

Applying a British Class Scheme to Swedish Data

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Abstract: To compare differences in social class among countries one needs a method of strategy that ensures comparability. Much speaks for the method of applying the class scheme of one country to the data of the other country by recoding each country's class scheme. One example of recoding is the ap-

plication of the British Registrar General's social classes to Swedish data. Finally, the Swedish definitions and divisions of social class are evaluated and found to be adequate.

Key words: Comparative research; social classes; Britain; Sweden.

1. Introduction

Social class is one of the most important descriptive variables available in social research. When studying the effects of class differences on the distribution of wealth, the distribution of education, or social mobility, it is important to make cross-national comparisons for several reasons.

In the specific case dealt with in this article, the initial research problem is the effects of social class differences on health. In Britain, social class has for decades been used as a standard variable in health statistics, and class differences in health have been shown to persist (Townsend and Davidson (1982)). In Swe-

den, on the other hand, such questions have been neglected until recently, when differences in health among classes were found during several studies (cf. Kjellström and Lundberg, forthcoming). Having recognized the effect of social class on health in Sweden, several questions may be posed, for instance, whether the overall level of illness is different in Sweden than in other countries, or whether class differences in health are smaller or greater in Sweden than elsewhere.

Comparative studies can answer these questions. In order to do so, however, comparability must be ensured. Even then, differences among countries in the coding of central variables, such as social class, often pose a problem. But as will be shown in this article, it is a problem that can be solved.

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2. Different Procedures

When studying the effects of social class on health, and using self-reported illness as the dependent variable, one must accept that the only available data sources containing comparable health data is the General Household

Survey (GHS)² for Britain and the Survey of Living Conditions (ULF)³ for Sweden. This in turn determines the choice of a class model that the Swedish data would be compared to, namely, the Registrar General's Social Classes (RGSC)⁴ employed in the GHS. For attaining comparability between this class model and the one used for the ULF data, three major procedures are available.

The best approach would be to code each individual in ULF according to the principles of the RGSC. This procedure would involve the listing of all occupational titles in the material and the coding of them using the British coding instructions. Obviously this would be very expensive and time-consuming. Some other method, then, has to be found.

The traditional solution has been to collapse the existing social class scales into a small number of groups. As discussed by Erikson and Goldthorpe (1985), this solution is not recommended for two reasons. First, one often ends up with only a manual/non-manual distinction that is too crude for more sophisticated analyses. Second, the similarity achieved is often not much more than a similarity of labels.

² The General Household Surveys were initiated in October 1970, and have since then included samples of about 12000 British households. The questions posed cover topics such as Population, Employment, Housing, Health, Education, and Leisure.

³ In the early 1970s, Statistics Sweden was commissioned to produce periodic statistics on living conditions. The resulting Survey of Living Conditions Project conducted their first survey in 1974, and surveys have thereafter been conducted annually. The sample size is currently about 6500 persons. The material has been post-stratified according to region (4 groups), sex, age (5 groups), and marital status (2 groups). The nonresponse was in 1981 13.5 per cent.

⁴ The class scheme used in the GHS is not the Registrar General's Social Classes, but a collapsed version of 15 Socio-Economic Groups into 6 Socio-Economic Classes (for a presentation of which Socio-Economic Groups that forms the 6 classes, see Reid (1977, p. 45)). However, since the differences between the Registrar General's Social Classes and the Socio-Economic Classes are very small indeed, they can be treated as equivalents.

A more appropriate solution is to recode the class scheme of one country into a scheme already used in the other country, thereby assigning groups of individuals to a new class code. Using this strategy, one or more directions for the recoding can be chosen. First, one can apply a foreign code to domestic data ($\text{Code}_b \rightarrow \text{Data}_a$). Second, one can apply a domestic code to foreign data ($\text{Code}_a \rightarrow \text{Data}_b$), and third, one can apply an independent code to both data sets ($\text{Code}_c \rightarrow \text{Data}_a$ and $\text{Code}_c \rightarrow \text{Data}_b$). For practical reasons, the last one of these sub-strategies seems to be the least appealing. As suggested by Erikson and Goldthorpe (1985), the best choice would be to combine the first and second sub-strategies, that is to begin the cross-national comparison by applying one country's class scheme to the other country's data. One checks the results by re-analysing the data using the reversed recoding procedure. Because we have easier access to the Swedish data, the first step has been to recode them.

