

# Social Stratification Research Seminar 2011

*Modelling Patterns of Social Stratification*

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A meeting of the ESRC NCRM Lancaster-Warwick-Stirling Node, sociology strand

## **Paper titles, authors, and abstracts**

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**Roxanne Connelly** (Applied Social Science, University of Stirling)

### **The concept of ‘cognitive capital’ in the analysis of stratification and meritocracy**

Childhood cognitive ability test scores have been widely utilised in social stratification research concerned with the degree of meritocracy, yet considerations concerning what these tests truly indicate remain controversial. One recent approach has been to treat measures of cognitive ability as components of a conceptualisation of ‘cognitive capital’ (Henry 2004). Like its economic counterpart, cognitive capital can be endowed by inheritance, but takes a step away from a biological interpretation of cognitive ability. Cognitive capital is considered to be invested, fungible, and unequally distributed in terms of educational and occupational attainment, and its role as an accumulating and tangible construct is strongly emphasised.

This paper evaluates the cognitive capital construct in terms of its contribution to social stratification research. It utilises the cognitive assessment modules in the 2008 (age 50) and 1969 (age 11) sweeps of the British National Child Development study. This survey has been widely used in stratification research. These multiple cognitive assessments on the same individuals provide an opportunity to assess the stability of cognitive ability scores, and the relation between variations in cognitive ability, educational attainment, and adult occupational positions.

This paper builds on research which has mapped the relations of social background and childhood cognitive ability to adult occupational position, and interpretation aims to improve understanding of what tests of cognitive ability indicate about the competencies of individuals throughout the lifecourse in relation to meritocratic processes of social stratification. Initial results demonstrate a clear degree of stability between cognitive ability measured at ages 11 and 50. Change in cognitive ability is significantly related to occupational position throughout adulthood, and to educational attainment. Parental occupational position is not significantly related to cognitive ability at age 50, but is related to age 11 ability. However, decomposition of the scores highlights the major influence of childhood ability on both educational attainment and occupational position.

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**Harry Ganzeboom\* and Donald Treiman\*\***

(\*Dept. Sociology, Free University Amsterdam; and \*\*Dept. Sociology, UCLA)

**Occupational status measures for the new international standard classification of occupations ISCO-08; with a discussion of the new classification**

Recently, the International Labour Association [ILO] has released the 2008 revision of the International Standard Classification of Occupations [ISCO-08]. In this paper we introduce three new status measures to be used in conjunction with ISCO-08 data:

- ISEI-08: a newly developed version of the International Socio-Economic Index of occupational status, introduces for ISCO-68 and ISCO-88 by Ganzeboom et al. (1992, 1996).
- SIOPS-08: an upgraded version of the Standard International Occupational Prestige Scale, introduced by Treiman (1977).
- ISEC-08: a new conceptualized and developed International Sociop-Economic Class index, that assumes the familiar EGP classes (developed by Erikson, Goldthorpe & Portocarero, 1979) and the European Socio-Economic Class index (developed by Rose & Harrison, 2010) as special cases.

The validity of the new status scale is tested using data from the European Social Survey, Rounds 1-4.

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**Vernon Gayle and Paul Lambert** (Applied Social Science, University of Stirling)

**How useful are microclasses? An analysis of detailed parental occupational differences and their effects on filial school attainment in Britain.**

It is often argued that detailed differences between occupational positions have important empirical effects upon socio-economic outcomes (e.g. Weeden and Grusky, 2005). In this paper we investigate the extent to which fine-grained measures of parental occupational positions, as are available in a major longitudinal UK social survey (Youth Cohort Study of England and Wales), add value to an analysis of children's educational attainment.

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**David Griffiths and Paul Lambert** (Applied Social Science, University of Stirling)

**Occupational marriage networks in the USA, 1970-2010**

This paper explores occupational stratification through analysis of the social networks of occupational incumbents. Data is taken from the US Current Population Survey from 1970 to 2010 to explore marriage patterns by occupational position. The paper supports Treiman's (1977) hypothesis that the relative advantage and prestige of occupations remains consistent over time. Through adopting a social network perspective, it is possible to identify changes which are occurring within the occupational structure, particularly regarding educational expansion, and understand how structures remain resilient despite socio-cultural changes. The categorisation of occupations into social classes is also explored, with a case study demonstrating that the aggregation of management roles can produce suboptimal categories.

