmann, 1972	
Denmark		
DEN71	Borre et al., 1971	
DEN72l	Allardt & Uusitalo, 1972	Inlaws.
DEN72s	Allardt & Uusitalo, 1972	
England and Wales		
ENG51	Benjamin, 1958	Birth records.
ENG63	Butler & Stokes, 1963	
ENG67t	Ornauer, 1967-1969	Adults < 40 years old.
ENG69	Butler & Stokes 1969-1970	
ENG72	Hauser, 1984	
ENG74	Crewe, Särlvik & Alt, 1974	
ENG74p	Barnes & Kaase, 1973-1976	
ENG83	Heath et al., 1983	
ENG86	Heath, 1986a	
Finland		
FIN67t	Ornauer, 1967-1969	Adults < 40 years old.
FIN72l	Allardt & Uusitalo, 1972	Inlaws.
FIN72s	Allardt & Uusitalo, 1972	
FIN75p	Barnes & Kaase 1973-1977	

Table 1.   (Continued)

Name	Source	Remarks on sample
FIN80	Pöntinen, Alestalo & Uusitalo, 1984	
FIN82w	Wright, 1981-1983	
France		
FRA58	Dupeux, 1958	
FRA64	Garnier & Hazelrigg, 1976	Imputed N, adults < 46 years old.
FRA67	Converse & Pierce, 1967	
FRA70	Hauser, 1984	
FRA71e	Inglehart & Rabier, 1971	Skill levels distinguished with help of education.
Germany (Federal Republic)		
GER59	Daheim, 1959	
GER69	Klingemann & Pappi, 1969	
GER69k	Kleining, 1969	
GER75p	Barnes & Kaase, 1973-1977	
GER76z	ZUMA, 1976-1981	Zumabus 1.
GER77z	ZUMA, 1976-1981	Zumabus 2.
GER78	ZUMA, 1976-1981	Zumabus 3.
GER78x	ZUMA, 1976-1981	Kapitalstudie.
GER78z	ZUMA, 1976-1981 [1979]	Zumabus 4.
GER79z	ZUMA, 1976-1981	Zumabus 5.
GER80	ZUMA, 1976-1981	Wohlfahrtstudie.
GER80p	Allerbeck, Kaase & Klingemann, 1980	
GER80z	ZUMA, 1976-1981	Kapitalstudie.
GER82a	ZUMA, 1980-1984	Allbus 2.
GER84a	ZUMA, 1980-1984	Allbus 3.
Hong Kong		
HKG67	Mitchell, 1967	Married men.
Hungary		
HUN62	Andorka, 1982	
HUN73	Andorka, 1973	
HUN73l	Andorka, 1973	Inlaws.
HUN82	Kolosi, 1982	
HUN83	Kulszar & Harcsa, 1983	
HUN86	Kolosi	
India		
IND62c	Cantril, 1957-1963	Four states: Andra Pradesh, Gujerat, Uttar Pradesh, and West Bengal.
IND63a	Indian Institute of Public Opinion, 1963	Urban oversample.

(continued)

Table 1. (Continued)

Name	Source	Remarks on sample
IND63c	Cantril, 1957-1963	Restricted to same four states as IND62c.
IND71n	Verba, Nie & Kim, 1966-1971	Restricted to same four states as IND62c.
Ireland		
IRE74	Hout, 1986	
Israel		
ISR62c	Cantril, 1957-1963	
ISR74	Matras, Weintraub & Kraus, 1974	
Italy		
ITA63	Lopreato, 1963-1964	
ITA68	Barnes, 1968	
ITA72	Barnes, 1972	
ITA74	Heath, 1986b	
ITA75p	Barnes & Kaase, 1973-1976	
Japan		
JAP55	Odaka & Fukutake, 1955	
JAP65	Yasuda, 1965	
JAP67	Ward & Kubota, 1969	
JAP69t	Ornauer, 1967-1969	
JAP71n	Verba, Nie & Kim, 1966-1971	
JAP75	Tominaga, 1975	
Malaysia		
MAL67	Malaysian Department of Statistics, 1966-67	Married men.
Netherlands		
NET58	Gadourek, 1958	
NET67t	Ornauer, 1967-1969	Married persons < 40.
NET70	Heunks, Jennings et al., 1970-1973	
NET71	Mokken & Roschar, 1971	
NET71e	Inglehart & Rabier, 1971	Skill levels distinguished with help of education.
NET74p	Barnes & Kaase, 1973-1976	
NET76	Hermkens & Van Wijngaarden, 1976	
NET77	Werkgroep Nationaal Kiezeronderzoek, 1977	
NET77x	CBS, 1977	
NET79p	Heunks et al., 1979	
NET82	Heinen & Maas, 1982	
NET82u	Ultee & Sixma, 1982	
NET85	OSA, 1985	
Nigeria		
NIG71n	Verba, Nie & Kim, 1966-1971	

Table 1. (Continued)

Name	Source	Remarks on sample
Northern Ireland		
NIR68	Rose, 1968	
NIR73	Hout, 1986	
Norway		
NOR57	Rokkan, 1957	
NOR65	Valen, 1975	
NOR67t	Ornauer, 1967-1969	Adults < 40 years old.
NOR72l	Allardt & Uusitalo, 1972	Inlaws.
NOR72s	Allardt & Uusitalo, 1972	
NOR73	Norwegian Quality of Life Survey, 1973	
NOR82w	Wright, 1981-1983	
New Zealand		
NZE76	Jones & Davis, 1986	
Philippines		
PHI68	Bacol, 1971	Married men.
PHI73	Population Institute, 1973	Married men.
Poland		
POL72	Zagorski, 1972	
POL82	Beskid, 1982	
POL82	Slomczynski, 1987	
Puerto Rico		
PUE54	Miller, 1960	
Quebec		
QUE60	Pinard, Breton & Breton, 1960	
QUE73	Boyd et al., 1973	
QUE77	Coté, 1977	
Scotland		
SCO74	Crewe, Särlvik & Alt, 1974	
SCO75	Moore & Payne, 1974-1975	
Spain		
SPA65	Fondacion FOESSA 1970	
SPA67t	Ornauer, 1967-1969	Adults < 40 years old.
SPA75	INE, 1976	
Sweden		
SWE50	Carlsson, 1958	Birth records.
SWE60	Särlvik, 1960	
SWE72l	Allardt & Uusitalo, 1972	Inlaws.
SWE72s	Allardt & Uusitalo, 1972	
SWE73	Hauser, 1984	
SWE83w	Wright, 1981-1983	

(continued)

Table 1.   (Continued)

Name	Source	Remarks on sample
Switzerland		
SWI76p	Barnes & Kaase, 1973-1976	
Taiwan		
TAI70	Grichting, 1970	
TAI70l	Grichting, 1970	Inlaws.
United States		
USA47	NORC, 1947	
USA47l	NORC, 1947	Inlaws.
USA59c	Cantril, 1957-1963	
USA62o	Featherman & Hauser, 1962-1973	
USA72g	Davis & Smith, 1972-1986	
USA73g	Davis & Smith, 1972-1986	
USA73o	Featherman & Hauser, 1962-1973	
USA74g	Davis & Smith, 1972-1986	
USA74p	Barnes & Kaase, 1973-1976	
USA75g	Davis & Smith, 1972-1986	
USA76g	Davis & Smith, 1972-1986	
USA77g	Davis & Smith, 1972-1986	
USA78g	Davis & Smith, 1972-1986	
USA80g	Davis & Smith, 1972-1986	
USA81w	Wright, 1981-1983	
USA82g	Davis & Smith, 1972-1986	
USA83g	Davis & Smith, 1972-1986	
USA84g	Davis & Smith, 1972-1986	
USA85g	Davis & Smith, 1972-1986	
USA86g	Davis & Smith, 1972-1986	
Yugoslavia		
YUG67t	Ornauer, 1967-1969	Restricted to Slovenia; adults < 40.

Note: * A full description of the sources can be found in Appendix 4. Explanation of sixth character in table name: c = Cantril's Pattern of Human Concerns survey, e = European Community Study, g = General Social Survey, l = in-Law table, n = Nie's Seven Nation Study. o = OCG survey, p = Political Action Survey, s = Scandinavian Welfare Study, t = World 2000 Study, w = Wright study; N: Total number of cases in table.

supervisory status was used to distinguish between nonmanual self-employed workers with and without employees. Then the extent of supervision was considered, and both the self-employed with employees (IVa) and nonmanual workers (II and III) were moved into the highest class (I) if they had many employees or supervised many other workers. Finally, routine nonmanual workers (III) were moved one step up, into the ranks of lower controllers (II) if they had limited supervisory responsibilities. These last two steps were

conditional upon whether we judged these occupations to be "promotable," that is conceivably performed in a managerial or proprietorial way.

This general recoding scheme converted detailed occupational classifications into the original 10 EGP categories, which we then collapsed to six categories as indicated above.

Data

The 149 tables analyzed here are listed in Table 1 alphabetically by country and within countries by the year of the survey. In cases where we have two or more tables from the same country in the same year we have distinguished them by an additional character. Table 1 also lists the researcher or research institution responsible for the data from which the table was derived and gives details on special characteristics of the original samples and resulting data. Where the original unit record data were weighted we utilized the weights to generate the table counts, but adjusted them so that the total number of cases in the weighted table exactly equals the number of cases in the unweighted data. The counts for each mobility table are given in Appendix 2 and the percentaged marginal distributions are shown in Appendix 3. Full references to these sources and the distributing archives are given in Appendix 4.

Wherever possible we have restricted our analysis to national samples of males age 21-64. There are, however, a few exceptions.

Regional Samples

First, some tables refer to subnational regions. In one case, India, this was because we utilized a survey restricted to one region of the country. The 1971 Indian survey was restricted to four states and we have therefore similarly restricted the 1962 and 1963 data from the Cantril study (IND62c and IND63c). The four included states cover about one third of the Indian nation; hence these tables still refer to the largest population sampled. Comparison of tables based on the regional samples and the full national samples from 1962 and 1963 show no notable differences. Unfortunately, the fourth Indian table (IND63a) could not be restricted in a similar way. In three other cases— Belgium, Canada, and the United Kingdom—we have divided national samples into regions that appeared to us to correspond to distinct societies or at least labor markets. Both Belgium and Canada can be characterized as "one state, two nations," and the historical divisions between England and Wales, Scotland, and Northern Ireland, are well known. The main advantage of doing this is that it enabled us to incorporate tables based on surveys conducted only in one of the subnational regions.

Sampling Biases

Second, some tables exhibit various sampling biases—non-standard age ranges, restriction to married men, etc. The 1973 Australian table and the 1976 New Zealand table refer to men age 30-64 years old and therefore lack men in the beginning of their careers. Other tables refer to currently married (or currently and formerly married) persons: the 1967 Malaysian table, the 1967 Hong Kong table, the 1973 Philippines table, and all the "in-law"-tables, which are based on information furnished by married women on the occupations of their husbands and fathers-in-law. Such tables were constructed for Australia 1967, Hungary 1973, Taiwan 1970, the United States 1947, and the four countries (Denmark, Finland, Norway, Sweden) in the 1972 Scandinavian Welfare Study. The main potential bias in tables restricted to married men is that younger men will tend to be under-represented.

There are also several tables in which an over-representation of younger men can be expected. The 1964 French table includes only men under 46 and therefore lacks men toward the end of their careers. All seven tables from the Ornauer study on Images of the World in the Year 2000 (conducted in 1967 in England, Finland, the Netherlands, Norway, Spain, and Yugoslavia, and in 1969 in Japan) are from samples of men under 40. Other tables with similar sampling bias are the 1951 Benjamin table for England and the 1950 Carlsson table for Sweden. These two tables were constructed from census data and birth records, which implies that the occupation of the father was measured at an early point in his career. We suspect that the bias in these tables is similar to that when younger men are oversampled.

We assume that these variations in sampling will contribute to variation in mobility regimes, as measured by parameters constructed from the tables. Specifically, we suspect that the omission of younger men upwardly biases the association and inheritance parameters and that the omission of older men downwardly biases these parameters. We correct this by taking the (potential) sampling biases into account as a control variable. The presence and direction of possible age bias is indicated in Table 2 by scores of +1 for tables in which older men are oversampled ("mature samples"), -1 where younger men are oversampled ("immature samples"), and 0 otherwise.

Occupational Detail

Our collection of tables can be divided into several categories on the basis of the amount of detail available in the occupational classifications from which we constructed the tables. The first distinction is between tables we created from unit data and tables we created by manipulating or copying published counts. In all, 30 of the 149 tables were derived from published counts

(sometimes containing many more than six categories). Of these, fifteen were already coded in the EGP-scheme. The other 15 we judged to be collapsible into categories at least nominally comparable to the EGP-scheme.

The tables we constructed from unit data can be divided into three subgroups based on the amount of detail in the original occupational classification. If the classification was fairly crude (ranging from eight to about 100 categories), we mapped the categories directly into the EGP-scheme. If the classification included more than 100 categories, we recoded the categories into the expanded ISCO and then applied the scheme for mapping ISCO categories into the EGP classification outlined above. The third group is formed by a number of data sets that were originally coded in the ISCO classification.

Occupational titles may map into the EGP classification only imperfectly. It is obvious that the precision of matches depends directly on the level of detail in the original table or data—the more detailed the original classification, the greater the likelihood of a precise match. Where the original classification is not very detailed, it will tend to include within single categories jobs mapping into more than one EGP category. For example, skill distinctions among manual workers may be lacking in the original classification, as may distinctions between lower level managerial workers and routine non-manual workers and even between routine non-manual workers and unskilled and semiskilled manual workers.

We assess the precision of the mapping of occupational titles into the EGP scheme using a six category scale, the categories ranging from 5 for the most precise coding to 0 for the least precise coding. The categories, shown in Table 2 under the column labeled Q (Quality), are defined as follows:

Quality = 5: tables originally published in the EGP scheme. These include, first, the three tables for England 1972, France 1973 and Sweden 1973 that were analyzed by Erikson, Goldthorpe, and Portocarero (1979, 1982, 1983), Hope (1982), and Hauser (1984). The exact frequencies are taken from Hauser (1984). In addition, the published tables for Ireland 1974 and Northern Ireland 1973, Finland 1980, New Zealand 1976 and Australia 1973, and nine tables for Germany 1976-1981 all were created according the specifications of the originators of the EGP scheme. Finally the tables for Scotland (1975) and England/Wales (1983 and 1986) are included in this category since they were constructed from unit data coded into the Hope-Goldthorpe classification that formed the basis for the EGP scheme. In total, 13% of our tables are in this category.

Quality = 4: tables constructed from unit data in which occupations were originally classified in ISCO or near-ISCO codes. This category includes 14% of our tables: ten tables from the Netherlands created for Ganzeboom et al.'s (1987) analysis; seven tables tabulated from the first and second rounds of the Political Action Survey (in addition to the 1974 and 1979 tables

for the Netherlands) [Austria 1974, Finland 1975, Germany 1975 and 1980, Italy 1974, Switzerland 1976, and the United States 1974]; tables for Northern Ireland 1968 and Quebec 1977, included since their original classifications are very close to the original EGP specifications; and two tables on Germany 1982 and 1984 derived from the Allbus surveys.

Quality = 3: tables constructed from unit data in which an original detailed occupational classification was translated into ISCO and then, as a second step, our recoding procedure was applied. This is the largest category, containing 30% of the tables. Among these are the two tables for the United States from the 1962 and 1973 OCG surveys, the 13 tables for the United States constructed from the 1972-1986 NORC General Social Survey, and the two tables derived from the 1947 NORC prestige study. Other tables in this category are those constructed from the 1982, 1983 and 1986 Hungarian surveys in which the Hungarian codes were converted to the ISCO scheme by our Hungarian colleagues. Also included are all the tables from the Wright survey (Canada 1982, Finland 1982, Norway 1982, Sweden 1983, USA 1981); two tables from Verba, Nie and Kim's Seven Nation Study (India 1971, Japan, 1971); three tables for Australia (the two for 1967 and the one for 1987); Brazil 1973; Canada 1984; England 1963, 1969 and 1974; Israel 1974; the Japanese tables for 1955, 1965 and 1975; the Philippines 1973; Poland 1972; Scotland 1974; and the two 1970 tables for Taiwan 1970.

Quality = 2: tables constructed from occupational classifications not detailed enough to sustain conversion into ISCO categories but still detailed enough to warrant fair confidence regarding the validity of the mapping into EGP categories; 17% of our tables are in this category. In such cases we matched the existing titles directly to EGP categories, and where possible corrected these matches with independent information on self-employment and supervisory status. Most important among these are eight tables constructed for the four Nordic countries from the Scandinavian Welfare Study 1972. The Scandinavian Welfare survey coded occupations in several different ways but used a detailed three-digit code only for respondent's occupation. We decided therefore to use a classification available for both fathers and sons, a 25 category scheme that closely parallels the six EGP categories, in conjunction with additional information on employment status from Carlsson's classification (also contained in the file).[11] Other tables included in this category are those with fairly detailed codes (typically around 100 categories): Hungary 1973, Hong Kong 1967, Japan 1967, and the Netherlands 1958; and those with a limited number of categories (10-20) that map relatively precisely into the six EGP categories: Belgium 1975 and 1976, Canada 1973, Germany 1959 and 1969, Italy 1963, 1968 and 1972, Norway 1957, 1965 and 1973, and Quebec 1973.

Quality = 1: other published tables and unit data where the level of detail is only slightly greater than in the six-fold EGP scheme. In these cases we have

settled for only nominal equivalence between the original data and the EGP classification. We include in this category a number of published tables in which the categories are generally similar to the categories of the EGP classification. Examples of these are the tables for Australia 1965, Austria 1978, Czechoslovakia 1967, England 1951, France 1964, Germany 1969 (Kleining), Hungary 1962, the Philippines 1968, Poland 1982 and 1987, Spain 1960 and 1968, Sweden 1950. Unit data included in this category because of their crudeness are the Cantril data for India (1962 and 1963), Israel (1962) and the United States (1959); Ornauer's 1967-1969 cross-national survey on Images of the World in the Year 2000 (conducted in England, Finland, Japan, Netherlands, Norway, Spain, Yugoslavia); and data from election surveys in Denmark 1971, France 1957 and 1967, and Sweden 1960.

Quality = 0: Finally, there are some tables of admittedly dubious quality (six per cent of the total). These include tables from the 1971 European Community Study for the Netherlands, France and Belgium. This set is important because it adds the only national table on Belgium to our dataset. The problem is that the only way to distinguish between skilled and unskilled/ semi-skilled manual workers is by using education as a proxy. The consequence of this may well be an artifactual inflation of the association between father's and son's class. Since there are several tables for the Netherlands and France, we can correct for this inflation with a "study-effect" variable. Other tables are included in this category because they display a variety of deficiencies. The 1971 Nigerian table is derived from a data set containing an unusually large number of missing values on the occupation variables. The 1963 India table is from a survey conducted by the Indian Institute of Public Opinion that has an unknown oversampling of urban respondents. The Tumin/Feldman table for Puerto Rico 1954 published by Miller, 1960 (the only Miller table we use) over-represents the highly educated. The 1974 table for England from the Political Action Study is based on different information for fathers and sons. Finally, the 1967 Malaysia table (otherwise a Quality = 3 in-law table) and Ammassari's 1974 Italian table (otherwise Quality = 1) are included here simply because they are empirical outliers. The Malaysian table exhibits an extremely low association between father's and son's occupation when the diagonal categories are excluded, while Ammassari's exhibits a particularly strong positive association. We do not know why these results occur, but think it wise to exclude them from the analysis at some point and have therefore demoted them to Quality = 0. With the exception of the European Community Study, these deficiencies differ from table to table and hence cannot be corrected with a study effect variable. We include these tables in our data set (1) for reasons of completeness, and (2) to demonstrate that our results are not dependent on the selection of tables for analysis. We employ the data quality scale just described as an exogenous variable in our analysis to attempt to control for the effect of variable data quality.

Self-Employment

There is an additional way in which our constructed tables may fail to conform precisely to the requirements of the EGP scheme. As we noted above, there is substantial variability in the precision with which self-employed workers or owners of small businesses are defined. There are actually two distinct groups in EGP category IVa + IVb (new category 3): self-employed shopkeepers and self-employed artisans. In most of the data sets, self-employed shopkeepers are adequately identified. This is because in many occupational classifications, for example, the ISCO, this information is included in the job title. All in all, small shopowners are not well defined in the data used to construct six tables and self-employed artisans are not well defined in the data used to construct 26 tables. We try to assess and control for the lack of information on self-employment by introducing two exogenous variables: a variable scored 1 if information is available that permits the identification of self-employed shop-keepers, and scored 0 otherwise; and a similarly defined variable for artisans. These scores are also shown in Table 2.

Study Effects

Finally, we introduce control variables to take account of design similarities in a number of cross-national studies—in each case a dummy variable identifying a particular group of studies sharing a common design. We conjecture that studies which employ a common design, in particular a common coding scheme, might show similar deviations from the EGP scheme. We thought this particularly likely for the eight tables from the Scandinavian Welfare Study; three of the five tables (Nigeria, Japan, India) from the Verba et al. study (the other two surveys employed a different coding scheme); the eight tables from the 1974-1976 Political Action Survey; the three tables from the 1971 European Community study; and the seven tables from Ornauer's Images of World in the Year 2000 study. We did not introduce design effect variables for the tables obtained from the Wright and Cantril studies because these surveys did not employ a common occupational classification.