The purpose of this article is to describe the recoding procedure, to report the outcome, and finally to present a detailed recoding manual for those interested in adopting the suggested standard⁵.

3. The Recoding

The recoding is done by combining two Swedish codes and thus classifying groups of individuals into the RGSC. We use two Swedish codes to provide as detailed as possible information about the different occupational groups. Thus, it would have been preferable to have three or more codes to build on.

The Swedish codes are of two sorts. The first of them, SEI (Socio-Economic Division), is a categorization based on a division between manual and non-manual employees on

⁵ For those with access to ULF data, it might be of interest to mention that this application of the RGSC has been included as a variable in the 1981 material.

the one hand, and self-employed on the other. Among employees, subgroups are formed according to the length of formal education typically needed for the occupations listed. Among the self-employed, entrepreneurs are subdivided according to the number of employees, and farmers are differentiated according to the size of their farms. Since its introduction, SEI has undergone some revisions. The older version used here consists of the following groups.

Workers

- 01 Unskilled; no education required.
- 02 Semi-skilled; 1 year of education or less required.
- 03 Skilled; 1–2 years of education required.
- 04 Highly skilled; 3–4 years of education required.

Salaried employees

- 05 Low; no education required.
- 06 Semi-low; 1 year of education or less required.
- 07 Semi-skilled; 2 years of education required.
- 08 Skilled; 3–4 years of education required.
- 09,10 Specialists; 5 years of education or more required.

Entrepreneurs, Farmers, and Self-employed

- 11 Farmer; < 20 hectare land and < 100 hectare wood.
- 12 Farmer; 21–100 hectare land and/or 101–400 hectare wood.
- 13 Entrepreneur; no employees.
- 14 Entrepreneur; 1–9 employees.
- 15 Entrepreneur; >9 employees, *or* Farmer; > 100 hectare land or >400 hectare wood.
- 16 Self-employed; would have been coded 09 if employed.
- 31 Farmer; unknown amount of land and wood.

- 41 Entrepreneur; unknown number of employees.

For a more detailed description, see SCB (1982).

The second code, NYK (Nordic Occupational Classification), is an ISCO (International Standard Classification of Occupation)-related occupational code. It has three levels, represented by three digits. The first level represents ten different occupational areas. The second level, using two digits, comprises 58 occupational groups. On the most detailed level, 282 occupational families can be distinguished (SCB (1983)).

In Britain the target variable, RGSC, has been used in different versions since the 1921 British census, and has been extensively discussed elsewhere (Stevenson (1928), Leete and Fox (1977), for a brief introduction see Reid (1981)). The categories used are as follows:

- I Professional (e.g., doctor, lawyer)
- II Intermediate (e.g., nurse, school-teacher)
- IIIN Skilled, non-manual (e.g., clerical worker, shop assistant)
- IIIM Skilled manual (e.g., butcher, carpenter)
- IV Partly skilled (e.g., bus conductor, postman)
- V Unskilled (e.g., cleaner, dock-worker).

Military occupations are excluded from the class scheme, perhaps because a large proportion of these individuals are stationed in other countries. The properties of this scheme have lately become a matter of dispute (Jones and Cameron (1984), Brewer (1984)). The RGSC, however, is still commonly used in British health statistics.

The actual application of the British Social Class division to the Swedish data was performed in two steps. First, SEI and NYK were combined using the formula $SEI*1000$

+NYK, thereby obtaining a single code for each individual. Second, the different combinations of SEI-NYK were grouped into the six classes forming the RGSC.