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**Morag Henderson** (Dept. Sociology/St Cross College, University of Oxford)

### **Intergenerational transfer of education: A test of parenting style**

Status attainment literature suggests that the educational success of parents determine the educational success of their children. However the mechanisms by which families determine a child's educational outcome are imperfectly understood. In this paper I test Annette Lareau's parenting typology using the Longitudinal Study of Young People in England (2004-2006). The findings suggest that class is not a convincing predictor for parenting style, but that use of concerted cultivation strategies improves GCSE scores by over six grade points as well as having a positive effect on subjective measures of educational outcomes. This has significant consequences for stratification.

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**Steffen Hillmert** (Institut fuer Soziologie, Universitaet Tuebingen)

### **Modelling inter-generational transmission: From social mobility to social reproduction**

*Social mobility* is commonly defined as the movement of individuals (or social units) among social positions within a society, which form a structure of social inequality. Hence, social mobility can be regarded to be an indicator of the individual- or group-level persistence of social advantage and disadvantage. In conceptual terms, most analyses of inter-generational social mobility start from the *children's generation*, and they are conditional on both the formation of the origin context and the existence of the children. This perspective is well compatible with references to individual life chances. If one is interested in the question of inter-generational *social reproduction*, however, an immediate interpretation of these results is often misleading. In this case, one looks at inter-generational links from the perspective of the *parents' generation* and asks about the consequences for the following generation(s). This includes questions of how the origin context is formed, whether there are any children at all and when they were born as well as the aspect of these children's relative chances of education and of attaining particular social positions. A special intention of this paper is therefore to model the micro-level process of inter-generational social reproduction. Hence, partial processes of social selectivity can be distinguished, such as union formation, fertility, and children's educational attainment. In doing so, the paper combines a traditional concept of social mobility with a demographic research perspective.

As an empirical example, the paper describes historical developments concerning social reproduction in Germany during the mid- and late 20th century. As there is no comprehensive data source that contains all the information needed to analyze our research questions, the analysis follows a multi-stage procedure. In a first step, the partial processes are estimated separately using a combined data set. This dataset consists of individual-level census data as well as data from surveys. In a second step, the results of these estimations are combined using a simulation technique in order to get an estimate of the overall process of social reproduction. In a third step, this combined dataset is modified using counterfactual assumptions to assess the relative importance of the partial processes.

Preliminary results indicate a relatively high degree of historical stability in inter-generational educational reproduction in West Germany towards the end of the 20th century. While background-specific chances of access to certain levels of education have been major determinants of the level of inter-generational social reproduction, there have been important contributions also of other partial processes (particularly in the form of social homogamy) to the individual chances of social reproduction. An important conceptual conclusion is that the analysis of inter-generational transmission of advantage and disadvantage has to be careful about distinctions like individual and household or union-related analyses; gender-differences in the odds of social transmission; relative proportions and absolute quantities; and comparisons of two generations versus multi-generation comparisons.

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**Cristina Iannelli\***, **Lindsay Paterson\*** and **Adam Gamoran\*\***

(\*School of Education, Univ. Edinburgh; \*\*WCER, Univ. Wisconsin-Madison)

### **Effectively maintained inequality through field of study differentiation: The case of Scottish higher education**

Over the course of the last decade, scholars have increasingly realised that fields of study in secondary and postsecondary education constitute not just a form of horizontal differentiation to which persons are allocated on the basis of diverse interests, but a form of vertical differentiation linked to unequal status origins and tied to varied labour market outcomes (e.g., Van de Werfhorst, Sullivan, and Cheung, 2003; Ayalon and Yogev, 2005; Van de Werfhorst and Luijkx, 2010). To the extent that fields of study bear status distinctions with consequences for labour market trajectories, they may be regarded as a mechanism of “effectively maintained inequality,” that is, a way to sustain inequality among persons from different origins even as those from lower-status origins achieve higher levels of education.

A limitation on existing research on the topic is that most studies identify status differences based on the origins of entrants: fields are judged to be relatively low in status if persons from lower ability tiers or socio-economically disadvantaged backgrounds are overrepresented, and high in status if they are composed of persons with esteemed educational qualifications or advantaged social origins. This measurement strategy introduces a circularity into the argument: if the status of a field of study depends on who is enrolled, then vertical differentiation is evident by definition, but the question of whether such differentiation has long-term consequences remains open. Moreover, existing research tends to focus either on the type of institution in which one is enrolled or the field of study one pursues, but not both, whereas the key dimensions of stratification may be at the intersection of field of study and institutional type. Is a student better off studying a prestigious subject in a low-status institution, or a low-status subject in a more revered institution? Answering these questions also requires a measure of the status of field of study that is independent of who is enrolled.