Statistical Methods

In this paper we do not discuss observed mobility, nor do we investigate the influence of structural mobility. We restrict ourselves to the analysis of relative mobility chances (circulation mobility) for given marginal distributions. For the bulk of our analysis, we utilize a particular kind of scaled model of association, Goodman's *Row and Column Effects Model II* (Goodman 1979a, 1979b). This model can be described as a modification of the constraints of the uniform association model. Origin and destination

Table 2. Data Deficiency Codes, Fit Statistics, and Selected Parameters for Two Logmultiplicative Models Applied to 149 Tables from 35 Countries

Name	N	Sa	Ar	Sh	Q	L_d	L_d/N	L_e	L_e/N	U_d	IMM_d	U_e
AUS65	1852	0	0	1	1	61.8	.03	63.3	.03	1.15	.58	1.24
AUS67	747	0	0	1	3	35.8		38.4		1.53	.48	1.38
AUS67l	604	1	0	1	3	29.5		30.6		1.35	.54	1.36
AUS73	2227	1	1	1	5	74.8	.03	95.3	.04	2.09	.42	1.73
AUS87	632	0	0	0	3	24.5		34.2		1.73	.38	1.24
AUT69n	634	0	1	1	1	27.8		54.2	.09	2.46	.94	3.49
AUT74p	454	0	1	1	4	36.4		36.8		1.42	.68	1.73
AUT78	9971	0	0	1	1	408.6	.04	383.0	.04	2.13	.58	2.22
BEL71e	518	0	1	1	0	39.8		74.1	.14	1.08	1.13	2.20
BEL75	748	0	1	1	2	93.3	.12	102.7	.14	1.36	.79	2.01
BEL76	603	0	1	1	2	52.8	.09	71.4	.12	1.50	.89	2.40
BRA73	5964	0	1	1	3	157.8	.03	204.0	.03	2.24	.42	1.92
CAN73	10224	0	1	1	2	142.1	.01	131.3	.01	1.42	.53	1.39
CAN82w	1140	0	1	1	3	25.2		26.9		1.58	.47	1.42
CAN84	1185	0	0	0	3	34.3		38.6		1.98	.45	1.74
CSK67	3942	0	1	1	1	88.4	.02	132.0	.03	1.81	.42	1.54
DEN71	510	0	1	1	1	42.7	.08	50.3	.10	1.83	.74	2.22
DEN72l	331	1	1	1	2	31.3		31.7		2.03	.53	2.01
DEN72s	426	0	1	1	2	25.5		24.9		2.87	.60	2.97
ENG51	2534	-1	0	1	1	81.0	.03	74.4	.03	2.52	.53	2.45
ENG63	685	0	1	1	3	32.2		32.1		1.55	.61	1.75
ENG67t	315	-1	1	1	1	14.7		15.3		1.59	.47	1.36
ENG69	726	0	1	1	3	27.5		26.3		2.29	.54	2.28
ENG72	9489	0	1	1	5	156.5	.02	148.0	.02	2.05	.50	1.94
ENG74	764	0	1	1	3	21.7		23.3		1.17	.62	1.38
ENG74p	397	0	1	1	0	35.4		35.5		2.62	.48	2.46
ENG83	1520	0	1	1	5	39.3		39.2		2.09	.46	1.83
ENG86	1327	0	1	1	5	22.3		25.2		1.83	.48	1.64
FIN67t	190	-1	1	1	1	22.6		24.0		1.77	.41	1.43
FIN72l	283	1	1	1	2	23.6		26.2		2.12	.73	2.52
FIN72s	383	0	1	1	2	35.4		35.7		1.63	.60	1.79
FIN75p	417	0	1	1	4	27.8		28.2		1.51	.55	1.56
FIN80	1608	0	1	1	5	33.9		36.3		1.47	.59	1.59
FIN82w	409	0	1	1	3	23.1		23.3		.82	.61	.98
FRA58	335	0	1	1	2	23.1		26.5		2.27	.75	2.72
FRA64	9888	-1	1	1	1	300.0	.03	316.1	.03	2.68	.63	2.91
FRA67	743	0	1	1	1	47.4	.06	49.5	.07	2.73	.57	2.89
FRA70	4769	0	1	1	5	113.3	.02	112.2	.02	1.98	.59	2.10
FRA71e	623	0	1	1	0	63.1	.10	69.2	.11	1.53	.77	2.01
GER59	1377	0	0	1	1	55.8	.04	65.2	.05	2.28	.67	2.63
GER69	271	0	1	1	2	21.6		26.1		1.89	.78	2.52
GER69k	4047	0	0	1	1	133.5	.03	214.0	.05	2.50	.79	3.18
GER75p	657	0	1	1	4	35.5		34.0		1.56	.58	1.66
GER76z	518	0	1	1	5	45.1	.09	43.9	.08	2.72	.49	2.55
GER77z	443	0	1	1	5	19.9		20.0		2.10	.57	2.18

(continued)

Table 2.   (Continued)

Name	N	Sa	Ar	Sh	Q	L_d	L_d/N	L_e	L_e/N	U_d	IMM_d	U_e
GER78	401	0	1	1	5	27.4		27.6		2.10	.56	2.14
GER78x	365	0	1	1	5	16.3		16.8		1.26	.57	1.37
GER78z	388	0	1	1	5	40.9		41.1		2.96	.46	2.69
GER79z	409	0	1	1	5	27.6		29.5		2.95	.66	3.21
GER80	392	0	1	1	5	39.8		39.1		2.30	.51	2.21
GER80a	649	0	1	1	5	22.7		26.9		1.72	.70	2.15
GER80p	543	0	0	1	4	39.2		40.4		2.05	.64	2.26
GER80z	396	0	1	1	5	29.1		32.3		2.44	.40	2.01
GER82a	570	0	1	1	4	41.9	.07	43.2	.08	1.39	.64	1.67
GER84a	589	0	1	1	4	35.6		35.5		1.81	.61	2.01
HKG67	1334	1	0	1	2	47.7	.04	52.4	.04	1.82	.54	1.83
HUN62	11988	0	1	1	1	333.6	.03	393.5	.03	3.45	.47	3.26
HUN73	11233	0	1	1	2	204.4	.02	240.7	.02	2.60	.48	2.45
HUN73l	7810	1	1	1	2	148.5	.02	175.0	.02	2.70	.48	2.55
HUN82	5416	0	1	1	3	38.8		65.4	.01	1.67	.46	1.50
HUN83	10710	0	1	1	3	107.8	.01	228.0	.02	1.93	.41	1.63
HUN86	2049	0	1	1	4	80.6	.04	101.8	.05	1.59	.42	1.30
IND62c	1279	0	1	1	1	115.2	.09	120.6	.09	2.35	.66	2.74
IND63a	1587	0	0	1	0	86.7	.05	320.8	.20	1.66	1.69	4.06
IND63c	1190	0	1	1	1	192.5	.16	303.5	.26	1.51	1.59	3.92
IND71n	1944	0	1	1	3	73.9	.04	94.5	.05	1.50	.79	2.17
IRE74	2128	0	1	1	5	65.7	.03	78.3	.04	1.86	.68	2.19
ISR62c	407	0	1	0	1	55.3	.14	54.7	.13	1.95	.58	2.14
ISR74	5921	0	1	1	3	84.2	.01	139.8	.02	1.52	.43	1.20
ITA63	1045	0	1	1	2	40.0		57.1	.05	2.51	.78	3.06
ITA68	960	0	1	1	2	31.4		31.2		3.43	.54	3.47
ITA72	590	0	1	1	2	50.9	.09	51.9	.09	3.20	.53	3.11
ITA74	3513	0	1	1	0	115.9	.03	123.0	.04	6.72	.51	6.49
ITA75p	595	0	1	1	4	54.1	.09	55.8	.09	2.19	.48	2.23
JAP55	1800	0	1	1	3	78.1	.04	86.0	.05	1.29	.49	1.15
JAP65	1828	0	1	1	3	55.9	.03	62.5	.03	1.29	.49	1.20
JAP67	539	0	0	1	2	27.4		60.9	.11	1.07	1.13	1.94
JAP69t	402	-1	1	1	1	43.1	.11	46.2	.11	.70	.75	1.05
JAP71n	1043	0	1	1	3	40.5		43.8	.04	2.32	.50	2.24
JAP75	2053	0	1	1	3	45.8	.02	50.0	.02	1.33	.53	1.33
MAL67	4430	1	0	1	0	140.6	.03	152.6	.03	.41	.63	.59
NET58	425	0	0	1	2	26.3		44.7	.11	1.85	.97	2.84
NET67t	182	-1	1	1	1	23.6		22.9		2.69	.58	2.76
NET70	779	0	1	1	4	35.0		59.5	.08	1.83	.90	2.55
NET71	361	0	1	1	4	21.8		23.3		2.22	.43	1.89
NET71e	383	0	1	1	0	51.0	.13	74.8	.20	2.29	1.13	3.22
NET74p	396	0	1	1	4	28.7		28.1		2.12	.50	2.00
NET76	560	0	1	1	4	31.0		30.7		2.46	.60	2.60
NET77	555	0	1	1	4	35.6		34.1		2.26	.54	2.26
NET77x	1407	0	1	1	4	46.1	.03	44.8	.03	1.97	.59	2.08
NET79p	316	0	0	1	4	36.5		40.3		.96	.73	1.41
NET82	878	0	1	1	4	41.5		40.1		1.53	.53	1.48

(continued)

Table 2. (Continued)

Name	N	Sa	Ar	Sh	Q	L_d	L_d/N	L_e	L_e/N	U_d	IMM_d	U_e
NET82u	426	0	1	1	4	33.7		33.4		1.87	.48	1.70
NET85	1653	0	1	1	4	24.9		28.9		1.55	.48	1.39
NIG71n	1286	0	1	1	0	46.4	.04	88.6	.07	1.06	.29	.07
NIR68	474	0	1	1	4	29.1		40.4		1.13	.82	1.75
NIR73	2291	0	1	1	5	76.9	.03	83.5	.04	1.87	.66	2.16
NOR57	632	0	1	1	2	44.3	.07	46.6	.07	1.53	.50	1.44
NOR65	724	0	1	1	2	24.4		26.8		1.70	.63	1.90
NOR67t	170	-1	1	1	1	19.7		19.9		1.27	.54	1.33
NOR72l	328	1	1	1	2	22.9		23.8		1.20	.58	1.33
NOR72s	412	0	1	1	2	27.9		30.5		2.26	.44	2.03
NOR73	966	0	1	1	2	41.5		42.4		1.46	.49	1.34
NOR82w	884	0	1	1	3	29.2		31.0		1.08	.47	.95
NZE76	1453	1	1	1	5	45.4`	.03	58.6	.04	1.50	.43	1.21
PHI68	36468	1	0	1	1	418.3	.01	598.1	.02	1.44	.72	1.80
PHI73	5300	1	0	1	3	67.2	.01	84.6	.02	1.21	.66	1.47
POL72	31561	0	1	1	3	407.1	.01	381.3	.01	1.28	.56	1.35
POL82	1703	0	1	1	1	21.6		24.8		1.70	.48	1.56
POL87	954	0	1	1	1	28.0		29.9		.99	.58	1.11
PUE54	857	0	0	1	0	30.5		45.0	.05	1.97	.38	1.61
QUE60	402	0	0	0	1	57.8	.14	58.2	.14	1.80	.66	2.06
QUE73	2610	0	1	1	2	69.8	.03	67.7	.03	1.92	.52	1.86
QUE77	3620	0	1	1	4	101.9	.03	130.2	.04	1.49	.42	1.20
SCO74	415	0	1	1	3	22.9		24.5		1.21	.66	1.52
SCO75	3887	0	1	1	5	138.6	.04	136.9	.04	1.92	.48	1.76
SPA65	2127	0	1	1	1	122.6	.06	130.9	.06	2.65	.54	2.67
SPA67t	647	-1	1	1	1	46.1	.07	46.6	.07	2.83	.63	3.05
SPA75	48464	0	1	1	1	844.7	.02	1014.7	.02	2.29	.68	2.58
SWE50	12503	-1	0	1	1	345.7	.03	418.7	.03	2.97	.46	2.77
SWE60	600	0	0	1	1	51.6	.09	50.6	.08	3.55	.48	3.42
SWE72l	343	1	1	1	2	27.4		29.5		2.52	.44	2.27
SWE72s	428	0	1	1	2	17.6		18.5		3.22	.52	3.16
SWE73	2094	0	1	1	5	16.8		30.0		1.94	.43	1.68
SWE83w	594	0	1	1	3	43.2	.07	45.3	.08	1.78	.50	1.68
SWI76p	510	0	1	1	4	34.2		32.4		1.95	.57	2.01
TAI70	725	0	0	1	3	75.8	.10	79.4	.11	1.04	.55	1.07
TAI70l	585	1	0	1	3	33.0		34.0		1.58	.60	1.70
USA47	980	0	0	1	3	45.8	.05	47.2	.05	2.15	.54	2.15
USA47l	934	1	0	1	3	73.7	.08	80.0	.09	1.82	.48	1.67
USA59c	517	0	0	0	1	31.1		30.5		1.37	.57	1.46
USA62o	10519	0	1	1	3	103.6	.01	117.5	.01	1.73	.49	1.62
USA72g	526	0	1	1	3	33.9		33.7		1.27	.56	1.31
USA73g	469	0	1	1	3	32.3		33.8		1.15	.48	1.00
USA73o	20310	0	1	1	3	178.2	.01	237.5	.01	1.55	.46	1.37
USA74g	432	0	1	1	3	22.4		22.8		1.67	.49	1.57
USA74p	459	0	1	1	3	38.1		47.6	.10	1.60	.34	1.09

(continued)

Table 2. (Continued)

Name	N	Sa	Ar	Sh	Q	L_d	L_d/N	L_e	L_e/N	U_d	IMM_d	U_e
USA75g	440	0	1	1	3	25.0		29.0		1.53	.41	1.16
USA76g	427	0	1	1	3	18.3		17.7		1.29	.54	1.29
USA77g	477	0	1	1	3	28.2		28.1		1.41	.52	1.37
USA78g	447	0	1	1	3	27.2		32.9		1.80	.39	1.39
USA80g	414	0	1	1	3	19.8		25.0		1.65	.39	1.24
USA81w	610	0	1	1	3	18.8		21.3		1.16	.47	.98
USA82g	507	0	1	1	3	35.9		39.5		1.45	.44	1.17
USA83g	473	0	1	1	3	19.6		20.1		1.27	.49	1.15
USA84g	396	0	1	1	3	31.9		33.2		1.13	.47	.97
USA85g	468	0	1	1	3	23.0		23.6		1.45	.51	1.36
USA86g	424	0	1	1	3	32.0		31.6		1.21	.48	1.07
YUG67t	195	-1	1	1	1	33.8		33.4		2.78	.51	2.75

Note: Ar: Whether self-employed artisans are well defined (1 = yes; 0 = no); Sh: Whether self-employed shop-owners are well defined (1 = yes, 0 = no); Sa: Sample deficiencies (-1 = immature sample, 0 = normal sample, 1 = mature sample); Q = ("Quality"): A measure of how closely the original occupational classification matches the EGP scheme (range 0-5, see text for details); L_d: Likelihood ratio χ^2 for Model D; L_d/N: Effect size statistic for Model D; L_e: Likelihood ratio χ^2 for Model E; L_e/N: Effect size statistic for model E. The effect size statistics are not shown for Models that fit the data by conventional standards.

category scores are rescaled in order to produce the best fitting linear-by-linear interaction in the table. The basic log-multiplicative model used throughout our analysis is, for a single table with counts f_{ij}:

$$\ln (F_{ij}) = O_i + D_j + IMM_i + U*U_i*U_j \qquad (1)$$

where

F_{ij}	is the expected frequency in the ijth cell;
O_i	are the origin effects;
D_j	are the destination effects;
IMM_i	are the inheritance-parameters for each diagonal cell (i = j);
U	is the association parameter given the scores U_i and U_j;
U_i	are the estimated origin scores with constraints $\Sigma U_i = 0$ and $\Sigma U_i^2 = 1$;
U_j	are the estimated destination scores with constraints $\Sigma U_j = 0$ and $\Sigma U_j^2 = 1$;

An additional constraint is equality among corresponding origin and destination categories ($U = U_j$). With this modification, Model (1) is what in Goodman's terminology is called a *Quasi Equal Row and Column Effects Model II.*

If we ignore the other components of the model, the association parameters and origin and destination scores are related to expected odds ratios as follows:

$$lu \quad \frac{F_{ij} * F_i{}'_j{}'}{F_{ij}{}' * F_i{}'_j} \quad U * (U_i - U_i{}') * (U_j - U_j{}') \tag{2}$$

where i and i' are adjacent categories and likewise for j and j'. One can see why these models are scaled association models: the U parameter is equivalent to the log odds-ratio of the expected frequencies, but scaled by the distance between category scores. Observe that the uniform association model is a special case in which adjacent classes are equidistant (say 1): $(U_i - U_i{}') = (U_j - U_j{}') = 1$ for all i and j.

In general, models of this type have three interesting elements:

a. *Category scores U_i and U_j.* These are the occupational category scores that maximize the linear-by-linear interaction in the table. Several kinds of restrictions can be put on the category scores. First, we usually want the set of scores for fathers and sons to be *equal*: ($U_i = U_j$, for all i = j). Second, when comparing tables we prefer models that restrict the category scores to be common, or *homogeneous*, between tables. The advantage of these *homogeneous equal row and column effects models* is that by creating a standard distance between each pair of categories across tables they permit unambiguous interpretation of the association and immobility parameters.

b. The *association parameter U,* which is an overall measure of association for the table given the particular category scores, U_i and U_j. These U-parameters can be constrained to be equal across tables (positing no difference in association between tables) or to be related to exogenous variables.

c. The *immobility parameters IMM_i,* which single out diagonal cells to be modeled separately. If IMM_i parameters are included in the model, the U_i and U_j scores and the association parameter U refer to occupational opportunities for those who are occupationally mobile, that is, those whose origin and destination classes differ. IMM_i parameters can be constrained to be equal between tables, indicating an immobility pattern that differs from class to class but is constant across tables within each class. We also make use of one immobility parameter for each table, IMM, which posits a level of immobility common to all diagonal cells in a table. When both IMM and the IMM_i are included in the model, the IMM_i indicate the deviation of specific diagonal cells from the overall level of immobility. As with the U parameter, linear constraints can be placed on the immobility parameters.

Given the amount of data to be analyzed, the GLIM-macro (Dessens et al. 1985) we employed in some previous work to compute maximum likelihood estimates of *Row and Column Effects Model II* with exogenous variables cannot be used here. Instead we use Assoc(PC), a version of the ANOASC program by Shockey and Clogg (1983) adapted by Luijkx,[12] which works with an iterative proportional fitting algorithm but does not permit the inclusion of exogenous variables. We thus resort to a two-step strategy of model development. *First,* we analyze our tables without exogenous constraints, using Assoc(PC). Our goal in this step is to find a pattern of mobility common to all the tables. Success in this step (which we achieve) enables us to summarize the differences between tables by two sets of parameters: (1) a single parameter, U, measuring the extent of off-diagonal association; and (2) a set of "inheritance" parameters, one for every diagonal cell, IMM_i, or, alternatively, a single overall inheritance parameter, IMM. In the *second step* we analyze these parameters by means of analysis of covariance models estimated with regression equations in which the tables are the observations and the parameters plus various exogenous factors are the variables, in order to assess the extent of variation in mobility parameters between countries and over time and also to determine whether the quality of the data affects the parameters.

This two-step procedure can be criticized for at least three potential deficiencies, the first of which we think unimportant, the second of which is endemic to this sort of analysis, and the third of which we can overcome.

First, it is sub-optimal from an estimation standpoint: the parameters estimated in our two steps are in general not identical to the parameters derived from a one-step estimating procedure. However, we have investigated the amount of divergence between the results of the one-step procedure and the results of the two-step procedure for more limited samples and the differences invariably are very small.

Second, our method does not take account of differences in the size of the various tables included in the analysis. However, while it would be possible to adjust for variations in the size of the tables from which the coefficients were derived by weighting each coefficient proportionally to the number of cases in the table, it is uncertain whether this procedure would improve the analysis. The problem is that after such a correction the larger tables would outweigh the smaller ones to such a degree that, in effect, we would be fitting contrasts between the larger tables only. We have therefore not applied any weight correction in the second step of our analysis and treat each table as one observation. In doing so, we take an extremely conservative position with respect to the possibility of detecting statistically significant differences between our tables.

Third, our method does not directly take account of differences in data quality. In order to correct for variations in data quality, we introduce as exogenous variables our judgmental estimates of the quality of each table and

Table 3. Fit Statistics for Logmultiplicative Models of Intergenerational Class Mobility in 35 Countries; Each Model is Applied to All 149 Tables (*total N = 391,686*)

$F_{ijk \, \triangle}$		*DF*	*L*	*BIC*
A. $O_{ik} + D_{jk} + U_kU_{ik}U_{jk} + IMM_{ik}$ (heterogeneous scores)		1490	2,913	-12,276
B. $O_{ik} + D_{jk} + U_kU_iU_j + IMM_{ik}$ (homogeneous scores)		2674	6,456	-27,980
C. $O_{ik} + D_{jk} + U_kU_iU_j + IMM_{ik}$ (homogeneous equal scores: $U_i = U_j$)		2678	6,898	-27,589
D. $O_{ik} + D_{jk} + U_kU_iU_j + IMM_k + IMM_i$ (homogeneous equal scores: $U_i = U_j$)		3418	10,306	-33,712
E. $O_{ik} + D_{jk} + U_jU_iU_j + IMM_i$ (homogeneous equal scores: $U_i = U_j$)		3566	12,212	-33,712

Note: U_i = origin scores; U_j = destination scores; U: association coefficient; IMM_i: immobility coefficients; IMM: general immobility level; k indexes the tables; DF: degrees of freedom; L: Likelihood ratio χ^2; BIC: Bayesian information coefficient.

the comparability of the occupation categories to the EGP scheme (see above). The introduction of these variables enables us to test the hypothesis that the lower the quality of a table, the more mobility it will show. This seems to us the most plausible assumption about the effect of data errors. We assume that low quality coding will in general disturb the association between father's occupation and son's occupation, in the same way that unreliability biases correlations in a downward direction.