The crucial step in the recoding is the decision concerning which SEI-NYK combinations should be grouped together. The problems encountered, however, are quite different from those met when a new class scale is constructed. In the latter case, theoretical and practical concerns about the class structure and the placement of different occupations in the structure are of great importance. In our case, such decisions have already been made. Our problems lie in understanding the scale's original purpose and construction, and to find out where the SEI-NYK combinations' British "twins" would have been placed on the scale. This work has been guided by the principles used in the 1980 British census (OPCS (1981), Leete and Fox (1977), Boston (1980)). The details of our classification of SEI-NYK codes into the Registrar General's Social Classes are presented in the Appendix at the end of the article.

When trying to follow the British classification rules, a crucial problem is how to assign a social class to housewives, students, and pensioners. According to Leete and Fox (1977), housewives have been classified according to their previous occupation, and, if never part of the labour force, according to their husband's occupation. The intention was to assign students to a class according to their fathers' occupations, and pensioners according to the occupation they held when they left the working force. This goal could not be fulfilled for students, since "father's occupation" in the ULF-data was only coded according to SEI. Therefore, 526 students (8.1 per cent of the initial data set) have not been assigned to a social class. In addition, 15 persons (0.2 per cent) holding military occupations were omitted from the class scheme, in accordance with the British classification rules. Another 470

persons (7.2 per cent) were impossible to code due to insufficient information. The total "missing information" figure then is 15.5 per cent, which is commonly regarded as acceptable. The difference in level of illness is also negligible between the whole material and those assigned to a specific social class, only 0.6 per cent.

There are means for reducing the missing data, which so far have not been utilized. If the social class distribution for each SEI-code is assumed to be the same for the students' fathers as for those already assigned to a social class, students could be distributed among different social classes based on their fathers' SEI-codes, using a random procedure. This is equivalent to eliminating missing values by using the overall mean. The same procedure could not be applied as easily to the other non-classifiables, since the assumption of a similar social class distribution for each SEI-code seems rather unreliable in the other non-classifiable cases.

4. The Relationship between SEI and Social Class

The relationship between one Swedish code, SEI, and the social class scheme is shown in Tables 1 and 2.

Table 1 describes each social class by the SEI-codes in that class. Studying these rates, it becomes apparent that the majority of classes I, II, and III N are SEI-coded as senior, intermediate, and junior salaried employees respectively. Among classes III M-V, the majority is coded as workers in SEI, and with lower social class the share of skilled in SEI decreases.

Table 2, on the other hand, shows the social classes that have been assigned to persons in one specific SEI category. From these rates, it becomes apparent that being a senior salaried employee or self-employed professional is a necessary, but not sufficient in itself, criterion for social class I placement; around 35 per

Table 1. The composition of the Registrar General's social classes in terms of SEI-codes. Per cent

SEI ¹	Social classes						
	I	II	III N	III M	IV	V	N
Workers							
Unskilled and semi-skilled	0.0	0.9	24.1	46.4	69.7	59.1	1886
Skilled	0.0	4.8	2.4	39.2	14.6	11.7	948
Salaried employees							
Junior	1.0	12.7	49.6	3.0	6.5	14.7	840
Intermediate	1.0	44.4	14.4	1.6	1.6	4.7	772
Senior and self-employed	91.6	23.9	1.8	0.4	0.3	2.3	527
Entrepreneurs	5.4	8.3	5.9	7.5	2.7	5.1	355
Farmers	0.0	3.8	0.4	0.5	2.4	1.1	84
Unclassifiable	1.0	1.1	1.4	1.3	3.3	1.3	84
<i>N</i>	203	1258	1036	1782	749	469	5497

¹ In order to make the table more comprehensive a collapsed version of SEI has been used.