ANALYSIS

Our analysis consists of two parts. The goal of the first is to test whether the collection of tables is actually comparable by setting up a common framework against which the differences can be evaluated. This is accomplished by estimating a series of log-multiplicative models, as outlined above. Our preferred model is arrived at by gradually adding restrictions to the parameters in order to capture the commonalities of the tables in a small group of common parameters and the differences among the tables in a small set of varying (table specific) parameters. In the second step we directly test the FJH hypothesis of a common association pattern by submitting each set of pertinent parameters of the log-multiplicative association model to an analysis of covariance, with countries as groups and the year of the survey as the covariate. We employ a hierarchical testing strategy in which we first attempt to account for variability in the mobility parameters by reference to the various data deficiencies and biases we have discussed. We then determine how much additional variance falls between countries, and after that how much additional variance (that cannot be attributed to either data deficiencies or country differences) can be

explained by linear secular trends in the degree of societal openness. Finally, we allow secular trends in mobility to vary across countries and assess the additional explanatory power that we derive from relaxing the assumption that there is a common world wide trend toward increasing societal openness.

Establishing a Common Framework

Table 3 shows goodness of fit statistics for five log-multiplicative association models of the sort we described above; each of these models was fitted to all 149 tables at once. Since we used the original counts in the tables, rather than downweighting the large tables or using only part of the data, the total number of cases for all tables combined is $391,688.$[13] Given the large sample size, virtually all null hypotheses will be rejected by conventional statistical tests. Raferty (1986) has introduced the BIC ("Bayesian Information Coefficient") statistic as a solution to this problem. This statistic, which for each model is a function of the likelihood ratio $\chi2\,(L)$, the degrees of freedom, and the number of cases in the table, can be used to assess the relative probability of competing models. A model with a more negative BIC, and therefore a greater probability of being correct, is to be preferred to a model with a less negative BIC.

Model A is a *quasi-heterogenous* row and column effects model. In this model the category scores (U_i and U_j), the association coefficient (U), and the diagonal parameters (IMM_i) are all permitted to vary across tables, as, of course, are the parameters required to reproduce the origin (O) and destination (D) distributions. If this proved to be the optimal model, it would imply that the tables are fundamentally incomparable in the sense that the class structure, the pattern of immobility, and the degree of openness all vary across tables and, moreover, that the class structure varies between generations. This model, A, however, compares unfavorably by a wide margin with the more restricted *homogeneous* Model B, in which the class category scores are constrained to be equal across tables (but not between rows and columns). The large improvement of Model B over Model A (as measured by the BIC coefficient) implies that the relative distances between class categories are essentially similar in all societies. This is a finding of great substantive importance, since it implies that a common class structure exists everywhere, at least insofar as class structure is defined by mobility chances. A second, practical, implication is that the tables can, indeed, be analyzed within a common framework: given that the scaling of the class categories can be taken to be essentially similar across tables, it is sensible to compare the other coefficients.

Model C adds the restriction that the category scores are *equal* for fathers and sons. The slightly more negative BIC coefficient for Model B compared to Model C implies that Model C is actually too restrictive and that the scores differ between origin and destination categories. However, since Models B and C are about equally probable,[14] we prefer Model C on grounds of parsimony.[15]

Model D imposes extra restrictions on the diagonal parameters by positing that the *relative* size of the six diagonal parameters is common across tables, although the *absolute* size of the parameters is not. Hence, differences between tables with respect to immobility can be summarized by a single parameter that indicates the general level of immobility in each table, given the common pattern. The BIC coefficient clearly favors Model D over Model C. Model D reduces the number of parameters permitted to vary across tables to two, an immobility coefficient and an off-diagonal association coefficient. Finally, Model E drops the table-specific overall immobility parameter, IMM, and hence reduces the number of association coefficients that differ between tables to one, the association coefficient U. The difference between the BIC coefficients for Model D and Model E is very small; hence we conclude that Models D and E are about equally probable. This leaves us free to choose between Models D and E on theoretical grounds. Our preferred model is D, since it seems plausible to us that the factors affecting the degree of class immobility are somewhat different from the factors affecting the overall degree of equality in mobility chances among those who are mobile. As we will see, this is indeed the case. However, we discuss the parameters of Model E as well.

Although the BIC statistics favor Models D and E overall, these models may fit individual tables poorly. Therefore it is instructive to assess the fit of these models to each table. Table 2 reports the likelihood ratio goodness of fit statistic (L) for Models D and E, separately for each table. For more than half of the tables (57%), Model D fits according to the criterion of classical statistical inference—the computed likelihood ratio χ^2 (L) is smaller than the critical value for $p < .01$ (the critical value of L for $p < .01$ with 23 degrees of freedom is 41.6).

For the remaining tables, we can evaluate the fit of the model by recourse to the effect size statistic. Since the likelihood ratio χ^2 statistic (L) is proportional to the number of cases in the table, the effect size statistic ($= L/N$) is a suitable indicator of the adequacy of a model that does not fit by classical criteria. Since all of the L values for Model D are small relative to the size of the table to which they correspond (the largest effect size statistic for Model D is .14, for the 1963 Cantril study for India, and only one other effect size statistic is greater than .10), Model D appears to provide an adequate summary of the mobility pattern in each table, as well as for the entire set of tables taken as a group. The coefficients for Model E lead to the same conclusion. The proportion of tables with significant likelihood ratios is larger for Model E (.50, compared to .43 for Model D), but the pattern of deviations is very similar to that for Model D, the Cantril study for India in 1963 again heading the field but this time with a considerably larger effect size statistic (.26). Still, as with Model D, most of the effect size statistics are around .10 or lower.

Cross-national Commonalities in Occupational Mobility

Before discussing cross-national differences in mobility patterns, we need to consider the cross-national commonalities, which are of considerable interest in their own right. Two portions of Model D are common across tables: the class category scores and the cell-specific immobility parameters. These are:

	I/II	III	IVa/IVb	V/VI	VIIa	VIIb/IVc
Class scores	-.682	-.311	-.032	.119	.465	.450
Immobility:	1.230	1.622	3.280	1.656	0.994	9.555

what has been shown for Hungary (Ganzeboom, Luijkx, and Robert 1989) and the Netherlands (Luijkx and Ganzeboom 1989). As we have indicated, the class scores may be interpreted as a mobility probability gradient: the larger the difference between the scores for a pair of categories, the smaller the likelihood of mobility between them, or—if one prefers an interpretation in terms of odds ratios—the more unequal the outcome of the competition between the two categories with respect to mobility from or into them. The resulting dimension strongly resembles well-known a priori scalings of occupational categories with respect to socio-economic status (Duncan 1961): the mobility dimension separates manual from non-manual occupations and skill levels within these occupations; the small self-employed category occupies a middle position; and the farm occupations are at the extreme manual end of the scale.[16]

Note that all categories but two are well separated along the mobility probability gradient. The exception is that the score for farmers and farm laborers, the last category, nearly coincides with that for unskilled and semiskilled workers. Since an implication of *homogeneous equal scaled association* models (Models C, D, and E are all of this type) is that the pattern of inflow into and outflow from a category are similar, the similarity of the scale scores for the farm and semi- and unskilled labor categories implies that the sons of farmers or farm laborers and of unskilled or semi- skilled workers have similar destinations *and* that the origins of men who move into farming and into unskilled or semi-skilled work are similar. Given the small inflow into farming from other origins, these scale scores mainly reflect the outflow patterns, for which the similarity of the farm and unskilled/semi-skilled categories is hardly surprising. In another respect, however, the two categories are quite different: farming has the highest immobility coefficient and unskilled/semi-skilled work the lowest. The implication is that most farmers and farm workers are from farm origins, but that few of the fathers of unskilled and semi-skilled workers were themselves unskilled or semi-skilled.

Next to the farm category, the highest immobility parameter is for small proprietors. An obvious interpretation is that this is related to the transfer of property and the taste for autonomy in employment, which are not transferred via the educational system (cf. Hout 1984). From this reasoning, we would have expected a higher immobility coefficient for category I/II, a high proportion of which is comprised of large proprietors and self-employed professionals. However, since category I/II also includes many salaried professionals, who tend to be recruited through the educational system, what may be involved is as much the intergenerational transmission of cultural capital as of property or financial capital.

Between-Country and Over-Time Variation

The remaining parameters to be discussed are those for the general association level U and the general diagonal level IMM, which are table specific. Table 2 gives the values of these parameters under Models D and E for each of the 149 tables. The second part of our analysis involves treating these parameters[17] as dependent variables in analyses of covariance.[18]

We organize our analysis of these parameters stepwise. There are two groups of predictors: those used to test and control for the effects of data deficiencies; and those used to test the hypothesis of common social fluidity by assessing the extent to which variance across tables in the mobility parameters lies between countries or over time.

Data Deficiency Indicators

These are the variables listed in Table 2 and discussed in the *Data* subsection of the *Methods* section above. The indicators of "sample deficiencies" and the adequacy with which self-employed shopkeepers and artisans are identified are coded as shown in Table 2. These variables are so coded that we expect positive effects on the dependent variables from all three. On the basis of some exploratory analysis, we decided to represent the *Quality* categories shown in Table 2 by a set of dummy variables. In addition, we use five dummy variables to identify sets of tables from cross-national comparative studies in order to assess the possibility of study-specific cross-national design-effects: the Scandinavian Welfare Study, the Political Action Survey, the Images of the World in the Year 2000 Study, the Verba et al. Seven Nation Study, and the European Community Study.

Substantive Indicators

As promised at the outset, we assess the hypothesis of constant social fluidity by exploiting the fact that for 25 of our 35 countries we have more

than one table; these countries average about five tables each, although the range is from two (for Israel, Northern Ireland, the Philippines, Scotland, and Taiwan) to 20 (for the United States). Using the 139 tables for these 25 countries, we test the common social fluidity hypothesis with respect to the association parameters and each of the immobility parameters by modelling these parameters using an analysis of covariance design with countries as the groups and the year of the survey as the covariate. If the between-country variance in the U parameter is a substantial fraction of the total variance, the hypothesis of common social fluidity is cast strongly into doubt, because there are sizable country differences in the extent of mobility that must be explained.[19] And if, as we hypothesize, there is a secular trend within societies toward increased openness, the coefficient associated with the covariate, year, should be negative and statistically significant. The same arguments apply also to immobility parameters. We first test for between-country variance, by estimating Model 2 (of Table 4), and then add tests for the amount of systematic over-time variation in the parameters. We do this in two ways: first, by imposing a common time gradient for all countries (Model 3) and, second, by estimating a different time slope for each country (Model 4). Of course, the common over-time gradient can only be obtained for countries with replicated tables;[20] moreover, differences between countries in the over-time gradients can only be obtained for countries with three tables or more, reducing the number of countries for this part of the analysis to 19.

In sum, in this second stage there are three sets of substantive independent variables in our analysis. First, we use 24 dummy variables to specify country effects. Adding these variables to regression equations for the mobility parameters will furnish an estimate of the total between-country variance. Second, we use time as a predictor for the mobility regime. However, instead of using chronological time (year of survey), we have centered time within countries, so that this variable is truly uncorrelated with the between-country variance. Third, we allow the effect of time to vary across countries by adding interaction terms between time and country.

Each model is estimated twice, first for the full set of tables available given the constraints specified above (Panel A of Table 4) and then for a reduced set of tables representing countries that have at least three tables remaining after excluding tables with Quality = 0 and all inlaw tables[21] (Panel B of Table 4). These exclusions leave us with 18 countries and 112 tables. The analysis in Panel A is intended to consider *all* the available evidence. The analysis in Panel B is intended to omit all suspect evidence. If the results are similar— as, indeed, they are—we gain confidence that our results are not merely the accidental result of the particular set of tables analyzed.

Table 4. Variance Estimates for Selected Mobility Coefficients Derived from Logmultiplicative Models

	SS_b	SS_w	DF_{exp}	DF_{res}	F_{inc}	R^2	$Adj. R^2$
A. All tables (N = 149)							
a. *Association coefficient U model D*							
Model 1: (Sa + Ar + Sh + Q + St)	14.93	59.51	13	135	2.61 ***	.201	.124
Model 2: (Sa + Ar + Sh + Q + St) + C	41.82	32.63	38	110	3.62 ***	.562	.410
Model 3: (Sa + Ar + Sh + Q + St) + C + Y	43.43	31.00	39	109	5.66 **	.584	.435
Model 4: (Sa + Ar + Sh + Q + St) + C + Y + C * Y	48.71	26.73	58	90	1.15	.654	.432
b. *Immobility coefficient IMM model D*							
Model 1: (Sa + Ar + Sh + Q + St)	2.53	7.62	13	135	3.45 ***	.249	.177
Model 2: (Sa + Ar + Sh + Q + St) + C	6.60	3.56	38	110	5.03 ***	.650	.529
Model 3: (Sa + Ar + Sh + Q + St) + C + Y	6.62	3.53	39	109	0.62	.652	.528
Model 4: (Sa + Ar + Sh + Q + St) + C + Y + C * Y	7.57	2.58	58	90	1.74 *	.746	.582
c. *Association coefficient U model E*							
Model 1: (Sa + Ar + Sh + Q + St)	26.27	64.42	13	135	4.12 ***	.287	.218
Model 2: (Sa + Ar + Sh + Q + St) + C	57.65	34.05	38	110	3.94 ***	.629	.500
Model 3: (Sa + Ar + Sh + Q + St) + C + Y	59.99	31.71	39	109	8.04 **	.654	.530
Model 4: (Sa + Ar + Sh + Q + St) + C + Y + C * Y	65.11	26.59	58	90	0.91	.710	.523

(continued)

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Table 4. (Continued)

	SS_b	SS_w	DF_{exp}	DF_{res}	F_{inc}	R^2	$Adj.R^2$
B. Questionable ($Q = 0$), inlaw, and unitary tables detected ($N = 112$; 18 countries)							
a. *Association coefficient U model D*							
Model 1: (Sa + Ar + Sh + Q + St)	11.00	28.68	11	100	3.49 ***	.273	.198
Model 2: (Sa + Ar + Sh + Q + St) + C	24.56	15.13	28	83	4.37 ***	.619	.490
Model 3: (Sa + Ar + Sh + Q + St) + C + Y	25.73	13.95	29	82	6.78 ***	.649	.524
Model 4: (Sa + Ar + Sh + Q + St) + C + Y + C * Y	29.30	10.38	46	65	1.32	.738	.553
b. *Immobility coefficient IMM model D*							
Model 1: (Sa + Ar + Sh + Q + St)	1.56	4.32	11	100	3.28 ***	.265	.208
Model 2: (Sa + Ar + Sh + Q + St) + C	3.46	2.41	28	83	3.83 ***	.588	.449
Model 3: (Sa + Ar + Sh + Q + St) + C + Y	3.47	2.41	29	82	0.34	.590	.444
Model 4: (Sa + Ar + Sh + Q + St) + C + Y + C * Y	4.13	1.75	46	65	1.44	.702	.491
c. *Association coefficient U model E*							
Model 1: (Sa + Ar + Sh + Q + St)	22.96	29.76	11	100	7.01 ***	.435	.373
Model 2: (Sa + Ar + Sh + Q + St) + C	39.21	13.51	28	83	5.87 ***	.743	.657
Model 3: (Sa + Ar + Sh + Q + St) + C + Y	40.75	12.97	29	82	9.73 ***	.772	.693
Model 4: (Sa + Ar + Sh + Q + St) + C + Y + C * Y	44.20	8.52	46	65	1.54	.838	.724

Notes: SS_b: Sum of squares between countries; SS_w: Residual sum of squares; DF_{res}: Degrees of freedom for the residual sum of squares; DF_{exp}: Degrees of freedom for the explained sum of squares; F_{incr}: F-test for increment of explained variance; R^2: Variance explained; $Adj.R^2$: Variance explained adjusted for degrees of freedom; Sa, Ar, Sh, Q, and St are defined as in Table 2; St is a set of dummy variables representing the cross-national studies identified in Table 1; C: dummy variables for countries; Y: year (centered); Unitary: the only table available for a country; * p <.05; ** p < .01; *** p < .001.

Table 5. Models Regressing Parameters of Models D and E on Exogeneous Variables:
(a) Complete Set, (b) Questionable, Inlaw, and Fewer than Two Tables Omitted

	Model D				Model E	
	U		*IMM*		*U*	
	B	*se*	*B*	*se*	*B*	*se*
A. Complete set (35 countries, 149 tables)						
Constant	1.677 ***	.380	-.710 ***	.128	1.56 ***	.385
Sample deficiencies	-.218	.178	.040	.060	-.163	.180
Artisians well defined	.252	.177	-.018	.099	-.064	.296
Shopkeepers well defined	-.051	.293	-.104	.059	.104	.179
Questionable quality	.376	.311	.042	.105	.500	.314
Published table	.039	.234	.093	.079	.204	.237
Crude/semi-detailed data	-.316	.235	.238 **	.079	.038	.237
Detailed data	-.267	.201	.063	.068	-.152	.204
ISCO-data	-.501 *	.231	.028	.078	-.431	.234
EGP table or data	0		0		0	
Europ. Comm. Study 1971	.929 *	.442	.481 ***	.149	-.379	.447
Political Action Survey	-.040	.264	-.046	.089	-.139	.267
Scandinavian Welfare Study	.690 *	.297	-.135	.100	.500	.301
Verba et al. Seven Nations	.014	.316	-.190	.106	-.336	.320
World 2000 Study	-.328	.300	.001	.101	-.350	.303
Other studies	0		0		0	
Australia	.121	.327	-.078	.110	.008	.351
Austria	.359	.393	.474 ***	.132	1.112 **	.398
Belgium	-.170	.404	.425 ***	.136	.570	.409
Canada outside Quebec	.133	.392	-.061	.132	.053	.396
Denmark	.175	.405	.237	.136	.459	.409

Table 5. (Continued)

	Model D				Model E	
	U		IMM		U	
	B	se	B	se	B	se
England	.147	.269	.129	.091	.310	.272
Finland	-.266	.309	.219 *	.104	.045	.313
France	.474	.330	.228 *	.111	.810 **	.333
Germany	.440	.247	.261 **	.083	.826 **	.250
Hungary	.713 *	.303	-.092	.102	.604 *	.307
India	-.111	.330	.867 ***	.111	1.577 ***	.333
Israel	-.057	.460	.045	.155	.043	.466
Italy	1.954 ***	.324	.105	.109	2.053 ***	.327
Japan	-.262	.302	.269 **	.102	.083	.305
Netherlands	.590 *	.272	.259 **	.091	.944 ***	.275
Northern Ireland	-.126	.435	.507 ***	.147	.603	.440
Norway	-.271	.301	.024	.101	-.220	.304
Philippines	.005	.477	.226	.161	.278	.482
Poland	-.494	.380	.131	.128	-.316	.385
Quebec	.185	.380	.023	.128	.213	.384
Scotland	-.179	.433	.229	.146	.146	.438
Spain	.709	.380	.258 *	,128	1.056 **	.384
Sweden	.775 *	.313	-.031	.105	.743 **	.317

Taiwan	.079	.459	.091	.154	.179	.464
United States	-.085	.254	.000	.085	-.078	.257
Other countries	0		0		0	
Year (centered)	-.018 *	.007	-.002	.002	-.002 *	.007
Adj R^2	.435		.528		.530	

B. Questionable ($Q = O$), inlaw, and fewer than two tables deleted ($N = 112$; 18 countries)

Constant	1.699 ***	.319	-.763 ***	.132	1.429 ***	.295
Sample deficiencies	-.057	,263	.153	.109	.200	.244
Artisians well-defined	.150	.171	-.139	.071	-.015	.159
Shopowners well-defined	-.053	.271	.044	.112	.025	.251
Published data	.067	.218	.140	.090	.349	.202
Crude/Semi-detailed data	-.274	.213	.304 ***	.088	.177	.197
Detailed data	-.333	.178	.095	.074	-.153	.165
ISCO data	-.454 *	.212	.022	.088	-.384 *	.196
EGP table or data	0		0		0	
Political Action Survey	.046	.240	.008	.099	.026	.222
Scandinavian Welfare Survey	.679 *	.296	-.150	.123	.461	.274
Verba et al. Seven Nations	.602 *	.289	-.005	.120	.586 *	.267
World 2000 Survey	-.348	.325	.101	.135	-.231	.301
Other studies	0		0		0	
Australia	.089	.265	-.142	.110	-.109	.246
Austria	.147	.322	.378 **	.134	.725 *	.298
Canada	.211	.273	-.070	.113	.124	.253
England	.244	.197	.145	.082	.435 *	.183
Finland	-.243	.237	.181	.098	.024	.219

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Table 5. (Continued)

	Model D						Model E		
	U			IMM			U		
	B		*se*	*B*		*se*	*B*		*se*
France	.638	*	.2 71	.286	*	.112	1.044	***	.251
Germany	.473	*	.195	.264	**	.081	.872	***	.181
Hungary	.692	**	.215	-.091		.089	.573	**	.199
India	-.145		.301	.674	***	.125	1.127	***	.278
Italy	1.345	***	.279	.064		.116	1.431	***	.258
Japan	-.233		.207	.220	*	.086	.031		.192
Netherlands	.586	*	.226	.255	**	.094	.946	***	.209
Norway	-.085		.230	-.025		.095	-.096		.213
Poland	-.409		.281	.115		.117	-.285		.260
Quebec	.194		.295	.021		.122	.220		.273
Spain	.823	**	.297	.241	*	.123	1.121	***	.275
Sweden	.903	***	.243	-.014		.101	.900	***	.225
United States	0			0			0		
Year (centered)	-.017	**	.006	-.001		.002	-.020	**	.006
Adj. R^2	.525			.444			.693		

Note: * p < .05; ** p < .01; *** p < .001.