Table 2. The distribution between Registrar General's social classes for members of different SEI-groups. Per cent

SEI ¹	Social classes						
	I	II	III N	III M	IV	V	N
Workers							
Unskilled and semi-skilled	0.0	0.6	13.2	43.8	27.7	14.7	1886
Skilled	0.0	6.3	2.6	73.7	11.5	5.8	948
Salaried employees							
Junior	0.2	19.0	61.2	6.4	4.9	8.2	840
Intermediate	0.2	72.3	19.3	3.8	1.6	2.8	772
Senior and self-employed	35.3	57.1	3.6	1.5	0.4	2.1	527
Entrepreneurs	3.1	29.6	17.2	37.7	5.6	6.8	355
Farmers	0.0	57.1	4.8	10.7	21.4	5.9	84
Unclassifiable	2.4	16.7	16.7	27.4	29.8	7.1	84
<i>N</i>	203	1258	1036	1782	749	469	5497

¹ In order to make the table more comprehensive a collapsed version of SEI has been used.

cent of the people with such occupations are assigned to this class, and comprises almost the entire class. Furthermore, nearly 60 per cent of this SEI-group are assigned to class II. Of the intermediate salaried employees, more than 70 per cent are coded as class II, while the

majority of junior salaried employees are placed in class III N. A majority of the workers, especially the skilled workers, are to be found in class III M. Entrepreneurs are evenly distributed among different classes, while farmers are concentrated in class II.

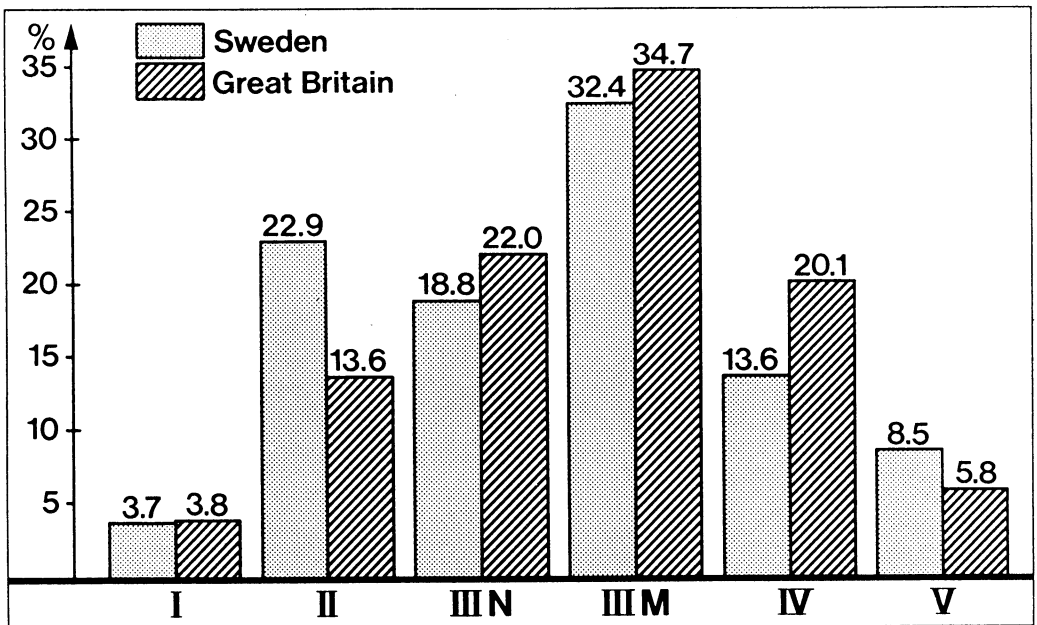
From Tables 1 and 2, it is apparent that some minor errors have been made in the recoding. For instance, it seems doubtful that an appropriate reclassification for senior salaried employees is class V. The version of SEI used for the recoding is more detailed and allows the unclassifiable to be assigned social classes. However, the vast majority of people can be classified without difficulty. Moreover, the degree to which occupations have been reclassified reflects the differences between the two class schemes. The amount of reclassification indicates the importance of re-

coding class scales when comparing countries, and not just compare two different indigenous scales. It is also evident from the tables that it would have been impossible to accomplish this recoding without the use of two Swedish codes.