Table 4 shows variance components for the various models, while Table 5 displays selected coefficients for the most pertinent models. The logic of the analysis can easily be traced in Table 4. The substantive components are added to the model stepwise. Since the steps result in nested models they can be compared with F-tests. For each model we report the associated F-test for the significance of the increase in explained variance.[22] The effect of introducing each component can best be judged from the adjusted R^2 figures, in which the explained variance is corrected for the increase expected just from the additional degrees of freedom used. We enter the control variables first, so that our estimates for the variance components explained by the substantive variables are conservative, lower bound, estimates. In Model 1, we establish the influence of all the technical control variables together. These variables account for between 12 and 22% of the total variance in the mobility parameters, with an outlier of 37% in Panel B.c. Model 2 in Table 4 adds the between-country effects to the regression equation. This increases the explained variance by a stable amount of 24 to 35%. The associated F-tests show that this addition is highly statistically significant for all three dependent variables in both panels. Model 3 adds the time covariate to the design. This increases the explained variance between a negligible amount and 3.6%, and in both panels is statistically significant for the one degree of freedom it involves for the association coefficients U in both Model D and Model E, but not for the immobility coefficient IMM in Model D. Finally, Model 4 in Table 4 tests whether the slopes of the time regressor differ between countries. This test can only be performed for those countries that are represented by at least three tables in the analysis. In five of the six comparisons the increase in variance explained is not statistically significant at the .05 level, but in one case (Panel A, row b.4) it is significant just beyond the .05 level. Since this one instance is not replicated in the more restricted set of tables in panel B, we have chosen to disregard this evidence. All in all, we conclude that we cannot reject the null hypothesis that the over-time trends are identical between countries.

The results are generally similar for each comparison, and for all coefficients: about a fifth of the variance is due to variations in the quality of the data and an additional third of the variance is between countries and over time; the remainder is within countries and represents error and/or idiosyncratic events. The large between-country and over-time component permits an unequivocal rejection of the hypothesis of cross-national and cross-temporal constancy in the degree of societal openness.

Table 5 gives the estimated effects for our preferred model, Model 3. We begin our discussion of results with the study effects. There are hardly any. Of the 27 coefficients only six are statistically significant. The first two measured effects are conceptually a single effect. In panel A there is one effect for Model D, replicated for the two dependent variables: the three tables from the European Community Study 1971 have in common a disproportionately high

immobility coefficient, net of other factors, and a disproportionately low association coefficient. Of course, this effect will not appear in Model E since in that model the association parameter reflects both influences, which cancel each other. Of the four remaining significant effects, only the unusually high association coefficient in the tables from the Scandinavian Welfare Study are replicated in both panels. The generally negative results for the study effects go some way toward relieving our concern that observed between-country differences in mobility parameters simply reflect cross-national methods effects.

The data deficiency measures likewise yield basically negative results. The sample deficiency measure and the two variables relating to whether artisans and shopkeepers are well defined show *no* significant coefficients among the 18. The quality measure, which reflects how closely the original data conform to the EGP categories, behave in an initially surprising but understandable way. Although again the effects are very weak, there is some suggestion that both the association and the immobility parameters *increase* as data quality decreases, instead of decreasing as predicted. Two explanations occur to us. First, we may have done a poor job in converting original categories to the ISCO. We do not believe this to be the case. Second, there may be an inherent difficulty in translating occupational titles from one classification to another. If so, the contrast with the data of lower quality may be reinterpreted as a contrast between refined and coarse classifications, which leads to the speculation that the more detail in the initial classification the more likely it is that measurement error will reduce the strength of association and immobility coefficients. Fortunately, however, the effects are so weak that for practical purposes they can be ignored.

The estimates of the effects of the countries to which the tables pertain on the U and IMM parameters are highly similar in Panels A and B of Table 5. This indicates that these parameter estimates are quite robust and not simply artifacts of the particular selection of tables analyzed. In this paper we do not propose an explanation of these country differences but reserve this task for a subsequent paper. One technical point to keep in mind is that the values in Table 5 refer to the average year of the surveys conducted in each country and hence do not pertain to any particular point in history.

Of greater interest in the present context than the country coefficients are the values of the coefficients for "year." All four coefficients relating the year of the survey to the degree of off-diagonal association are negative and statistically significant (and the two coefficients involving the immobility parameters are likewise negative although not statistically significant) This result provides strong support for the claim of a world wide secular trend toward increased societal openness—which, as we have argued above—is inconsistent with the hypothesis of constant social fluidity. The decrease in association in Model D is -.017 per year and in Model E is -.020 per year. Since on average the size of the association coefficients is around 2.0, the

decrease in association is about one per cent per year. Although this is a negligible amount in the short run (and therefore difficult to estimate over short periods), it implies very substantial change in the long run. For example, for the United States, the country for which we have our longest time series, the model implies that the U-parameter of Model E, dropped from 1.81 in 1947 to 1.08 in 1986.

Because of the importance of our discovery of a world wide secular trend toward increased societal openness, we confirm it by reanalyzing our data in a somewhat different way. In the analyses reported above we were forced by computing constraints to resort to a statistically sub-optimal two-step procedure, first extracting the mobility parameters from log-multiplicative models and then analyzing these parameters via regression models. It is, however, possible to estimate Model 4 of Table 4, which allows country-specific time effects on the mobility parameters, directly via loglinear analysis; since this model can be estimated one country at a time, the maximum number of tables involved in any one analysis is 20, well within the limits of our computing capability. We have carried out such computations, using the scale scores derived from Model E of Table 3 as a priori values. The resulting country-specific trend estimates are shown in Table 6. In contrast to the country coefficients reported in Table 5, derived from an analysis in which tables are the units and hence are treated as if they are all of the same size, the estimates in Table 6 take account of the size of each table. To some extent, however, this advantage is offset by the impossibility of including the control variables used in the analysis reported in Tables 4 and 5, since doing so would require cross-national constraints and hence exceed our computing capacity. Therefore, to minimize the effect of data quality differences, we have restricted the tables in the present analysis to those used in the analysis reported in Panel B of Tables 4 and 5: 18 countries for which at least three tables are available after tables of questionable quality ($Q = 0$) and all inlaw tables are excluded.

The estimates in Table 6 strongly support the hypothesis of increasing societal openness: 46 of the 54 coefficients are negative, indicating increasing openness over time. Moreover, 30 of the negative time-slopes are statistically significant, in contrast to only two of the positive slopes. Since this analysis utilizes tables of varying quality and deficiencies, we would not want to make too much of the results for any particular country.[23] It is the overall pattern that we find extremely impressive.

One way to assess this overall pattern is to note that for the three models, respectively 15, 16, and 15 of the 18 coefficients are negative. Under the null hypothesis that there is no change over time, the likelihood of getting 15/18 negative coefficients (or more) is .0031 and the likelihood of getting 16/18 negative coefficients (or more) is .0006. Hence we reject the null hypothesis. Note that these results are much stronger than those reported in Table 5; in Table 6, in which the coefficients are derived by technically optimal procedures,

Table 6. Parameter Estimates for Secular Trends in Levels of Association and Immobility for Each of 18 Countries (Questionable, Inlaw, and Fewer Than Two Tables Omitted)

	No. of tables	Model D				Model E	
		$U * Y$	se	$IMM * Y$	se	$U * Y$	se
Australia	4	0.033 **	0.013	-0.018 ***	0.005	0.008	0.011
Austria	3	-0.004	0.040	-0.046 ***	0.011	-0.080 *	0.036
Canada	3	0.038 *	0.015	-0.013 *	0.006	0.021	0.013
England	8	-0.016 *	0.007	-0.001	0.002	-0.019 *	0.006
Finland	5	-0.053	0.044	0.010	0.013	-0.040	0.041
France	4	-0.091 ***	0.023	-0.008	0.007	-0.102 ***	0.021
Germany	16	-0.023	0.012	-0.008 *	0.003	-0.037 ***	0.010
Hungary	5	-0.078 ***	0.006	-0.007 ***	0.001	-0.087 ***	0.005
India	3	-0.082	0.043	-0.009	0.011	-0.101 **	0.036
Italy	4	-0.015	0.036	-0.038 ***	0.011	-0.067 *	0.032
Japan	6	0.009	0.012	-0.002	0.005	0.005	0.011
Netherlands	12	-0.034 *	0.014	-0.019 **	0.004	-0.064 ***	0.012
Norway	6	-0.022	0.014	-0.007	0.005	-0.031 **	0.012
Poland	3	-0.003	0.014	-0.008	0.005	-0.014	0.012
Quebec	3	-0.038	0.024	-0.023 **	0.009	-0.066 **	0.021
Spain	3	-0.068 **	0.027	0.050 ***	0.008	0.004	0.024
Sweden	5	-0.047 ***	0.006	-0.004 *	0.002	-0.053 ***	0.006
United States	19	-0.017 ***	0.004	-0.004 *	0.002	-0.022 ***	0.004
Number of decreasing parameters (out of 18)		15		16		15	

Note: Coefficients indicate the expected decrease or increase in the association and immobility parameters. *: coefficient at least twice its standard error; **: coefficient at least 2.5 its standard error; ***: coefficient at least three times its standard error.

we see that for almost all of the countries considered, the level of openness as measured by the two coefficients in Model D or the association coefficient in Model E is increasing over time.

These two results—substantial country differences in the degree of openness and a pervasive secular trend toward increasing openness over time—provide strong evidence against the claim that social fluidity levels are identical across countries or over time. Although countries display a common *pattern* of mobility chances (as indicated by the common parts of the models), they differ systematically in the *strength* of this pattern. There are, indeed, substantial differences between countries in mobility regimes. Although no claim of formal generalizability can be made for the subset of countries available to us for testing, we would expect the results to remain essentially the same if we had multiple tables for all of our countries, since the countries for which multiple tables are available do not appear to be a distinctive subset of our total sample of countries.

CONCLUSIONS

This paper reports a first description and analysis of a new and comprehensive set of 149 tables on intergenerational occupational mobility among men in 35 countries. The particular research design we have chosen— the use of multiple tables per country—makes it possible to estimate the between-country variance in societal openness and the extent of increase in societal openness over time. Both tests show convincingly that the pattern of intergenerational occupational mobility is not constant across time and space, and that cross-national and cross-temporal differences are not simply methodological artifacts. Although our analysis confirms that there is a basic similarity in mobility *patterns*, that is, in the relative distance ·between occupational classes, it shows at the same time that there are substantial cross-national and cross-temporal differences in the *extent* of mobility. With respect to both the degree of immobility (IMM) and the equality of mobility chances among those who do not remain in the same class as their fathers (U), about a third of the variance across mobility tables is attributable to societal differences in mobility regimes. This figure can function as a benchmark against which the predictive power of exogenous variables, to be included in future analysis of these data, can be measured.

In addition, a smaller but significant part of the variance in mobility regimes can be explained by the trend toward increasing openness over time. Virtually all the countries analyzed here have become more open during the period investigated (which in each country includes some portion of the period from shortly after the end of the Second World War to the present).

Taken together, the strong evidence of substantial cross-temporal and cross-national differences in mobility regimes suggests that the hypothesis of common social fluidity is simply incorrect.

Obviously, much work needs to be done. First, we need to explore the sources of both cross-societal and cross-temporal differences in mobility regimes, by adding exogenous variables that measure societal variations in such factors as the degree of industrialization and the nature of the political regime and, where possible, relating temporal changes in such macro-variables to temporal changes in mobility regimes. Second, we are not satisfied that we have completely solved the problems of measurement comparability and measurement quality differences. Third, we wish to include data from additional tables in our analysis and we ask our readers to help us accomplish this goal. Fourth, we want to explore different methods of analyzing multiple tables from many countries. Extensions toward time series analysis and multi-level models are obvious. We think that the innovation of treating the mobility table as a data point, subject to error, and hence to be replicated as many times as possible, is an important one, and we encourage others to pursue similar strategies of analysis—with the data we have provided or with other data.

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NOTES

1. The cost to a single research group of collecting comparable data by conducting national sample surveys in the 35 countries we analyze would be prohibitive, to say nothing of the effort involved. As an alternative, there have been attempts by international consortia of researchers to achieve measurement comparability by carrying out parallel studies in several countries. While some parallel studies have been conducted, the achievement of genuine measurement comparability has been frustrated by the felt need of the constituent research groups to maximize the validity of measurement in the local setting.

2. This is as true of comparisons relying on trichotomous nonmanual-manual-farm distinctions as of comparisons based on more detailed classifications since even where data are aggregated to a trichotomy there usually is considerable ambiguity as to where to place many specific occupations. See Treiman (1975) for a more detailed discussion of this issue.

3. A diskette containing these tables together with the necessary documentation may be obtained from the first author. Since it is our desire to compile an exhaustive collection of comparable intergenerational occupational mobility tables, we would appreciate copies of or information about any data not included in Appendix 2 which are amenable to recoding into our six by six modification of the class categories of Erikson, Goldthorpe, and Portocarero (see below): tables, published or unpublished, or unit data from which tables could be constructed. Please send this information to the first author. From time to time we expect to publish or otherwise make available updated versions of the basic set of tables.

4. Actually, we first remove variability due to data deficiencies and biases, as will be explained below.

5. To be sure, nonlinearities in the secular trend in mobility will be included in the "error" component. But there is no basis for expecting these to be large.

6. At the same time, it should be noted that Grusky and Hauser (1984) do not argue for the hypothesis of similar mobility regimes across societies and—in their empirical analysis—find large and readily interpretable differences between societies.

7. As we describe in detail below, our strategy is to convert each of the original coding schemes into the International Standard Classification of Occupations (ISCO), which we then collapse into our six category (modified EGP) classification. Appendix 1 gives the SPSS-X commands required to convert the ISCO categories to the six category classification, for the benefit of others wishing to follow our procedures.

8. In the original, British, case this variable referred to the number of people in the supervised establishment and the cutting point separating "few" from "many" was less than 25 vs. 25 or more. We use a lower cutting point, defining "few" as 10 or fewer and "many" as 11 or more, and we count the number of people supervised, not the size of the establishment; it is quite possible for employees of large establishments to supervise only a few people.

9. Actually, although in this respect the EGP scheme compares very favorably to the competitive class scheme of Wright (1985) one of the drawbacks of the EGP scheme is that it is not completely faithful to the manual/non-manual distinction: it mixes manual and non-manual workers in the small proprietor category (IVa/IVb), including both non-manual occupations (shop owners) and manual occupations (tradesmen and artisans).

10.   Treiman's (1977, Appendix A) expansion of the International Standard Classification of Occupations. We use the expanded ISCO as our basic coding scheme; details are given below.

11.   In general, we utilize the same coding scheme for fathers and sons even when other, possibly superior, classifications are available for one generation but not the other.

12.   A current version of the Assoc(PC) program can be obtained from the second author.

13.   The sample total used in the estimation procedure differs slightly from the total of 391,688, since we had to increase zero counts by a small constant to make some of the model estimable.

14.   There is no formal way of choosing between models that have similar or identical BIC measures. Given the magnitude of the differences in the BICs for the five models, together with the fact that BIC provides only a rough approximation to differences in the relative probabilities of alternative models, we think it is prudent to regard Models B and C as equally probable and also Models D and E as equally probable. Since Models D and E are clearly the most probable, as indicated by the BICs, we restrict the remainder of our analysis to Models D and E.

15.   The estimated scalings U_i and U_j in model B are:

	I/II	III	IVab	V/VI	VIIa	IV/VIIb
Ui - Origins:	-.682	-.354	.033	.215	.556	.232
Uj - Destinations	-.627	-.338	-.107	.103	.478	.492

From these coefficients it is clear that substantial asymmetry pertains only to one category— the farm category IV/VIIb. The coefficients indicate that the origins of persons entering farming, but whose fathers were not farmers, are relatively "high" compared to the destinations of persons of farm origin who leave farming. Given the very small number of persons of nonfarm origins who enter farming, we think it sensible to treat the category scalings for fathers and sons as equal.

16.   It is important to note that although scaled association models assume the notion of distances between categories, this is not indentical to assuming that the categories form a *vertical hierarchy*, as others (e.g., Breen and Whelan 1984) have done. That the distances between categories on the mobility dimension can be equated with socioeconomic status (indeed, the similarity is striking), is in scaled association models an a posteriori interpretation and not an a priori assumption.

17.   The IMM parameters are analyzed in logged form but displayed in multiplicative form.

18.   A proper specification of this part of the analysis requires a log linear framework. However, our problem exceeds the computational capacity of log linear analysis routines currently available to us.

19.   To be sure, country differences may themselves reflect instrument effects, especially when all of the tables for a given country are derived from surveys conducted by a single agency. Fortunately, this is not usually the case, although for a few countries, such as the United States, we have many tables from a single agency. We expect to explore this issue further.

20.   In fact, one additional country must be eliminated from this analysis—Taiwan, because both tables are from the same year—leaving 24 countries.

21.   Inlaw tables are excluded because they are in some sense simply replications of standard tables (within the limits of reporting error and selectivity due to their restriction

to married persons) and hence may artifactually inflate the within-country similarity of the tables.

22. Since those countries for which only one table is available do not contribute to the analysis of between country differences, only 25 (numerator) degrees of freedom are used to compare Model 2 to Model 1. In addition, one country for which we have two tables, Taiwan, does not contribute to the analysis of over-time trends since both tables are for the same year. The other four countries for which we have two tables can be used to estimate the overall time trend, but not to estimate between-country differences in time trends. Therefore Model 4 is compared to Model 3 with 20 degrees of freedom (Panel A). After the restrictions imposed to create Panel B, Belgium and Denmark are reduced to two tables each, leaving 18 countries with at least three tables that fit the other selection criteria. Hence, in Panel B there are 17 degrees of freedom when Model 2 is compared with Model 1 and again 17 degrees of freedom when Model 4 is compared with Model 3. The comparison of Model 3 with Model 2 is unproblematic since it always involves one degree of freedom, and the same is true of testing the significance of Model 1, which always involves 5 degrees of freedom.

23. Of the countries that fail to show a statistically significant trend toward increased openness, the only one for which we have confidence that the results are not simply artifacts of data deficiencies is Japan. The Japanese data (six tables) span a reasonably long period (1955-1975) and the larger tables (for 1955, 1965, and 1975) are taken from the Japanese Social Stratification and Mobility Studies, a series of very high quality surveys that are quite comparable to one another.

REFERENCES

Breen, R., and C.I. Whelan. 1985. "Vertical Mobility and Class Inheritance in the British Isles." *British Journal of Sociology* 36:165-192.

Central Bureau voor de Statistiek [Netherlands] (CBS). 1971. *14de Algemene Volkstelling, Systematisch Classificaties 2, Beroepenclassificatie.* Voorburg: CBS.

Clogg, C.C., and J.W. Shockey. 1984. "A Note on Two Models for Mobility Tables." *Comparative Social Research* 7:443-462.

Cutright, P. 1968. "Occupational Inheritance: A Cross-National Analysis." *American Journal of Sociology* 73:400-416.

Dessens, J., W. Jansen, and R. Luijkx. 1985. "Fitting Log-multiplicative Association Models." *GLIM Newsletter* 11:28-33.

Duncan, O.D. 1961. "A Socioeconomic Index for all Occupations." Pp. 109-138 in *Occupations and Social Status*, edited by A. J. Reiss, Jr. New York: Free Press of Glencoe.

_____. 1979. "How Destination Depends on Origin in the Occupational Mobility Table." *American Journal of Sociology* 84:739-804.

Erikson, R. 1983. "Changes in Social Mobility in Industrial Nations: The Case of Sweden." *Research in Social Stratification and Mobility* 2:165-196.

Erikson, R., and J.H. Goldthorpe. 1985. "Are American Rates of Social Mobility Exceptionally High? New Evidence on an Old Question." *European Sociological Review* 1:1-22.

_____. 1987a. "Commonality and Variation in Social Fluidity in Industrial Nations (I): A Model for Evaluating the 'FJH-Hypothesis'." *European Sociological Review* 3:54-77.

_____. 1987b. "Commonality and Variation in Social Fluidity in Industrial Nations (II): The Model of Core Social Fluidity Applied." *European Sociological Review* 3:145-166.

Erikson, R., J.H. Goldthorpe, and L. Portocarero. 1979. "Intergenerational Class Mobility in Three Western Countries: England, France and Sweden." *British Journal of Sociology* 30:415-441.

————. 1982. "Social Fluidity in Industrial Nations: England, France and Sweden." *British Journal of Sociology* 33:1-34.

————. 1983. "Intergenerational Class Mobility and the Convergence Thesis: England, France and Sweden." *British Journal of Sociology* 34:303-343.

Featherman, D.L., F.L. Jones, and R.M. Hauser. 1975. "Assumptions of Social Mobility Research in the U.S.: The Case of Occupational Status." *Social Science Research* 4:329-360.

Fox, T.G., and S.M. Miller. 1965. "Economic, Political, and Social Determinants of Mobility: An International Cross-sectional Analysis." *Acta Sociologica* 9:76-93.

Ganzeboom, H., R. Luijkx, and P. Robert. 1989. "Intergenerational Occupational Mobility in Hungary between 1930 and 1986: A Loglinear Analysis with Logmultiplicative Scaled Association Models." Tilburg University, Department of Sociology, Working Paper Series #3, December, 1989.

Ganzeboom, H., R. Luijkx, J. Dessens, N.D. de Graaf, P. de Graaf, W. Jansen, and W. Ultee. 1987. "Intergenerationele klassenmobiliteit tussen generaties in Nederland tussen 1970 en 1985." *Mens en Maatschappij* 62:17-43.

Goldthorpe, J.H. 1980. *Social Mobility and Class Structure in Modern Britain.* Oxford: Claredon Press.

————. 1983. "Social Mobility and Class Formation: On the Removal of a Tradition in Sociological Inquiry." Mannheim/Amsterdam: Casmin Working Paper 1.

————. 1985. "On Economic Development and Social Mobility." *British Journal of Sociology* 36:549-573.

Goodman, L. 1979a. "Multiplicative Models for the Analysis of Occupational Mobility Tables and Other Kinds of Cross-classification Tables." *American Journal of Sociology* 84:804-819.

————. "Simple Models for the Analysis of Occupational Cross-classifications Having Ordered Categories." *Journal of the American Statistical Association* 74:537-552.

————. 1981. "Criteria for Determining Whether Certain Categories in a Cross-classification Table Should be Combined, with Special Reference to Occupational Categories in an Occupational Mobility Table." *American Journal of Sociology* 87:611-650.

Grusky, D.B., and R.M. Hauser. 1984. "Comparative Social Mobility Revisited: Models of Convergence and Divergence in 16 Countries." *American Sociological Review* 49:19-38.

Hardy, M.A., and L.E. Hazelrigg. 1978. "Industrialization and the Circulatory Rate of Mobility: Further Tests of Some Cross-sectional Hypothesis." *Sociological Focus* 11:1-10.

Hauser, R.M. 1978. "A Structural Model of the Mobility Table." *Social Forces* 56:919-952.

————. 1979. "Some Exploratory Methods for Modeling Mobility Tables and Other Cross-classified Data." Pp. 413-458 in *Sociological Methodology, 1980,* edited by Karl F. Schuessler. San Fransisco: Jossey-Bass.

————. 1984. "Vertical Class Mobility in Great Britain, France and Sweden." *Acta Sociologica* 27:87-110 and 387-390.

Hauser, R.M., J.N. Koffel, H.P. Travis, and P.J. Dickinson. 1975. "'Temporal Changes in Occupational Mobility: Evidence for Men in the United States." *American Sociological Review* 40:279-297.

Hazelrigg, L.E. 1974. "Cross-national Comparisons of Father-to-Son Occupational Mobility." Pp. 469-493 in *Social Stratification,* edited by J. Lopreato and L.S. Lewiss. New York: Harper and Row.

Hazelrigg, E., and M.A. Garnier. 1976. "Occupational Mobility in Industrial Societies: A Comparative Analysis of Differential Access to Occupational Ranks in Seventeen Countries." *American Sociological Review* 41:498-511.

Heath, A. 1981. *Social Mobility*. Glasgow: Fontana.

Hope, K. 1981a. "Vertical Mobility in Britain: A Structured Analysis." *Sociology* 15:19-55.

_____. 1981b. "Trends in the Openness of British Society in the Present Century." *Research in Social Stratification and Mobility* 1:127-170.

_____. 1982. "Vertical and Nonvertical Class Mobility in Three Countries." *American Sociological Review* 47:99-113.

Hout, M. 1984. "Status, Autonomy, and Training in Occupational Mobility." *American Journal of Sociology* 89:1379-1409.

Hout, M., and J.A. Jackson. 1986. "Dimensions of Occupational Mobility in the Republic of Ireland." *European Sociological Review* 2:114-137.

International Labour Office. 1968. *International Standard Classification Occupations*. Revised Edition. Geneva: International Labour Office.

Kerckhoff, A.C., R.T. Campbell, and I. Winfield-Laird. 1985. "Social Mobility in Great Britain and the United States." *American Journal of Sociology* 91:281-308.

Lipset, S.M., and R. Bendix. 1959. *Social Mobility in Industrial Society*. Berkeley: University of California Press.

Luijkx, R., and H.B.G. Ganzeboom. 1989. "Intergenerational Classs Mobility in the Netherlands between 1970-1985." Pp. 5-30 in Similar or Different?, edited by W. Jansen, J. Dromkers, and K. Verrings. Amsterdam: SISWO.

McClendon, McKee J. 1980a. "Occupational Mobility and Economic Development: A Cross-national Analysis." *Sociological Focus* 13:331-342.

_____. 1980b. "Structural and Exchange Components of Occupational Mobility: A Cross-national Analysis." *Sociological Quarterly* 21:493-509.

McRoberts, H.A., and K. Selbee. 1981. "Trends in Occupational Mobility in Canada and the United States: A Comparison." *American Sociological Review* 46:406-421.

Miller, S.M. 1960. "Comparative Social Mobility." *Curent Sociology* 9:1-89.

Pöntinen, S. 1976. *Patterns of Social Mobility in the Scandinavian Countries*. Helsinki: University of Helsinki, Institute of Sociology, licentiate thesis.

_____. 1982. "Models and Social Mobility Research: A Comparison of Some Log-linear Models of a Social Mobility Matrix." *Quality and Quantity* 16:91-107.

Raferty, A.E. 1986. "Choosing Models for Cross-classifications." *American Sociological Review* 51:145-146.

Shockey, J.W., and C.C. Clogg. 1983. *ANOASC: A Computer Program for the Analysis of Association in a Set of K I-by-J Contingency Tables*. University Park, PA: Pennsylvania State University. Population Issues Research Center.

Simkus, A.A. 1981. "Historical Changes in Occupational Inheritance under Socialism: Hungary, 1930-1973." *Research in Social Stratification and Mobility* 1:171-203.

_____. 1984. "Structural Transformation and Social Mobility: Hungary, 1938-1973." *American Sociological Review* 49:291-307.

Svalastoga, K. 1966. "Social Mobility: The Western European Model." *Acta Sociologica* 9:175-182.

Treiman, D.J. 1970. "Industrialization and Social Stratification." Pp. 207-234 in *Social Stratification: Research and Theory for the 1970's*, edited by E.O. Laumann. Indianapolis: Bobbs-Merrill.

_____. 1975. "Problems of Concept and Measurement in the Comparative Study of Occupational Mobility." *Social Science Research* 4:1883-230.

_____. 1977. *Occupational Prestige in Comparative Perspective*. New York: Academic Press.

Treiman, D.J., and J. Kelley. 1986. "Is There A World Wide Special Fluidity Regime?" Paper presented at the meeting of the ISA Research Committee on Social Stratification and Social Mobility, Rome, April 3-5.

Tyree, A., M. Semyonov, and R.W. Hodge. 1979. "Gaps and Glissandos: Inequality. Economic Development, and Social Mobility in 24 Countries." *American Sociological Review* 44:410-424.

Wanner, R.A. 1986. "Structural and Exchange Mobility in Canada and the United States: A Comparison." Paper presented at the meeting of the ISA Research Committee on Social Stratification and Social Mobility, Rome, April 3-5.

Wright, E.O. 1985. *Classes*. London: Verso.

Yamaguchi, K. 1987. "Models for Comparing Mobility Tables: Toward Parsimony and Substance." *American Sociological Review* 52:482-494.

APPENDIX 1:

The Standard Scheme for Recoding the ISCO Classification Into the EGP Class Categories (SPSS-X statements)

compute	sempl =
compute	fsempl =
compute	fsupvis =
compute	fsupvis =

The variables SEMPL and FSEMPL refer to the employment status of respondent and the father respectively and are coded as:
(1) salaried
(2) self-employed

The variables SUPVIS and FSUPVIS refer to number of subordinates or employees (for self-employed). The variables can be coded continuously, or otherwise.
(0) no subordinates
(5) 1-10 subordinates
(11) > 10 subordinates

compute	egp 10 = isco
compute	fegp 10 = fisco
RECODE	egp 10 fegp 10

RECODE egp 10 fegp 10
(100 thru 133 = 1) (140 = 2) (200 thru 299 = 1) (300 320 = 2) (310 = 2)
(321 = 3) (330 thru 390 = 2) (400 thru 420 = 1) (421 = 2) (430 = 1)
(500 510 thru 531 = 1) (540 thru 541 = 2) (600 thru 611 = 1)
(620 = 2) (630 = 1) (640 = 2) (650 = 1) (660 = 2) (670 = 1) (680 690 = 2)
(720 = 2) (710 = 2) (711 = 2) (720 = 3) (721 thru 761 = 2) (762 = 8)

(continued)

(770 thru 793 = 2) (800 thru 820 = 1) (830 = 2) (840 = 2)
(900 thru 1290 = 1) (1291 = 2) (1310 1311 = 1)
(1300 1320 thru 1389 = 2) (1390 = 2) (1391 = 2) (1393 = 3)
(1392 1394 = 1) (1400 1410 1412 thru 1490 = 2) (1411 = 1) (1491 = 0)
(1500 thru 1732 = 2) (1740 = 1) (1741 thru 1801 = 2) (1900 = 1)
(1910 = 2) (1920 thru 1924 = 1) (1930 thru 1950 = 2) (1951 = 1)
(1990 thru 1999 = 2) (2010 thru 2014 = 1) (2000 2015 2036 = 1)
(2020 thru 2035 = 1) (2100 thru 2110 = 2) (211 = 1) (2112 2113 = 2)
(2114 2115 = 1) (2190 2191 2196 = 2)
(2116 2120 = 2) (2192 thru 2195 2197 = 1) (2200 thru 3104 = 2)
(3200 thru 3420 = 3) (3590 = 3) (3500 3510 3520 = 2) (3600 = 3)
(3601 = 3) (3602 = 3) (3700 3701 = 9) (3800 thru 3900 = 3)
(3920 3911 = 11) (3920 thru 3993 = 3)
(4000 thru 4002 = 2) (4101 4103 4104 4106 41088 = 4)
(4100 4102 4205 = 5) (4107 = 0) (4200 4210 = 2) (4220 thru 4222 = 2)
(4300 thru 4310 = 2) (4320 = 3) (4400 thru 4411 = 2) (4412 = 2)
(4420 thru 4432 = 2) (4500 thru 4511 = 3) (4512 = 9) (4513 4514 = 3)
(4520 4521 = 5) (4522 4523 = 3) (4524 = 9) (4525 = 0) (4900 = 3)
(5000 thru 5002 = 2) (5100 thru 5104 = 4) (5200 = 3) (5201 = 3)
(5300 thru 5311 = 8) (5312 = 9) (5320 thru 5322 = 3)
(5400 thru 5600 = 9) (5700 thru 5703 = 8) (5800 5810 = 8) (5820 = 2)
(5822 = 1) (5821 5823 = 2) (5890 thru 5892= 9) (5999 = 0)
(5900 thru 5920 = 3) (5990 = 9) (5991 = 3) (5992 thru 5995 = 9)
(5996 thru 5998 = 3) (6000 thru 6120 = 11) (6200 thru 6269 = 10)
(6270 = 10) (6280 thru 6311 = 10) (6320 thru 6322 = 10)

(6400 6410 = 10) (6411 = 11) (6490 6491 = 10) (7000 7001 = 7)
(7100 7110 7111 7113 = 8) (7112 7120 = 9) (7130 thru 7280 = 8)
(7290 = 9) (7300 thru 7321 = 8) (7330 thru 7340 = 9)
(7400 thru 7520 = 9) (7350 thru 7541 = 8) (7550 thru 7560 = 8)
(7570 thru 7590 = 9) (7600 thru 7699 = 8) (7700 thru 7710 = 9)
(7711 = 4) (7720 7730 = 8) (7731 = 9) (7732 = 8) (7740 7750 = 9)
(7760 thru 7780 = 8) (7790 thru 7890 = 9) (7900 thru 7940 = 8)
(7950 thru 7970 = 9) (7980 = 8) (7990 = 8) (8000 thru 8010 = 8)
(8020 8030 = 9) (8100 8110 = 8) (8120 = 9) (8190 thru 8339 = 8)
(8340 = 9) (8350 thru 8399 = 8)
(8400 thru 8421 = 8) (8422 = 8) (8423 thru 8490 = 8)
(8491 thru 8494 = 9) (8500 8510 8520 = 8) (8530 = 9)
(8540 thru 8550 = 8) (8551 = 4) (8560 thru 8610 = 8) (8620 = 3)
(8700 8710 = 8) (8711 = 4) (8720 thru 8920 = 8)
(8930 thru 8990 = 9) (9000 thru 9100 = 9)
(9200 thru 9299 = 8) (9300 thru 9311 = 8) (9410 = 8) (9530 = 9)
(9420 thru 9493 = 9) (9500 thru 9520 = 8) (9540 9541 = 8)
(9542 = 9) (9550 9551 = 8) (9560 thru 9570 = 9)
9590 thru 9593 = 8) (9430 = 8) (9390 9400 9420 9530 = 9)
(9594 9595 = 9) (9596 thru 9596 = 8) (9600 thru 9699 = 9)
(9700 thru 9714 = 9) (9720 = 8) (9730 = 8) (9731 = 9) (9740 = 8)
(9790 = 9) (9800 thru 9811 9820 = 9) (9830 = 8) (9831 thru 9834 = 9)
(9855 = 3) (9860 thru 9900 = 9) (9950 = 8) (9951 = 5)
(9970 thru 9997 = 9) (10000 = 1) (10001 = 1) (10002 = 7) (10003 = 8)

comment   *** ascertain self-employment on basis of isco title ***

do repeat   is = fisco isco/s = fsempl sempl/
if   (is ge 4100 and is le 4108) s = 2
if   (is ge 5100 and is le 5104) s = 2

APPENDIX 1   (Continued)

if	(is ge 6100 and is le 6112) s = 2
if	(is eq 6120) s = 2
if	(is eq 8551 or is eq 8711) s = 2
if	(is eq 4520 or is eq 4521) s = 2
end repeat	
comment	*** some job titles are designed to be promotable ***
compute	xpromo = isco
compute	xfrpromo = fisco
recode	xpromo xfpromo
	(100 thru 320 400 thru 540 711 793 1300 thru 1391)
	1394 1591 1900 thru 1995 2010 thru 2197 3000
	3100 thru 3104 3310 3312 3500 thru 3590 4000 thru 4320
	4400 thru 4412 5000 thru 5201 5821 thru 5823 = 1) (else = 1)
if	(egp 10 = 4 or egp 10 = 5) xpromo = 1
if	(fegp 10 = 4 or fegp 10 = 5) xfpromo = 1
do repeat	e = egp 10 fegp10/s = sempl fsempl/sv = supvis fsupvis/
	p = xpromo xfrpromo/
if	((e ge 7 and e le 9) and (s = 2) and (sv ge = 1)) e = 4
if	((e ge 7 and e le 9) and (s = 2) and (sv le 0)) e = 5
if	((e = 8) and (sv ge 10)) e = 7
if	((e = 10) and (s = 2)) e = 11
if	((e = 4) and (sv = 0)) e = 5
if	((e = 5) and (sv ge 1)) e = 4
if	((e = 2 or e = 3 or e = 4) and (sv ge 10) and (p = 1) e = 1
if	((e = 3) and (sv ge 1 and sv lt 10) and (p = 1) e = 2
end repeat	

value labels   egp 10 fegp 10
(1) higher controllers (2) lo controllers
(3) routine nonmanual (4) sempl with emp
(5) sempl without empl (7)manual supervis
(8) skilled manual (9) semi-unskilld manual
(10) farm labor (11) selfempl farm

recode   fegp 10 (1 2 = 1) (3 = 2) (4 5 = 3) (6 10 11 = 6) (7 8 = 4) (9 = 5)
into fegp egp

value labels   fegp egp
(1) Hi Non Manual
(2) Routine Non Manual
(3) Self-Employed
(4) Skilled Manual
(5) Unskilled Manual
(6) Farm

APPENDIX 2:

Intergenerational Class Mobility, Observed Counts for 149 Tables From 35 Countries

AUS65	126	66	3	36	46	17	57	41	3	35	27	5	10	9	6	9	13	4
	68	54	4	162	106	4	90	75	3	142	175	29	55	28	5	55	109	175
AUS67	88	20	8	18	16	11	15	8	1	7	2	2	7	5	2	6	7	0
	35	26	2	56	54	9	30	21	5	48	62	13	30	13	4	27	39	50
AUS67l	59	13	3	24	14	5	15	9	1	3	8	2	8	4	2	2	5	3
	36	19	1	57	31	3	23	15	3	31	42	9	13	11	8	26	41	55
AUS73	174	29	42	52	19	11	45	23	10	23	1	1	108	29	69	94	47	15
	141	52	42	188	89	12	56	32	56	141	96	8	71	20	46	134	109	142
AUS87	83	17	14	22	15	4	21	6	4	3	5	2	11	6	3	7	3	0
	57	12	18	34	25	2	34	16	16	41	40	7	17	5	13	20	24	25
AUT69n	27	16	1	4	2	1	18	61	6	16	8	0	9	20	34	23	8	1
	12	20	5	42	11	1	5	28	10	40	64	3	10	19	7	12	26	64
AUT74p	27	5	0	8	8	1	7	9	1	12	6	1	15	5	10	8	5	1
	24	7	2	30	24	3	13	8	2	27	31	1	8	11	2	25	30	77
AUT78	1236	124	143	195	83	6	233	128	29	154	81	4	376	86	246	169	103	15
	663	246	89	704	326	27	320	188	55	684	548	23	379	228	102	538	663	777
BEL71e	37	4	3	6	5	0	6	17	2	8	8	1	25	12	42	5	9	1
	4	5	1	16	11	0	29	33	15	27	84	1	8	6	10	9	24	44
BEL75	110	22	27	23	6	3	38	23	4	25	1	2	43	3	60	16	3	2
	38	22	15	49	8	3	7	11	6	20	18	2	13	14	3	13	2	93
BEL76	80	14	14	19	2	3	33	22	6	17	3	1	41	9	44	14	3	2
	20	18	8	70	8	2	4	10	1	22	16	2	15	5	4	13	3	55
BRA73	134	51	33	30	34	24	35	22	14	16	7	1	130	105	216	97	108	64
	51	49	41	94	75	30	42	41	34	80	100	31	179	160	512	452	601	2271
CAN73	713	173	58	201	157	25	336	141	33	170	124	14	199	54	103	181	135	20
	508	257	70	587	425	40	478	257	99	621	801	50	491	228	191	652	739	893

CAN82w	120	23	18	34	19	3	32	10	4	20	11	0	19	6	9	6	11	3
	70	21	22	66	42	6	48	28	18	52	64	7	50	18	24	73	74	109
CAN84	151	38	4	29	15	4	44	14	2	18	24	0	20	2	4	8	7	1
	56	34	5	70	67	8	65	36	5	84	86	11	37	20	2	64	62	88
CSK67	141	19	0	33	31	3	96	36	0	64	51	4	57	26	1	43	74	17
	192	68	1	201	125	28	228	126	4	311	374	69	190	111	4	234	554	426
DEN71	17	7	1	4	4	0	6	12	3	13	2	1	17	14	10	13	4	4
	6	10	2	34	13	1	9	13	6	20	50	2	23	26	14	28	70	51
DEN72l	14	6	2	6	0	3	7	5	4	8	2	0	8	2	8	4	1	0
	16	15	5	50	6	12	2	3	3	11	10	5	7	8	8	26	6	58
DEN72s	17	7	3	3	1	1	11	9	3	9	2	0	10	3	14	13	2	1
	17	17	4	47	8	5	6	3	3	30	15	3	8	6	12	37	12	84
ENG51	75	33	15	48	20	4	48	34	9	53	17	3	25	20	34	23	13	6
	106	87	42	530	248	31	42	57	24	329	242	51	9	6	13	63	41	133
ENG63	32	8	8	9	9	1	11	6	1	7	7	0	22	3	11	16	11	1
	32	20	11	91	65	4	35	19	5	63	97	3	6	3	4	19	19	26
ENG67t	14	5	2	6	7	0	5	2	0	4	2	0	5	3	3	2	9	0
	16	5	6	31	34	0	20	11	8	37	62	1	2	0	0	5	6	2
ENG69	45	7	3	8	7	0	16	4	1	7	6	0	26	9	20	12	11	0
	45	17	10	102	79	1	30	20	13	67	76	3	9	3	7	18	29	15
ENG72	730	145	79	182	92	15	237	89	51	197	113	7	252	81	187	222	144	16
	731	325	248	1506	893	27	330	187	122	802	685	24	92	43	53	182	195	205
ENG74	58	14	8	14	12	3	18	8	4	9	8	1	19	7	16	13	15	2
	59	19	8	93	71	4	49	15	16	49	78	2	9	5	5	8	22	23
ENG74p	25	2	1	5	2	1	22	7	1	6	13	1	12	6	4	4	2	0
	31	22	12	66	63	4	6	2	3	14	17	1	6	0	0	10	14	12