5. Testing the Quality of the Recoding

In one way or another, the quality of the recoding must be tested. Since the aim here is to duplicate the British class scheme as closely as possible, it seems natural to compare the

Fig. 1. Distribution of Registrar General's social classes in Sweden and Great Britain, 1981



Source: Swedish Living Conditions Survey ($N=5497$) and General Household Survey ($N=23194$).

Swedish and British class distributions. The British data are once again taken from the GHS.

When comparing the British and Swedish data presented in Fig. 1, two questions come to mind, namely, does the Swedish class pattern differ from the British and if so, what can explain that difference?

The first question can be answered by an examination of Fig. 1. For all but one class, clear differences appear. The greatest difference is found for class II, which in Sweden comprises almost 23 per cent as compared to the British figure of about 14 per cent. For the labouring classes, the British shares of skilled and semi-skilled workers are larger, as is the British working class on the whole. The distributions have also been tested using a chi-square test for homogeneity. With the six classes in Fig. 1 $\chi^2=429$ ($df=5$), which indicates that the differences are not caused by chance.

There are several possible answers to the second question. First, the difference in Fig. 1 could be caused by that the British data includes also those older than 74, while this is not the case for the Swedish data. Although it is likely that those older than 74 are more often found in lower social classes, it is not plausible that such a skewness alone could produce the cross-national differences in the class distribution presented in Fig. 1. Hence, the major part of the differences observed may either be a result of errors in the recoding procedure, or a result of actual differences in the class structure of the two countries. If structural differences similar to those in Fig. 1 can be found in other studies as well, the error term is probably small. If no support for differences in structure can be found in the literature, the whole difference reported in Fig. 1 must be treated as having been caused by negligent recoding.

The only study using a class model similar enough to ensure a comparison with the

RGSC was conducted by Erikson, Goldthorpe, and Portocarero (1979, p. 422). By combining their classes II and IVc, thereby obtaining a class similar to the Registrar General's class II, it appears that 19 per cent in Sweden and 13 per cent in Britain were assigned to this class. Erikson and others also found that the share of skilled workers is greater in Britain. While semi-skilled and unskilled workers together comprise a greater share of people in Britain than in Sweden according to Fig. 1, Erikson and the others find the opposite relationship between the two countries for their class VIIa. The overall tendency towards a larger British working class, however, is found in both studies.

6. Conclusions

The test of the quality of the recoding reported above showed that the class distribution was different between Sweden and Britain, but that corresponding differences have been found elsewhere. Hence, our conclusion is that the Swedish application of RGSC as presented in this article can be used in comparisons with British data. An example of this is found in Lundberg (1986), where the initial problem of social-class differences in health is studied⁶.

A general conclusion is that recoding central variables is an option worth considering when planning a comparative study. The procedure is costly in terms of time, but the advantages of the recoded class variable compared to the alternative of collapsing domestic class schemes make it fully worth the effort. Furthermore, the recoding of central variables, such as social class, is essential for comparative studies to be prolific.

⁶ The results from this analysis showed that the dispersion of long-standing illness was greater in Britain, due to the fact that the British class I was healthier and the British class V unhealthier than their Swedish counterparts.

Appendix

In this appendix a list of all SEI-NYK codes forming the six Registrar General's Social Classes will be presented. For each class, the presentation starts with single codes, followed by intervals of SEI-NYK combinations. The last three digits are NYK-

codes, while those placed in front of these are SEI-codes. Please note that this manual is based on the 1981 ULF-data collection. In other materials, other SEI-NYK combinations may well be found. In such cases, contact the author for advice on appropriate locations in the RGSC.