(continued)

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APPENDIX 2 (Continued)

ENG83	127	19	14	33	24	3	26	71	3	19	8	0	42	8	30	39	22	3
	128	39	31	196	162	4	61	20	24	154	144	7	17	5	8	27	30	32
ENG86	147	22	23	26	27	1	45	9	10	16	8	0	47	7	25	18	23	0
	141	31	48	181	110	6	58	18	30	89	87	2	16	2	6	17	20	11
FIN67t	1	1	0	1	0	1	2	5	1	2	1	1	1	0	2	3	0	0
	5	10	2	32	6	5	0	1	0	8	0	0	3	12	6	33	7	38
FIN72l	14	4	0	2	0	1	6	6	0	4	1	3	1	3	5	3	0	0
	6	10	2	32	6	1	3	4	2	10	7	3	13	13	4	35	15	64
FIN72s	8	5	5	3	0	0	4	7	0	13	4	0	4	1	4	6	0	2
	6	6	4	44	10	5	3	1	1	16	7	2	13	19	12	49	23	96
FIN75p	17	2	0	6	4	0	3	1	0	4	2	0	7	5	4	6	7	1
	19	8	3	47	14	7	8	11	4	19	22	3	21	13	4	67	30	48
FIN80	84	9	7	27	11	1	34	7	5	21	14	2	30	10	22	44	20	7
	54	29	12	172	35	2	50	25	16	115	55	8	93	39	37	243	86	182
FIN82w	21	15	5	1	6	2	1	5	2	0	3	0	4	1	4	0	1	0
	22	32	5	4	13	1	12	26	4	2	24	3	34	45	15	11	42	43
FRA58	26	2	2	3	1	0	8	7	4	2	6	1	15	10	25	10	8	0
	4	1	1	5	3	0	9	12	6	15	36	4	11	10	9	5	32	42
FRA64	756	139	77	273	21	28	213	103	45	259	19	6	305	114	330	445	51	25
	440	245	131	1789	184	57	60	50	10	299	80	5	106	200	166	926	326	1605
FRA67	24	15	3	3	0	1	26	45	8	34	1	2	10	28	30	34	4	9
	10	48	11	136	6	9	0	6	0	8	1	0	13	30	26	67	6	89
FRA70	349	56	40	80	45	6	126	64	30	103	61	8	183	72	194	128	96	20
	174	93	60	339	189	14	110	79	42	235	209	19	123	103	102	224	393	600
FRA71e	51	2	3	9	13	0	17	10	1	15	12	1	30	8	22	7	17	1
	12	4	2	9	12	0	21	13	18	40	78	2	15	7	12	12	42	105

GER59	52	32	27	30	9	2	21	30	10	35	6	2	18	29	57	37	13	5
	35	47	40	208	71	10	11	26	10	81	107	11	20	18	31	56	65	115
GER69	14	5	2	11	1	0	4	16	3	10	3	0	5	12	9	7	4	1
	6	12	3	38	6	1	3	6	1	26	15	0	2	8	3	11	6	17
GER69k	228	186	37	86	14	2	77	225	26	87	16	1	85	158	251	155	25	7
	90	226	77	673	97	2	50	95	25	293	172	5	58	64	55	162	91	146
GER75p	71	15	5	23	6	0	33	18	1	13	9	1	10	5	12	6	5	1
	43	33	6	80	39	0	22	15	3	32	19	3	22	11	5	37	18	35
GER76z	64	5	6	15	2	0	16	3	6	11	1	0	14	1	17	14	5	1
	61	6	10	80	17	0	4	3	1	40	14	0	15	3	6	36	19	22
GER77z	46	4	6	14	4	0	8	2	1	10	2	0	17	3	6	12	6	0
	38	10	4	88	19	3	10	5	3	38	26	0	7	4	4	20	13	10
GER78	48	2	4	12	6	0	11	3	1	6	1	0	14	5	7	11	2	1
	41	9	8	74	12	4	9	3	6	34	22	0	10	2	1	14	12	6
GER78x	25	2	8	14	3	1	7	1	2	8	1	0	16	3	10	21	6	0
	26	5	6	99	9	1	9	2	1	33	7	1	7	2	2	17	5	5
GER78z	45	1	4	10	1	0	11	2	0	11	2	0	22	4	8	7	3	0
	50	7	10	66	13	1	8	3	0	34	16	1	4	3	5	22	5	9
GER79z	50	6	2	4	2	0	12	7	2	10	0	0	12	5	12	11	4	0
	44	14	7	88	9	0	9	1	2	30	10	2	8	2	2	17	12	13
GER80p	42	4	7	11	0	0	10	1	1	12	2	0	20	4	7	12	2	0
	41	7	3	71	12	1	12	4	1	40	16	2	7	4	4	20	1	11
GER80	67	6	4	20	2	0	14	4	3	13	2	1	20	5	21	20	5	0
	67	16	14	169	26	1	15	1	1	29	10	1	15	4	3	28	16	26
GER80a	61	10	5	6	3	0	18	15	2	7	1	0	16	8	4	3	0	0
	86	16	11	117	18	2	17	3	1	17	4	0	16	,7	5	35	10	19
GER80a	49	4	4	11	1	2	20	1	1	4	1	0	16	2	12	13	3	0
	54	6	8	59	13	1	11	0	2	31	6	1	15	3	1	20	13	8

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GER82a	61	16	3	14	9	1	13	3	0	9	4	1	24	7	21	12	7	0
	44	18	9	95	36	0	19	13	2	26	14	0	11	6	6	26	17	23
GER84	85	12	7	10	6	1	11	7	2	6	2	0	22	5	16	16	6	2
	55	19	5	82	30	2	25	10	0	33	22	1	16	3	8	33	13	16
HKG67	105	70	34	33	39	0	24	60	13	23	37	0	35	85	66	33	91	0
	11	17	13	37	26	0	8	28	22	18	68	3	23	65	43	53	144	7
HUN62	108	52	6	17	14	5	105	145	25	78	34	10	101	206	120	340	227	183
	115	233	48	541	184	73	66	170	55	397	401	136	166	296	193	1048	1776	4314
HUN73	257	80	7	157	30	18	192	121	5	146	59	11	133	110	63	334	166	38
	324	162	29	969	253	35	169	179	26	1024	717	115	378	266	73	1599	1608	1380
HUN73l	151	40	4	69	15	10	111	78	2	80	33	5	98	89	50	258	117	24
	228	119	26	577	150	28	128	124	19	625	462	82	296	221	51	1147	1211	1082
HUN82	203	47	6	95	69	9	127	55	5	113	109	8	66	48	32	108	100	16
	142	72	22	389	234	27	128	87	24	326	328	56	211	158	51	641	762	542
HUN86	108	33	7	45	47	4	31	4	0	11	18	0	66	19	10	94	48	14
	56	13	10	140	73	13	72	16	12	185	181	28	108	34	17	193	227	112
IND62c	29	19	4	8	2	9	28	33	5	10	5	16	21	31	61	6	4	12
	1	5	10	31	7	28	1	5	9	6	35	36	10	49	36	29	29	649
IND63a	49	26	16	10	6	0	28	155	32	15	4	9	13	36	213	21	14	8
	3	15	14	96	13	2	2	10	6	22	82	6	24	72	76	40	54	395
IND63c	19	15	7	3	1	0	7	41	6	20	1	8	0	20	49	9	5	25
	0	0	1	56	1	8	2	0	2	3	54	16	11	46	10	8	42	694
IND71n	33	12	12	1	3	20	10	20	12	5	3	15	16	17	182	14	46	52
	4	2	12	14	5	11	4	6	15	6	48	83	32	18	40	15	51	1105
IRE74	76	21	9	19	11	3	28	24	6	24	18	5	48	23	57	34	43	11
	45	29	13	139	82	4	35	50	24	132	180	40	66	44	64	92	168	461

ISR62c	76	7	4	22	8	4	32	28	3	47	28	9	12	3	3	7	4	4
	7	9	1	22	11	7	1	3	0	15	11	5	2	1	1	8	0	2
ISR74	363	134	40	124	111	21	160	102	30	89	93	14	404	313	263	392	441	71
	151	94	68	239	211	44	208	126	60	329	374	39	124	71	49	154	263	152
ITA63	75	12	4	9	7	3	12	5	4	2	10	2	16	11	28	17	15	2
	22	3	16	71	26	11	14	15	14	43	102	6	24	10	19	58	116	241
ITA68	7	8	1	0	0	1	13	41	8	24	9	2	23	35	43	27	6	3
	5	19	13	43	9	2	3	34	24	66	41	9	10	51	36	93	67	184
ITA72	16	13	5	7	0	2	8	20	7	12	2	0	8	7	31	29	4	4
	5	8	18	36	4	0	6	18	20	47	23	1	9	11	29	53	50	77
ITA74	69	74	20	11	4	1	34	97	32	14	1	0	45	131	237	117	23	6
	30	160	198	508	88	13	6	30	81	338	202	19	18	45	105	324	164	268
ITA75p	31	8	7	4	4	2	20	11	4	4	4	1	20	7	18	3	4	1
	16	8	16	36	28	0	34	21	20	29	25	6	14	9	26	42	48	64
JAP55	62	34	23	5	8	20	14	23	11	8	6	9	54	76	139	53	49	34
	5	9	7	15	15	2	7	10	19	10	25	12	75	67	122	51	81	640
JAP65	123	47	19	18	28	12	26	25	6	8	13	3	64	64	84	44	47	20
	38	23	24	41	35	11	16	14	9	13	34	4	130	72	107	130	151	325
JAP67	26	15	1	7	4	0	19	38	2	13	7	0	7	8	3	6	2	1
	10	12	3	63	9	2	7	1	0	7	19	1	33	33	8	45	36	91
JAP69t	21	18	3	1	13	1	7	8	1	0	3	1	27	15	31	10	28	1
	8	3	0	10	8	0	10	6	5	0	21	4	22	18	4	13	42	39
JAP71n	53	23	9	4	6	3	22	39	4	7	10	3	30	59	55	45	28	18
	4	19	5	13	6	3	7	10	4	14	17	5	33	70	44	70	95	206
JAP75	189	58	27	30	29	15	39	31	9	16	12	5	113	61	97	59	53	13
	25	23	15	44	19	7	27	17	6	34	45	5	164	89	93	127	186	271
MAL67	73	33	12	19	19	71	39	61	8	20	30	28	45	48	138	41	61	70
	39	32	16	87	57	75	31	27	27	31	86	78	216	88	105	126	298	2195

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NET58	19	9	4	10	1	1	6	8	0	1	1	0	15	12	44	21	8	0
	8	12	6	55	11	2	6	6	7	29	25	1	8	6	4	22	9	48
NET67t	9	10	1	3	1	0	6	6	1	3	1	0	5	5	12	3	1	1
	10	16	3	21	3	1	1	5	1	13	4	0	2	4	3	9	1	17
NET70	95	29	3	15	4	1	21	14	1	7	4	0	31	14	38	24	11	1
	22	17	3	70	24	0	28	11	6	38	56	4	31	16	7	29	42	62
NET71	33	10	1	15	3	0	9	6	2	4	0	0	19	11	13	14	11	1
	13	9	5	15	13	2	9	6	3	20	10	1	12	7	7	22	20	35
NET71e	27	4	1	4	0	1	21	15	0	15	1	1	18	4	21	8	3	1
	12	1	1	12.	3	0	15	20	4	31	48	4	6	1	0	16	9	55
NET74p	49	8	4	9	3	1	16	5	0	4	3	0	35	13	14	11	9	1
	17	13	1	21	13	2	18	10	2	31	14	1	10	9	3	8	15	23
NET76	52	17	5	8	1	0	19	13	4	11	3	0	30	21	30	15	10	2
	26	23	4	41	18	1	12	23	4	34	24	2	17	8	6	15	23	38
NET77	61	12	4	10	7	0	22	10	1	5	2	0	24	12	18	10	13	3
	26	17	5	47	26	0	16	14	2	38	23	3	18	12	3	43	22	26
NET77x	159	34	3	36	13	1	53	37	1	23	10	0	78	42	24	42	27	2
	73	63	10	135	48	3	42	40	6	100	59	6	49	17	14	56	34	67
NET79p	36	11	4	3	4	2	11	8	5	8	2	0	6	1	2	0	3	0
	18	11	6	44	11	1	17	8	1	22	9	2	13	6	1	9	5	26
NET82	87	27	3	22	16	4	41	17	2	10	5	0	40	25	25	21	16	2
	58	35	7	69	40	2	42	12	11	46	38	2	27	11	4	32	35	44
NET82u	47	10	5	13	6	0	17	6	0	9	3	0	23	9	7	6	10	1
	38	13	2	40	16	0	12	12	2	37	21	0	13	5	2	15	13	13
NET85	169	52	7	39	30	4	65	33	3	47	22	1	86	45	29	46	43	4
	103	64	10	128	81	6	74	36	14	103	95	11	44	23	10	41	51	34
NIR71n	34	5	20	1	3	32	4	2	5	1	1	14	22	14	60	2	4	41
	1	1	5	1	0	1	5	1	6	0	4	26	55	22	117	9	30	737

NIR68	16	3	5	5	5	0	4	4	3	4	5	0	10	3	9	2	9	2
	16	13	4	53	30	2	11	15	5	30	56	3	11	15	12	16	33	60
NIR73	110	23	7	26	20	6	36	35	14	35	21	2	48	24	60	46	40	7
	77	48	46	189	120	7	64	55	33	206	268	11	56	36	63	95	139	218
NOR57	27	9	8	18	8	2	0	2	0	1	3	1	15	7	22	13	10	11
	21	10	11	45	36	9	6	3	8	24	42	11	23	15	22	23	66	100
NOR65	44	9	8	10	10	0	10	1	0	2	2	0	19	8	19	10	13	3
	17	13	7	41	32	3	27	17	7	34	81	10	30	18	21	36	76	86
NOR67t	8	4	0	2	1	1	2	8	1	1	3	1	3	6	2	3	4	1
	8	7	0	11	7	3	2	9	1	9	9	1	4	14	2	12	8	12
NOR72l	22	7	2	5	1	3	12	9	4	10	1	1	8	7	4	4	0	1
	17	13	4	39	3	3	4	4	0	13	4	0	21	17	7	29	6	43
NOR72s	29	7	0	9	0	2	19	12	2	6	1	3	13	3	2	8	1	0
	22	17	9	41	8	5	8	4	6	15	5	2	21	18	7	36	19	52
NOR73	43	14	14	16	5	1	15	15	12	23	4	0	26	16	38	50	12	2
	49	33	25	128	22	11	20	14	11	51	13	0	36	15	39	92	17	84
NOR82w	103	12	10	24	19	0	20	9	2	11	3	1	22	7	4	5	5	1
	67	22	14	72	38	5	47	24	8	47	19	2	69	25	17	63	41	46
NZE76	172	20	21	40	17	17	26	7	5	11	4	2	79	17	50	53	20	12
	94	24	42	100	33	10	53	17	29	58	39	8	66	9	53	77	51	117
PHI68	368	180	52	64	172	120	212	272	36	68	180	160	228	132	308	96	248	292
	68	60	24	268	168	52	196	184	148	256	1500	780	784	880	712	768	3188	23244
PHI73	131	46	13	31	43	26	47	34	12	27	42	21	41	25	71	22	32	26
	38	33	16	164	91	70	31	34	23	63	122	58	180	179	134	333	443	2598
POL72	930	116	24	247	341	40	438	90	17	315	420	72	223	50	105	195	293	97
	762	214	68	1506	1549	171	905	259	73	1476	2130	290	1558	811	236	2763	4604	8173
POL82	108	8	7	59	6	5	29	5	1	37	7	1	13	2	4	12	3	3
	91	27	13	273	22	20	25	6	5	84	9	11	96	31	13	281	68	318

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POL87	54	3	8	42	3	6	12	6	4	24	0	1	6	4	3	10	2	5
	42	15	13	166	12	10	15	3	4	40	10	5	52	16	·22	133	29	174
PUE54	13	7	5	3	8	3	4	7	2	3	9	3	9	10	10	6	19	11
	5	5	4	20	24	10	6	7	4	14	47	18	21	32	34	44	188	242
QUE60	38	7	2	1	8	1	5	4	0	2	0	0	9	2	10	8	9	0
	1	7	1	10	14	1	12	14	4	20	24	1	20	6	18	23	41	79
QUE73	194	60	13	35	40	5	74	48	6	27	31	0	51	22	25	30	46	2
	137	78	22	139	137	3	113	773	21	150	252	6	94	49	59	148	259	161
QUE77	211	105	14	74	52	3	117	83	23	32	43	2	67	90	37	57	49	2
	268	275	42	292	237	7	157	150	28	142	148	5	128	104	56	235	194	91
SCO74	28	4	1	5	6	1	8	3	1	5	6	1	7	3	12	3	5	1
	36	16	7	45	37	0	27	6	7	32	54	4	10	1	2	7	13	11
SCO75	214	50	14	63	33	8	87	23	14	96	56	4	86	28	46	63	43	6
	274	129	64	585	444	19	149	102	55	377	347	11	35	26	23	83	95	135
SPA60	105	35	23	11	5	9	27	71	28	29	7	15	45	58	59	25	14	26
	21	32	24	102	28	19	13	29	30	55	64	38	42	87	130	138	109	574
SPA67t	56	19	10	3	0	1	9	24	4	6	3	5	22	8	33	17	6	3
	24	18	14	41	5	1	2	4	3	13	9	2	18	30	37	60	23	114
SPA68	1785	1043	177	26	520	83	566	1609	200	34	769	72	404	712	1249	27	1115	317
	25	90	16	29	173	12	645	1845	829	190	7257	530	1130	1657	1743	182	9834	11569
SWE50	210	110	16	22	14	13	210	486	48	165	220	97	76	102	48	37	48	26
	143	433	108	576	514	129	92	660	120	696	1388	378	109	615	218	787	1418	2171
SWE60	27	4	1	2	1	2	4	10	1	4	5	2	8	15	14	16	15	3
	3	16	6	23	42	2	3	23	15	40	63	9	3	18	18	26	62	94
SWE72l	31	11	5	7	0	0	15	6	2	10	3	0	5	4	4	5	1	2
	20	22	10	43	6	1	6	9	2	14	9	0	13	14	3	39	9	12

SWE72s	27	6	2	4	1	0	21	9	1	11	1	1	5	6	7	8	0	0
	22	10	13	66	11	3	7	11	7	27	9	3	12	11	11	39	22	34
SWE73	124	27	12	38	19	2	29	10	6	16	11	1	71	11	40	64	42	6
	122	40	31	188	104	10	81	28	31	159	109	9	86	47	45	165	186	124
SWE83w	56	14	8	8	9	0	10	5	0	4	2	0	14	1	4	9	4	1
	29	17	8	58	23	4	38	19	12	28	33	3	26	6	17	55	45	24
SWI76p	48	6	3	14	1	0	11	5	1	10	1	0	18	6	10	8	4	1
	38	12	5	49	20	2	23	14	2	44	22	0	19	12	9	29	19	44
TAI70	22	9	7	4	4	4	8	10	5	1	9	1	23	18	40	10	22	7
	1	1	5	10	4	1	3	4	13	2	34	11	60	28	74	14	73	183
TAI70l	21	7	4	2	5	2	8	7	2	3	4	0	17	8	27	3	13	6
	3	4	2	1	3	0	3	3	7	2	34	11	39	24	38	10	70	192
USA47	38	15	13	3	10	3	7	16	11	9	11	2	29	24	41	10	19	5
	25	29	32	61	42	7	14	20	15	38	69	11	22	19	45	61	81	123
USA47l	35	18	21	5	10	11	13	13	14	8	6	3	26	19	44	25	12	13
	19	19	19	64	45	18	13	17	14	31	66	14	22	21	24	50	76	106
USA59c	50	9	12	16	12	2	4	1	1	1	3	0	5	1	3	2	2	0
	26	11	3	39	18	3	27	6	6	37	51	1	19	5	10	50	39	42
USA62o	787	196	68	176	172	16	286	116	39	117	137	14	390	157	144	195	225	25
	446	217	83	547	513	27	464	263	98	524	846	38	420	221	185	624	1020	723
USA72g	53	20	2	9	16	1	11	5	0	3	6	0	22	7	6	5	9	1
	25	10	3	43	32	1	33	12	2	30	33	0	18	10	3	20	44	31
USA73g	41	12	4	17	14	1	12	1	0	1	7	1	17	9	9	11	9	1
	26	10	6	34	25	1	24	11	9	13	30	1	20	3	4	26	40	19
USA73o	1827	423	129	428	442	34	693	285	63	278	325	14	723	228	184	372	373	37
	1161	469	173	1154	1119	49	1074	513	170	1125	1590	49	831	335	271	1085	1568	716

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USA74g	45	8	5	8	7	0	13	4	1	3	8	0	11	7	3	10	4	0
	26	8	3	36	32	0	24	7	6	22	31	1	20	4	4	28	31	12
USA74p	64	5	2	16	10	1	21	2	0	8	4	3	24	1	3	4	3	0
	46	11	4	31	26	1	24	1	2	16	12	2	25	7	6	43	18	13
USA75g	40	12	3	12	10	0	10	4	1	1	4	0	20	5	6	16	11	0
	33	17	5	33	29	2	28	11	4	22	23	0	10	5	9	20	23	11
USA76g	41	8	6	9	8	0	10	4	1	7	4	0	10	3	4	8	12	1
	31	11	3	30	18	2	30	10	4	30	39	1	14	4	3	18	20	23
USA77g	42	9	4	11	12	1	11	1	1	3	3	0	22	1	11	11	11	2
	30	11	2	46	39	0	22	6	6	21	34	1	16	3	9	27	31	17
USA78g	58	10	4	14	12	0	9	5	3	7	6	0	21	5	2	6	5	0
	33	6	9	42	42	2	17	12	2	27	23	2	11	7	4	17	24	6
USA80g	48	13	7	16	11	1	17	1	1	4	3	0	17	3	5	6	7	1
	28	8	9	34	15	0	18	6	5	30	21	1	15	5	9	19	18	12
USA81w	90	16	13	20	21	2	16	5	3	6	7	0	24	4	7	11	9	1
	43	4	9	41	26	1	38	10	21	34	41	2	25	3	11	14	23	9

USA82g	45	10	7	12	17	1	15	2	2	5	10	0	26	5	15	13	19	0
	27	11	6	34	29	4	26	10	15	26	42	0	8	0	8	24	24	9
USA83g	66	16	5	18	16	1	10	8	3	5	6	1	22	6	5	4	11	1
	32	8	7	35	31	1	26	9	9	23	27	2	7	7	5	9	17	14
USA84g	50	15	6	10	17	1	15	5	1	2	3	0	12	6	3	7	9	2
	27	7	10	25	15	2	19	16	2	20	28	1	16	2	6	11	15	10
USA85g	71	14	9	15	13	1	13	5	0	2	2	1	14	3	4	12	8	1
	32	7	7	48	31	0	24	5	4	21	24	2	17	3	4	15	24	12
USA86g	73	16	13	11	14	2	14	7	1	6	6	0	13	5	7	6	5	1
	30	10	8	20	25	0	28	3	1	15	20	0	12	4	4	13	17	14
YUG67t	16	1	0	8	0	0	1	1	0	4	0	1	7	0	2	10	1	0
	2	5	0	29	7	1	3	3	0	16	3	0	4	7	0	34	17	12

Note: The counts are listed row by row. Thus the first entry for a country is the count for the (1,1) cell, that is the cell for fathers and sons in Category 1 (Professionals and Managers); the second entry is the count for the (1,2) cell, that is for fathers in Category 1 and sons in Category 2 (Routine nonmanual workers); and so on. As we have noted, and ASCII file containing these counts in this Appendix is available from the first author upon request.

APPENDIX 3:

Percentage Distributions of Fathers and Sons Across Occupational Classes, for 149 Tables From 35 Countries

	N	Fathers						Sons					
		(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
AUS65	1852	15.9	9.1	2.8	21.5	27.8	23.1	21.9	14.7	1.3	23.7	25.7	12.6
AUS67	747	21.6	4.7	3.6	24.4	24.0	21.8	27.4	12.4	2.9	21.7	24.1	11.4
AUS67l	604	19.5	6.3	4.0	24.3	20.4	25.5	25.5	11.8	3.0	23.7	23.3	12.7
AUS73	2227	14.7	4.6	16.3	23.3	17.5	23.4	26.7	8.3	11.9	28.4	16.2	8.5
AUS 87	632	24.5	6.5	4.7	23.4	24.4	16.5	35.3	9.8	10.8	20.1	17.7	6.3
AUT69n	634	8.0	17.2	15.0	14.4	23.7	21.8	12.8	25.9	9.9	21.6	18.8	11.0
AUT74p	454	10.8	7.9	9.7	19.8	18.1	33.7	20.7	9.9	3.7	24.2	22.9	18.5
AUT78	9971	17.9	6.3	10.0	20.6	18.2	26.9	32.2	10.0	6.7	24.5	18.1	8.5
BEL71e	518	10.6	8.1	18.1	7.1	36.5	19.5	21.0	14.9	14.1	13.7	27.2	9.1
BEL75	748	25.5	12.4	17.0	18.0	8.6	18.4	33.3	12.7	15.4	19.5	5.1	14.0
BEL76	603	21.9	13.6	18.7	20.9	9.1	15.8	32.0	12.9	12.8	25.7	5.8	10.8
BRA73	5964	5.1	1.6	12.1	5.7	5.5	70.0	9.6	7.2	14.3	12.9	15.5	40.6
CAN73	10224	13.0	8.0	6.8	18.5	22.6	31.2	26.7	10.9	5.4	23.6	23.3	10.2
CAN82w	1140	19.0	6.8	4.7	19.9	19.0	30.5	29.7	9.3	8.3	22.0	19.4	11.2
CAN84	1185	20.3	8.6	3.5	20.3	24.2	23.0	31.5	12.2	1.9	23.0	22.0	9.5
CSK67	3942	5.8	6.4	5.5	15.6	28.2	38.5	22.9	9.8	.3	22.5	30.7	13.9
DEN71	510	6.5	7.3	12.2	12.9	19.6	41.6	15.3	16.1	7.1	22.0	28.0	11.6
DEN72l	331	9.4	7.9	6.9	31.4	19.3	34.1	16.3	11.8	9.1	31.7	7.6	23.6
DEN72s	426	7.5	8.0	10.1	23.0	14.1	37.3	16.2	10.6	9.2	32.6	9.4	22.1
ENG51	2534	7.7	6.5	4.8	41.2	29.4	10.5	12.0	9.4	5.4	41.3	22.9	9.0

ENG63	685	9.8	4.7	9.3	32.6	32.4	11.2	20.1	8.6	5.8	29.9	30.4	5.1
ENG67t	315	10.8	4.1	7.0	29.2	44.1	4.8	19.7	8.3	6.0	27.0	38.1	1.0
ENG69	726	9.6	4.7	10.7	35.0	28.8	11.2	23.6	8.3	7.4	29.5	28.7	2.6
ENG72	9489	13.1	7.3	9.5	39.3	22.7	8.1	25.0	9.2	7.8	32.6	22.4	3.1
ENG74	764	14.3	6.3	9.4	33.2	27.4	9.4	27.7	8.9	7.5	24.3	27.0	4.6
ENG74p	397	9.1	12.6	7.1	49.9	10.8	10.6	25.7	9.8	5.3	26.4	28.0	4.8
ENG83	1520	14.5	4.4	9.5	36.8	27.0	7.8	26.4	6.7	7.2	30.8	25.7	3.2
ENG86	1327	18.5	6.6	9.0	39.0	21.4	5.4	34.2	6.7	10.7	26.1	20.7	1.5
FIN67t	190	1.9	6.3	3.2	31.6	4.7	52.2	6.1	15.3	5.8	41.7	7.4	23.7
FIN72l	283	7.4	7.1	4.2	20.1	10.2	50.9	15.2	14.1	4.6	30.4	10.2	25.4
FIN72s	383	5.5	7.3	4.4	19.6	7.8	55.4	9.9	10.2	6.8	34.2	11.5	27.4
FIN75p	417	7.0	2.3	7.2	23.5	16.1	43.9	18.0	9.5	3.6	35.8	19.0	14.2
FIN80	1608	8.6	5.2	8.3	18.9	16.7	42.3	21.5	7.4	6.2	38.7	13.7	12.6
FIN82w	409	12.2	2.7	2.4	18.8	17.4	46.5	23.0	30.3	8.6	4.4	21.8	12.0
FRA58	335	10.1	8.4	20.3	4.2	24.5	32.5	21.8	12.5	14.0	11.9	25.7	14.0
FRA64	9888	13.1	6.5	12.8	28.8	5.1	33.7	19.0	8.6	7.7	40.4	6.9	17.5
FRA67	743	6.2	15.6	15.5	29.6	2.0	31.1	11.2	23.2	10.5	38.0	2.4	14.8
FRA70	4769	12.1	8.2	14.5	18.2	14.6	32.4	22.3	9.8	9.8	23.3	20.8	14.0
FRA71e	623	12.5	9.0	13.6	6.3	27.6	31.0	23.4	7.1	9.3	14.8	27.9	17.5
GER59	1377	11.0	7.6	11.5	29.8	17.9	22.1	11.4	13.2	12.7	32.5	19.7	10.5
GER69	271	12.2	13.3	14.0	24.4	18.8	17.3	12.5	21.8	7.7	38.0	12.9	7.0
GER69k	4047	13.7	10.7	16.8	28.8	15.8	14.2	14.5	·23.6	11.6	36.0	10.3	4.0
GER75p	657	18.3	11.4	5.9	30.6	14.3	19.5	30.6	14.8	4.9	29.1	14.6	6.1
GER76z	518	17.8	7.1	10.0	33.6	12.0	19.5	33.6	4.1	8.9	37.8	11.2	4.4
GER77z	443	16.7	5.2	9.9	36.6	18.5	13.1	28.4	6.3	5.4	41.1	15.8	2.9
GER78	401	18.0	5.5	10.0	36.9	18.5	11.2	33.2	6.0	6.7	37.7	13.7	2.7

APPENDIX 3 (Continued)

	N	Fathers						Sons					
		(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
GER78x	365	14.5	5.2	15.3	40.0	14.5	10.4	24.7	4.1	7.9	52.6	8.5	2.2
GER78z	388	15.7	6.7	11.3	37.9	16.0	12.4	36.1	5.2	7.0	38.7	10.3	2.8
GER79p	543	15.7	7.9	5.7	46.0	7.7	16.9	39.4	10.9	5.2	34.1	6.6	3.9
GER79z	409	15.6	7.6	10.8	39.6	13.2	13.2	33.0	8.6	6.6	39.1	9.0	3.7
GER80	392	16.3	6.5	11.5	34.5	19.2	12.0	33.7	6.0	5.9	42.4	8.4	3.6
GER80a	649	15.3	5.7	10.9	45.1	8.8	14.2	30.5	5.5	7.1	43.0	9.4	4.5
GER80z	396	17.9	6.8	11.6	35.6	12.9	15.2	41.7	4.0	7.1	34.8	9.3	3.0
GER82a	570	18.2	5.3	12.5	35.4	13.0	15.6	30.2	11.1	7.2	31.9	15.3	4.4
GER84a	589	20.5	4.8	11.4	32.8	15.4	15.1	36.3	9.5	6.5	30.6	13.4	3.7
HKG67	1334	21.1	11.8	23.2	7.8	11.0	25.1	15.4	24.4	14.3	14.8	30.4	.7
HUN62	11988	1.7	3.3	9.8	10.0	10.2	65.0	5.5	9.2	3.7	20.2	22.0	39.4
HUN73	11233	4.9	4.8	7.5	15.8	19.9	47.2	12.9	8.2	1.8	37.6	25.2	14.2
HUN73l	7810	3.7	4.0	8.1	14.4	18.4	51.3	13.0	8.6	1.9	35.3	25.5	15.8
HUN82	5416	7.9	7.7	6.8	16.4	17.5	43.7	16.2	8.6	2.6	30.9	29.6	12.1
HUN83	10710	6.9	3.0	5.8	17.2	24.4	42.7	15.5	4.2	2.4	34.0	30.3	13.6
HUN86	2049	11.9	3.1	12.2	14.9	24.1	33.7	21.5	5.8	2.7	32.6	29.0	8.3
IND62c	1279	5.6	7.6	10.6	6.4	7.2	62.7	7.0	11.1	9.8	7.0	6.4	58.6
IND63a	1587	6.7	15.3	19.2	9.0	8.1	41.7	7.5	19.8	22.5	12.9	10.9	26.5
IND63c	1190	3.8	7.0	9.1	5.5	6.5	68.2	3.3	10.3	6.3	8.3	8.7	63.1
IND71n	1944	4.2	3.3	16.8	2.5	8.3	64.9	5.1	3.9	14.0	2.8	8.0	66.2
IRE74	2128	6.5	4.9	10.2	14.7	21.7	42.1	14.0	9.0	8.1	20.7	23.6	24.6

ISR62c	407	29.7	36.1	8.1	14.0	8.6	3.4	31.9	12.5	2.9	29.7	15.2	7.6
ISR74	5921	13.4	8.2	31.8	13.6	19.2	13.7	23.8	14.2	8.6	22.4	25.2	5.8
ITA63	1045	10.5	3.3	8.5	14.3	18.6	44.8	15.6	5.4	8.1	19.1	26.4	25.4
ITA68	960	1.8	10.1	14.3	9.5	18.4	45.9	6.4	19.6	13.0	26.4	13.8	20.9
ITA72	590	7.3	8.3	14.1	12.0	19.5	38.8	8.8	13.1	18.6	31.2	14.1	14.2
ITA74	3513	5.1	5.1	15.9	28.4	19.2	26.3	5.8	15.3	19.2	37.3	13.7	8.7
ITA75p	595	9.4	7.4	8.9	17.5	22.7	34.1	22.7	10.8	15.3	19.8	19.0	12.4
JAP55	1800	8.4	3.9	22.5	2.9	4.6	57.6	12.1	12.2	17.8	7.9	10.2	39.8
JAP65	1828	13.5	4.4	17.7	9.4	4.9	50.1	21.7	13.4	13.6	13.9	16.8	20.5
JAP67	539	9.8	14.7	5.0	18.4	6.5	45.6	18.9	19.9	3.2	26.2	14.3	17.6
JAP69t	402	14.2	5.0	27.9	7.2	11.4	34.3	23.6	16.9	10.9	8.5	28.6	11.4
JAP71n	1043	9.4	8.1	22.5	4.8	5.5	49.7	14.3	21.1	11.6	14.7	15.5	22.8
JAP75	2053	17.0	5.5	19.3	6.5	6.5	45.3	27.1	13.6	12.0	15.1	16.8	15.4
MAL67	4430	5.1	4.2	9.1	6.9	6.3	68.4	10.0	6.5	6.9	7.3	12.4	56.8
NET58	425	10.4	3.8	23.5	22.1	17.4	22.8	14.6	12.5	15.3	32.5	12.9	12.2
NET67t	182	13.2	9.3	14.8	29.7	13.2	19.8	18.1	25.3	11.5	28.6	6.0	10.4
NET70	779	18.9	6.0	15.3	17.5	18.4	24.0	29.3	13.0	7.4	23.5	18.1	8.7
NET71	361	17.2	5.8	19.1	15.8	13.6	28.5	26.3	13.6	8.6	24.9	15.8	10.8
NET71e	383	9.7	13.8	14.4	7.6	31.9	22.7	25.8	11.7	7.0	22.5	16.7	16.2
NET74p	396	18.7	7.1	21.0	16.9	19.2	17.2	36.6	14.6	6.1	21.2	14.4	7.1
NET76	560	14.8	8.9	19.3	20.2	17.7	19.1	27.9	18.8	9.5	22.1	14.1	7.7
NET77	555	16.9	7.2	14.4	21.8	17.3	22.3	30.1	13.9	5.9	27.6	16.8	5.8
NET77x	1407	17.5	8.8	15.3	23.6	18.0	16.8	32.3	16.6	4.1	27.9	13.6	5.6
NET79p	316	19.0	10.8	3.8	28.8	18.7	19.0	32.0	14.2	6.0	27.2	10.8	9.8

(continued)

APPENDIX 3   (Continued)

	N	Fathers						Sons					
		(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
NET82	878	18.1	8.5	14.7	24.0	17.2	17.4	33.6	14.5	5.9	22.8	17.1	6.2
NET82u	426	19.0	8.2	13.1	25.6	19.7	14.3	35.2	12.9	4.2	28.2	16.2	3.3
NET85	1653	18.2	10.3	15.3	23.7	20.1	12.3	32.7	15.3	4.4	24.4	19.5	3.6
NIG71n	1286	7.4	2.1	11.1	.7	3.3	75.4	9.4	3.5	16.6	1.1	3.3	66.2
NIR68	474	7.2	4.2	7.4	24.9	25.3	31.0	14.3	11.2	8.0	23.2	29.1	14.1
NIR73	2291	8.4	6.2	9.8	21.3	27.8	26.5	17.1	9.6	9.7	26.1	26.5	11.0
NOR57	632	11.4	1.1	12.3	20.9	14.9	39.4	14.6	7.3	11.2	19.6	26.1	21.2
NOR65	724	11.2	2.1	9.9	15.6	24.3	36.9	20.3	9.1	8.6	18.4	29.6	14.1
NOR67t	170	9.4	9.4	11.2	21.2	18.2	30.6	15.9	28.2	3.5	22.4	18.8	11.2
NOR72l	328	12.2	11.3	7.3	24.1	7.6	37.5	25.6	17.4	6.4	30.5	4.6	15.5
NOR73	966	9.6	7.1	14.9	27.7	11.3	29.3	19.6	11.1	14.4	37.3	7.6	10.1
NOR82w	884	19.0	5.2	5.0	24.7	16.6	29.5	37.1	11.2	6.2	25.1	14.1	6.2
NZE76	1453	19.8	3.8	15.9	20.9	14.0	25.7	33.7	6.5	13.8	23.3	11.3	11.4
PHI68	35468	2.6	2.5	3.6	1.8	8.4	81.1	5.1	4.7	3.5	4.2	15.0	67.6
PHI73	5300	5.5	3.5	4.1	7.8	6.2	73.0	8.8	6.6	5.1	12.1	14.6	52.8
POL72	31561	5.4	4.3	3.1	13.5	16.3	57.5	15.3	4.9	1.7	20.6	29.6	28.0
POL82	1703	11.3	4.7	2.2	26.2	8.2	47.4	21.3	4.6	2.5	43.8	6.8	21.0
POL87	954	12.2	4.9	3.1	27.0	8.1	44.7	19.0	4.9	5.7	43.5	5.9	21.1
PUE54	857	4.6	3.3	7.6	7.9	11.2	65.5	6.8	7.9	6.9	10.5	34.4	33.5
QUE60	402	14.2	2..7	9.5	8.5	18.7	46.5	21.1	10.0	8.7	15.9	23.9	20.4
QUE73	2610	13.3	7.1	6.7	19.8	23.6	29.5	25.4	12.6	5.6	20.3	29.3	6.8

QUE77	3620	12.7	8.3	8.3	31.0	17.4	22.3	26.2	22.3	5.5	23.0	20.0	3.0
SCO74	415	10.8	5.8	7.5	34.0	31.3	10.6	28.0	8.0	7.2	23.4	29.2	4.3
SCO75	3887	9.8	7.2	7.0	39.0	26.8	10.2	21.7	9.2	5.6	32.6	26.2	4.7
SPA60	2127	8.8	8.3	10.7	10.6	10.8	50.8	11.9	14.7	13.8	16.9	10.7	32.0
SPA67t	647	13.8	7.9	13.8	15.9	5.1	43.6	20.2	15.9	15.6	21.6	7.1	19.5
SPA68	48464	7.5	6.7	7.9	.7	23.3	53.9	9.4	14.4	8.7	1.0	40.6	26.0
SWE50	12503	3.1	9.8	2.7	15.2	26.7	42.5	6.7	19.2	4.5	18.3	28.8	22.5
SWE60	600	6.2	4.3	11.8	15.3	25.5	36.8	8.0	14.3	9.2	18.5	31.3	18.7
SWE72l	343	15.7	10.5	6.1	29.7	11.7	26.2	26.2	19.2	7.6	34.4	8.2	4.4
SWE72s	428	9.3	10.3	6.1	29.2	15.0	30.1	22.0	12.4	9.6	36.2	10.3	9.6
SWE73	2094	10.6	3.5	11.2	23.6	19.9	31.2	24.5	7.8	7.9	30.1	22.5	7.3
SWE83w	594	16.0	3.5	5.6	23.4	22.4	29.1	29.1	10.4	8.2	27.3	19.5	5.4
SWI76p	510	14.1	5.5	9.2	24.7	20.6	25.9	30.8	10.8	5.9	30.2	13.1	9.2
TAI70	725	6.9	4.7	16.6	3.0	9.2	59.6	16.1	9.7	19.9	5.7	20.1	28.6
TAI70l	585	7.0	4.1	12.6	2.2	10.3	63.8	15.6	9.1	13.7	3.6	22.1	36.1
USA47	980	8.4	5.7	13.1	20.0	17.0	35.8	13.8	12.6	16.0	18.6	23.7	15.4
USA47l	934	10.7	6.1	14.9	19.7	16.6	32.0	13.7	11.5	14.6	19.6	23.0	17.7
USA59c	517	19.5	1.9	2.5	19.3	24.8	31.9	25.3	6.4	6.8	28.0	24.2	9.3
USA62c	10519	113.5	6.7	10..8	17.4	21.2	30.4	26.6	11.1	5.9	20.8.	27.7	8.0
USA72g	526	19.2	4.8	9.5	21.7	20.9	24.0	30.8	12.2	3.0	20.9	26.6	6.5
USA73g	467	19.0	4.5	11.9	21.8	18.8	24.0	30.0	9.8	6.9	21.9	26.8	4.7
USA73o	20310	16.2	8.2	9.4	20.3	22.3	23.7	31.1	11.1	4.9	21.9	26.7	4.4
USA74g	432	16.9	6.7	8.1	24.3	21.1	22.9	32.2	8.8	5.1	24.8	26.2	3.0
USA74p	459	21.4	8.3	7.6	25.9	12.4	24.4	44.4	5.9	3.7	25.7	15.9	4.4
USA75g	440	17.5	4.5	13.2	27.0	20.0	17.7	32.0	12.3	6.4	23.6	22.7	3.0