				Class I				
8061	8081	9031	9032	9046	9050	9051	9094	9101
10031	10032	10046	10050	10051	10094	10101	16021	16032
16118	41001	41003	41032	41073				
9001- 9013		9021- 9024		9071- 9074		10001-10013		10021-10024
10071-10074		13001-13009		16001-16009				
				Class II				
1401	2044	2056	2058	2191	2302	2313	2401	2405
2945	3001	3002	3042	3047	3058	3083	3092	3405
4081	4087	5401	6045	6118	6401	6945	7014	7022
7023	7047	7118	7119	7312	7332	7601	7603	8024
8044	8050	8101	8111	8118	8313	8332	8642	8644
8945	9911	10096	11043	11295	11943	12003	13047	13052
14905	15118	15302	15401	15644	16081	31401	31411	41084
41085	41091	41098	41111	41301	41302	41313	41332	41405
41406	41461							
6006- 6014		7001- 7009		7044- 7045		7056- 7058		7092- 7093
7096- 7097		8001- 8014		8040- 8041		8047- 8048		8052- 8059
8084- 8097		8601- 8603		8715- 8911		9052- 9058		9081- 9093
9095- 9902		10111-10401		11401-11932		12333-12932		13081-13087
13301-13415		14001-14118		14302-14401		15001-15111		
				Class III N				
1093	1204	1333	2204	2239	2290	2331	2332	2333
2338	2701	2901	3295	3333	3901	4901	5290	6331
6333	6653	6659	6911	6932	7201	7331	7333	7765
7911	7946	8311	8312	8331	8946	13111	13201	13290
13911	13946	14201	14290	14911	15290	15911	41083	41290
41331	41333	41765	41946	41911				
6201- 6204		6290- 6297		7290- 7294		7296- 7298		7643- 7644
7902- 7903		8201- 8208		8290- 8294		8296- 8298		
				Class III M				
1043	1049	1404	1633	1651	1661	1711	1722	1826
	1834	1836	1851	1853	1875	1876	1912	1914
1947	2042	2043	2047	2049	2274	2403	2643	2671
2834	2836	2851	2994	3003	3631	3643	3671	3851
3854	3911	3912	3914	4631	4733	4750	4781	6014
6839	6917	6931	7295	7403	7711	7744	7751	7781
7875	8295	8633	8917	8921	13049	13295	13633	13639
13671	13912	13941	14683	14711	14941	15295	15633	15722
41633	41711	41744	41745	41750	41751	41753	41754	41771
41772	41774	41781	41791	41793	41801	41821	41822	41874
41941	98772							
1731- 1824		1856- 1857		2631- 2633		2711- 2793		2797- 2819
2822- 2826		2856- 2857		2871- 2876		2912- 2914		3042- 3043
3402- 3404		3711- 3826		3836- 3839		3871- 3874		7914- 7915
8402- 8404		13711-13875		14743-14822				

Class IV

1295	1431	1501	1504	1662	1729	1793	1825	1828
1831	1841	1852	1854	1859	1871	1881	1883	1908
1915	1918	1921	1931	1948	2023	2414	2418	2441
2501	2504	2611	2632	2636	2644	2651	2701	2795
2797	2821	2827	2828	2831	2841	2852	2881	2883
2904	2908	2909	2913	2915	2916	2917	2918	2921
2931	2948	3611	3632	3661	3828	3831	3852	3858
3859	3881	3883	3915	3921	3931	3933	5662	5931
6653	6916	6931	6943	6948	7651	7662	7883	7931
7943	7948	8412	8418	13441	13501	13635	13908	14391
14653	14931	15881	41431	41793	41797	41881	41908	
1411- 1412		1838- 1839		1942- 1944	2411- 2412		2661- 2662	
2838- 2839		2858- 2859		2942- 2944	3411- 3412		3501- 3502	
8914- 8915		13431-13432		13913-13915				

Class V

1635	1639	1678	1699	1701	1719	1861	1879	1882
1883	1913	1932	2635	2678	2701	2861	2932	3701
3861	13932	41635	41861	41933				
3932- 3933		14932-14933						

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