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APPENDIX 3   (Continued)

	N	Fathers						Sons					
		(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
USA76g	427	16.9	6.1	8.9	22.2	26.7	19.2	31.9	9.4	4.9	23.9	23.7	6.3
USA77g	477	16.6	3.9	12.2	26.9	18.9	21.6	30.0	6.4	6.9	25.0	27.3	4.4
USA78g	447	20.6	6.7	8.7	30.0	18.6	15.4	32.0	10.1	5.4	25.3	25.1	2.2
USA80g	414	23.2	6.3	9.4	22.7	19.6	18.8	34.5	8.7	8.7	26.3	18.1	3.6
USA81w	610	26.6	6.1	9.2	20.3	23.9	13.9	38.7	6.9	10.5	20.7	20.8	2.5
USA82g	507	18.1	6.7	15.4	21.9	23.5	14.4	29.0	7.5	10.5	22.5	27.8	2.8
USA83g	473	25.8	7.0	10.4	24.1	20.3	12.5	34.5	11.4	7.2	19.9	22.8	4.2
USA84g	396	25.0	6.6	9.8	21.7	21.7	15.2	35.1	12.9	7.1	18.9	22.0	4.0
USA85g	468	26.3	4.9	9.0	26.7	17.1	16.0	36.5	7.9	6.0	24.1	21.8	3.6
USA86g	424	30.4	8.0	8.7	21.9	15.8	15.1	40.1	10.6	8.0	16.7	20.5	4.0
YUG67t	195	12.8	3.4	10.3	22.6	12.8	38.0	17.0	8.5	1.0	51.9	14.4	7.2

APPENDIX 4:
DATA SOURCES

Appendix 4.A: Machine readable data files

Aitkin, Donald; Kahan, Michael; Stokes, Donald E.: AUSTRALIAN NATIONAL POLITICAL ATTITUDES, 1967 [machine-readable data file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7382). (AUS67, AUS67l)

Allardt, Erik; Uusitalo, Hannu: SCANDINAVIAN WELFARE SURVEY, 1972 [machine-readable data file] English translation ed. Helsinki, Finland: University of Helsinki [producer], 1977; Odense, Denmark: Danish Data Archives [distributor] (DDA0081) (DEN72l, DEN72s, FIN72l, FIN72s, NOR72l, NOR72s, SWE72l, SWE72s)

Allerbeck, K.R; Kaase, M.; Klingemann, H.D.: POLITISCHE IDEOLOGIE II (REPRAESEN-TATIVUMFRAGE), 1980 [machine-readable data file] Cologne, Germany: Zentralarchiv fuer empirische Sozialforschung [distributor] (ZA 1191). (GER80p)

Andorka, Rudolf: SOCIAL MOBILITY AND OCCUPATIONAL CHANGES IN HUNGARY, 1973 [machine-readable data file] English translation ed. Mannheim: Central Statistical Office [producer]; Los Angeles, CA: Institute for Social Science Research. University of California [distributor]. (HUN73, HUN73l)

Barnes, Samuel H.: ITALIAN MASS ELECTION SURVEY, 1968 [machine-readable data file] ICPSR ed. Rome, Italy: CISER [producer]; Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7953). (ITA68)

Barnes, Samuel H.; Sani, Giacomo: ITALIAN MASS ELECTION SURVEY, 1972 [machine-readable data file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7954). (ITA72)

Barnes, Samuel H.; Kaase, Max; et al.: POLITICAL ACTION: AN EIGHT NATION STUDY, 1973-1976 [machine-readable data file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7777). (AUT74p, ENG74p, FIN75p, GER75p, ITA75p, NET74p, SWI76p, USA74p)

Borre, Ole; Damgaard, Eric; Nielsen, Hans Jorgen; Sauerberg, Steen; Tonsgaard, Ole; Worre, Torben: DANISH PRE-AND POST-ELECTION SURVEY, 1971 [machine-readable data file] Odense, Denmark: Danish Data Archives, Odense University [distributor] (DDA0007). (DEN71)

Boyd, Monica; et al.: CANADIAN MOBILITY SURVEY, 1973 [machine-readable data file] Ottawa, ONT: Carleton University [distributor]. (CAN73, CAN73q)

Butler, David and Stokes, Donald E.: POLITICAL CHANGE IN BRITAIN, 1963 [machine-readable data file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7232). (ENG63)

Butler, David; Stokes, Donald E.: POLITICAL CHANGE IN BRITAIN, 1969-1970 [machine-readable data file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7004). (ENG69)

Cantril, Hadley: PATTERN OF HUMAN CONCERNS DATA, 1957-1963 [machine-readable data file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7023). (IND62c, IND63c, ISR62c, USA59c)

CBS (Centraal Bureau voor de Statistiek): LIFE [SITUATION] SURVEY, 1977 [machine-readable data file] Amsterdam, Netherlands: Steinmetz Archive [distributor] (P0328). (NET77x)

Converse, Philip E.; Pierce, Roy: FRENCH NATIONAL ELECTION STUDY, 1967 [machine-readable data file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7372). (FRA67)

Crewe, Ivor; Särlvik, Bo; Alt, James: BRITISH ELECTION STUDY: FEBRUARY 1974: CROSS SECTION [machine-readable data file] Essex, England: Social Science Research Council. University of Essex [producer]; Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7868); (ESRC 00359). (ENG74)

Crewe, Ivor; Särlvik, Bo; Alt, James: BRITISH ELECTION STUDY: OCTOBER 1974 — SCOTTISH CROSS-SECTION [machine-readable data file] Essex, England: Social Science Research Council. University of Essex [producer]; Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7871); (ESRC 00359). (SCO74)

Daheim, Hans-Jürgen: ABGRENZUNG UND KONSTANZ DES MITTELSTANDES, 1959 [machine-readable data file] Frankfurt, Germany: DIVO [producer]; Cologne, Germany: Zentralarchiv fuer empirische Sozialforschung [distributor] (ZA 0187). (GER59)

Davis, James A.; Smith, Tom W.: GENERAL SOCIAL SURVEY CUMULATIVE FILE 1972-1986: [machine-readable data file] NORC ed. Chicago, Ill.: National Opinion Research Center [producer], 1986; Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 8609). (USA72g, USA73g, USA74g, USA75g, USA76g, USA77g, USA78g, USA80g, USA82g, USA83g, USA84g, USA85g, USA86g)

Dupeux, Georges: FRENCH ELECTION STUDY, 1958 [machine-readable data file] Rev. ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7278). (FRA58)

Featherman, David L.; Hauser, Robert M.: OCCUPATIONAL CHANGES IN A GENERATION, 1962-1973 [machine-readable data file] Washington, D.C.: U.S. Bureau of the Census [producer]; Madison, WI.: Data and Program Library Service. University of Wisconsin [distributor] (SB-001-002-USA-DPLS-1962-1). (USA73o, USA62o)

Gadourek, Ivan: RISKANTE GEWOONTEN, 1958 [machine readable file], Amsterdam, Netherlands: Steinmetz Archive (P0142). (NET58).

Grichting, Wolfgang L.: VALUE SYSTEM IN TAIWAN, 1970 [machine-readable data file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7223). (TAI70, TAI70l)

Heath, A.F., et al.: BRITISH ELECTION STUDY: [JUNE] 1983 [machine-readable data file] Essex, England: Social Science Research Council. University of Essex [producer]; Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 8409); (ESRC 2005). (ENG83)

Heath, Anthony: BRITISH ELECTION SURVEY, 1986a (ENG86). [table provided by Anthony Heath]

Heinen, A.; Maas, A.: NPAO LABOUR MARKET SURVEY, 1982 [machine-readable data file] Amsterdam, Netherlands: Steinmetz Archive [distributor] (P0748). (NET82)

Hermkens, Piet; Van Wijngaarden, Piet: CRITERIA FOR JUSTIFICATION OF INCOME DIFFERENCES, 1976 [machine-readable data file] Amsterdam, Netherlands: Steinmetz Archive [distributor] (P0653). (NET76)

Heunks, Felix M.; Jennings, M. Kent; et al.: DUTCH ELECTION STUDY, 1970-1973 [machine-readable data file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7261). (NET70)

Heunks, Felix M.; et al.: POLITICAL ACTION SURVEY FOLLOW UP 1979 [machine-readable data file] Tilburg, Netherlands: Tilburg University [distributor] (NET79p)

Indian Institute of Public Opinion: ALL-INDIA POLITICAL POLL, 1963 [machine-readable data file] Cologne, Germany: Zentralarchiv fur Empirische Sozialforschung [distributor] (ZA. 0406). (IND63)

Inglehart, Ronald; Rabier, Jacques-Rene: EUROPEAN COMMUNITIES STUDY, 1971 [machine-readable data file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7275). (BEL71e, FRA71e, NET71e)

IBGE (Instituto Brasileiro de Estatistica): PESQUISA NACIONAL POR AMOSTRA DE DOMICILIOS, 1973 (PNAD) [machine-readable data file] English translation ed. prepared by Archibald O. Haller and Jonathan Kelley. Madison, WI.: Data and Program Library Service. University of Wisconsin [distributor]. (BRA73)

Klingemann, Hans D.; Pappi, Franz Urban: GERMAN PRE- AND POST-ELECTION STUDY, 1969 [machine-readable data file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7098). (GER69)

Kolosi, Tamas: A STRATIFICATION MODEL STUDY—CENTRAL FILE OF INDIVID-UALS IN ENGLISH, 1981-1982 [machine-readable data file]. Budapest: Social Research Informatics Society TARKI [distributor] (A97). (HUN82)

Kolosi, Tamas: HUNGARIAN WAY OF LIFE SURVEY, 1986 [machine-readable data file]. Budapest: Social Research Informatics Society TARKI [distributor]. (HUN86) [Tabulation provided by Peter Robert.]

Kulszar, Rosa; Harcsa, Istvan: HUNGARIAN SOCIAL MOBILITY AND LIFE HISTORY SURVEY 1983 [machine readable data-file] Budapest, Hungary: Central Statistical Office [producer] English translation ed. Madison WI: Center for Demography and Ecology. University of Wisconsin [distributor]. (HUN83)

Lambert, Ronald D.; et al.: CANADIAN NATIONAL ELECTION STUDY, 1984 [machine-readable data file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 8544). (CAN84)

Lopreato, Joseph, CLASS CONSCIOUSNESS IN ITALY, 1963-1964 [machine readable data-file] Madison, WI: Data and Program Library Service. University of Wisconsin [distributor] (DPLS SB-507-001-1-1). (ITA63)

Malaysian Department of Statistics: WEST MALAYSIAN FAMILY SURVEY, 1966-1967 [machine-readable data file] Kuala Lumpur, Malaysia: Census and Demography Division. Department of Statistics [producer]. (MAL67)

Matras, Judah; Weintraub, Dov; Kraus, Vered: OPPORTUNITY STRUCTURE, MOBILITY, AND FERTILITY IN ISRAEL, 1974 [machine-readable data file] Jerusalem, Israel: Central Bureau of Statistics [producer]. (ISR74)

McAllister, Ian; Mughan, Anthony: AUSTRALIAN ELECTION SURVEY, 1987 [machine readable data-file] Canberra, ACT: Social Science Data Archives. Australian National University [distributor] (SSDA 445). (AUS87)

Mitchell, Robert E.: FAMILY LIFE IN URBAN HONG KONG, 1967: [machine-readable data file] IDLRS ed. Hong Kong: Social Survey Research Center. University of Hong Kong [producer]; Berkeley, CA: State Data Program. University of California [distributor] (IDLRS 406-40-0006). (HKG67)

Mokken, Robert J.; Roschar, Frans M.: DUTCH PARLEMENTARY ELECTION SURVEY, 1971 [machine-readable data file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7311). (NET71)

Moore, R.; Payne, G.: SCOTTISH MOBILITY STUDY 1974-1975 [machine-readable data file] Essex, England: Social Science Research Council. University of Essex [distributor] (ESRC 00981). (SCO75)

NORC (National Opinion Research Center): STUDY OF OCCUPATIONAL PRESTIGE, 1947 [machine-readable data file] Chicago, IL: National Opinion Research Center [producer and distributor]. (USA47, USA47l)

NORWEGIAN QUALITY OF LIFE SURVEY, 1973 [machine-readable data file] Bergen, Norway: Norwegian Social Science Data Services [distributor]. [Tabulation provided by Kristen Ringdal.] (NOR73)

Odaka, Kunio; Fukutake, Tadashi: SOCIAL MOBILITY IN JAPAN, 1955 [machine readable data-file] Tokyo, Japan: Japan Sociological Society [producer]; Los Angeles, California: Institute for Social Science Research. University of California [distributor]. (JAP55)

Ornauer, H. [principal depositor]: IMAGES OF THE WORLD IN THE YEAR 2000 [machine readable data-file] Colchester, England: Social Science Research Council. University of Essex [distributor] (ESRC 33009). (ENG67t, FIN67t, JAP69t, NET67t, NOR67t, SPA67t, YUG67t). [adults < 40 years]

OSA (Organisatie voor Strategisch Arbeidsmarktonderzoek): NATIONAL LABOUR MARKET SURVEY, NETHERLANDS 1985 [machine-readable data file] Tilburg, Netherlands: Instituut voor Arbeidsmarktvraagstukken [producer and distributor]. (NET85)

Pinard, Maurice; Breton, Albert; Breton, Raymond, QUEBEC PROVINCIAL ELECTION STUDY, 1960, [machine readable data-file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 9002). (QUE60)

Population Institute. University of the Philippines: NATIONAL DEMOGRAPHIC SURVEY, 1973 [machine-readable data file] Manilla, Philippines: Population Institute. University of the Philippines [producer]; Los Angeles, CA.: Institute for Social Science Research. University of California [distributor].(PHI73)

Rezsohazy, R.: SYSTEME DE VALEURS DES BELGES FRANCOPHONES, 1975 [machine-readable data file] BASS ed. Louvain-la-Neuve, Belgium: Belgian Social Science Archive [distributor] (BASS 7720). (BEL75)

Rezsohazy, R.: ENQUETE SUR LE MODE DE VIE, 1976 [machine-readable data file] Louvain-la-Neuve, Belgium: Belgian Social Science Data Archive [distributor] (BASS 7721). (BEL76)

Rokkan, Stein; Valen, Henry: NORWEGIAN ELECTION STUDY, 1957 [machine readable data-file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7288). (NOR57) [Tabulation provided by Kristen Ringdal.]

Rose, Richard: NORTHERN IRELAND LOYALTY STUDY, 1968 [machine readable data-file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7237). (NIR68)

Särlvik, Bo: SWEDISH NATIONAL ELECTION STUDY, 1960 [machine-readable data file] Goteborg, Sweden: Institute of Political Science. University of Goteborg [producer]; Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7366). (SWE60)

Tominaga, Ken'ichi: SOCIAL STATUS AND MOBILITY SURVEY, 1975 [machine-readable data file] Los Angeles, CA: Institute for Social Science Research. University of California [distributor]. (JAP75)

Ultee, Wout C.; Sixma, Herman: NATIONAL PRESTIGE SURVEY, 1982 [machine-readable data file] Amsterdam, Netherlands: Steinmetz Archive [distributor] (P083). (NET82u)

Valen, Henry: NORWEGIAN ELECTION STUDY, 1965 [machine-readable data file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7256). (NOR65) [Tabulation provided by Kristen Ringdal.]

Verba, Sidney; Nie, Norman H.; Kim, Jae-On: POLITICAL PARTICIPATION AND EQUALITY IN SEVEN NATIONS, 1966-1971 ICPSR ed. [machine-readable data file] Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7768). (AUT69n, IND71n, JAP71n, NIG71n)

Ward, Robert E.; Kubota, Akira, JAPANESE NATIONAL ELECTION STUDY, 1967 [machine readable data-file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 7294). (JAP67)

Werkgroep Nationaal Kiezersonderzoek: DUTCH PARLIAMENTARY ELECTION STUDY, 1977 [machine-readable data file] Amsterdam, Netherlands: Steinmetz Archive [distributor] (P0354). (NET77)

Wright, Erik O.; et al.: CLASS STRUCTURE AND CLASS CONSCIOUSNESS: MERGED MULTI-NATION FILE, 1981-1983 [machine-readable data file] ICPSR ed. Ann Arbor,

MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 8413). (CAN82w, FIN82w, NOR82w, SWE83w, USA81w)

Yasuda, Saburo: SOCIAL STATUS AND MOBILITY SURVEY, 1965 [machine readable datafile] Tokyo, Japan: Japan Sociological Society; Los Angeles, California: Institute for Social Science Research. University of California [distributor]. (JAP65)

Zagorski, Kryzstof: POLISH SOCIAL MOBILITY SURVEY, 1972 [machine-readable data file] English translation ed. Los Angeles, CA.: Institute for Social Science Research. University of California [distributor]. (POL72)

ZUMA (Zentrum fur Umfragen, Methoden, und Analysen): GERMAN SOCIAL SURVEY (ALLBUS) CUMULATIVE FILE 1980-1986. [machine-readable data file] ICPSR ed. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] (ICPSR 8453). (GER82a, GER84a)

ZUMA (Zentrum fur Umfragen, Methoden, und Analysen): ZUMA-STANDARDDEMOGRAPHIE (ZEITREIHE), 1976-1981 [machine-readable data file] Cologne, Germany: Zentralarchiv fur Empirische Sozialforschung [distributor] (ZA. 1233). (GER76z, GER77z, GER78, GER78x, GER78z, GER79z, GER80a, GER80z, GER80)

Please note:

When available, references to machine-readable data files have been given for English language versions, obtainable from American data archives. Restrictions on distribution may apply. Neither the collectors of the original data nor the distributing data archives bear any responsibility for the analyses or interpretations presented here.

Appendix 4.B: Sources of mobility tables not derived from machine-readable data files.

Andorka, Rudolf. 1982 *A Tarsadalmi Mobilitas Valtosazai Magyarorsszagon.* Budapest: Gondalat. [Eng. translation provided by Peter Robert]. (HUN62)

Bacol, Melinda. 1971. "Intergenerational occupational mobility in the Philippines." *Philippine Sociological Review* 19:193-208. (PHI68)

Benjamin, B. 1958. "Inter-generation differences in occupation." *Population Studies* 11:262-268. (ENG51)

Beskid, Lidia. *Living Conditions and Need-Satisfaction in Poland.* Warsaw: Polish Academy of Sciences, Institute of Philosophy and Sociology. (POL82) [Tabulation provided by Bogdan Mach].

Broom, Leonard, and F. Lancaster Jones. 1976. *Opportunity and Attainment in Australia.* Canberra: ANU Press. (AUS65)

Carlsson, Goesta. 1958. *Social Mobility and Class Structure.* Lund: Gleerup. (SWE50)

[Coté, Guy] *Quebec Qualification Survey, 1977* [Tabulation provided by Guy Coté]. (QUE77)

Garnier, Maurice, and Lawrence Hazelrigg. 1976. "Reply to Daniel Bertaux's assessment." *American Journal of Sociology* 82:398-411. (FRA64)

Fondacion FOESSA. 1970. *Informe Sociologico sobre la Situacion Social de Espana.* Madrid: Editorial Euramerika. (SPA60)

Haller, Max. 1982. *Klassenbildung und soziale Schichtung in Oesterreich: Analysen zur Sozialstruktur, sozialen Ungleichheit und Mobilitaet.* Frankfurt: Campus Verlag. Table 4.31. (AUT78)

Hauser, Robert M. 1984. "Vertical mobility in Great Britain, France, and Sweden." *Acta Sociologica* 27:110. (ENG72, FRA70, SWE73) [Tables originally constructed by John Goldthorpe, Robert Erikson and Lucienne Portocarero].

Heath, Anthony. 1986b. "La mobilita sociale in Italia." Ch. 3 of Anthony Heath, *Social Mobility* (Italian Edition). Tables 3.5 and 3.6 (ITA74) [Table provided by P. Ammassari].

Hout, Michael. 1987. *Following their father's footsteps.* Berkeley: Department of Sociology, University of California. [typescript]. (IRE74, NIR73)

INE (Institudo Nacional de Estadisticas). 1976. *Encuesta de Equipamiento y Nivel Cultural de las Familias.* Madrid: Instituto Nacional de Estadisticas. (SPA68) [Table provided by Julio Carabana].

Jones, F. Lancaster, and Peter Davis. 1986. *Models of Society: Class, Stratification and Gender in Australia and New Zealand.* Sydney: Croom Helm. (AUS73, NZE76) [Special tabulations provided by F. Lancaster Jones.].

Jungmann, B. 1972. *Social and Occupational Mobility of the Czechoslovak Population in the Labor Force.* Bratislava: CSVUP. P. 79, Table III-5. (CSK67) [Tabulation provided by Bogdan Mach].

Kleining, Gerhard. 1969. "Die Veränderungen der Mobilitätschancen in der Bundesrepublik Deutschland." *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 23:780-807. (GER69k)

Miller, S.M. 1960. "Comparative social mobility." *Current Sociology* 9:1-89. (PUE54) [Table constructed by Melvin M. Tumin].

Pöntinen, Seppo, M. Alestalo, and Hannu Uusitalo. 1984. *The Finnish Mobility Study 1980: Data and First Results.* Helsinki. Tables 16a and 17a. (FIN80)

Slomczynski, Kazimierz M. *Social structure and social mobility in Poland.* Warsaw: Polish Academy of Sciences. (POL87) [Tabulation provided by Bogdan Mach].