We address these challenges by linking three main data sources on secondary and postsecondary education in Scotland. We use the UK Labour Force Survey to identify occupational outcomes such as occupational status and income of different fields of study. This provides a status measure for fields of study that does not depend on who is enrolled. For comparison we also categorise fields of study according to the selectivity of their entry qualifications, based on data from the UK Higher Education Statistics Agency. We then link our ranking scale for fields of study to data from successive waves of the Scottish School Leavers Survey (SSLS) to assess the extent to which fields of study stratify persons from different social origins, even among those who reach the same levels of education at secondary school. These time-series data are analysed using linear regression models in which the dependent variables are our three metrics differentiating fields of study (based on occupations, income and entry qualifications) and the independent variables are gender, parental education and occupational social class.

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**Alison Koslowski** (Department of Social Policy, University of Edinburgh)

### **Public and private forms of unemployment protection and social stratification in England and Scotland**

Public unemployment protection has been decreasing both in terms of the generosity of benefits and increasing conditionality over the past 20 years in the UK, and this trend looks set to continue in the foreseeable future. Similar trends are being witnessed across Europe (Clasen and Clegg, 2011). A certain amount of private unemployment protection is available, although this remains a niche product (Association of British Insurers, 2010). Certain social groups are more likely than others to take out such private insurance products as part of a ‘security package’ against loss of income in the case of unemployment following redundancy and/or illness. In part, we might assume that higher income groups are more likely to be in the position to engage in private risk management strategies. However,

whilst higher income groups may be more likely to consider private forms of income protection, they may not be the group most likely to need to benefit from such protection, given that the risk dynamics of unemployment are not evenly distributed across the population.

This paper analyses trends across England and Scotland since 1995 in expenditure, savings and investment behaviour in insurances and private market-based contracts for risk protection in relation to recent trends in public unemployment protection, in order to explore such assumptions. The data used are national repeated cross-sectional survey data on exposure to risk and insurance cover. First, the paper employs logistic regression analyses of risk protection behaviour by key explanatory variables. Secondly, latent class analysis of the most recent data allows sub-types associated with certain risk management behaviours to be identified in order to further our understanding of individuals' risk management behaviour.

This paper is linked to the ESRC project "Welfare Markets and Personal Risk Management in England and Scotland", with Jochen Clasen (PI); Traute Meyer (Co-I); Alison Koslowski (Co-I).

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**Yaojun Li** (Institute for Social Change, University of Manchester)

#### **Persisting distinction? Intergenerational social mobility of Whites and Blacks in Britain and the USA (1972 – 2006)**

We analyse intergenerational social mobility of White and Black men and women in Great Britain and the United States of America in the last four decades. Drawing on the national representative samples from 1972 to 2006, namely the General Household Survey in Britain and the General Social Survey in the USA, we differentiate between absolute and relative mobility and organise the data into four decades. Our analysis shows that the US has higher mobility rates of both types at the overall level. However, higher levels of relative rates are not always found in the trends. While the Black women in the USA experienced greater upward mobility than their British counterparts in the period covered, only the earlier decades saw greater social fluidity in the USA. As Britain was making more rapid progress in social fluidity in the last two decades, the two countries had similar relative mobility in the early 21<sup>st</sup> century. Neither the theory of American exceptionalism nor that of endogenous mobility regimes receives full support. Instead, a convergence towards greater openness is found even though considerable barriers still existed in the life chances of women and Blacks, the US Black men in particular. The analysis renders more support to the thesis of slow and steady progress in both countries, more so in Britain than in the USA.

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**Cinzia Meraviglia\*** and **Harry Ganzeboom\*\***

(\*Dept. Social Research, Univ. Eastern Piedmont; \*\*Dept. Sociology, Free Univ. Amsterdam)

#### **Log-multiplicative models for assessing mothers' and fathers' influence on IEO in Italy**

The paper investigates the relationship between origin and education in Italy over the 20th century. Previous research on this subject has found either a persisting stability of IEO in Italy (Cobalti and Schizzerotto 1993; Checchi and Fiorio 2007; Breen et al. 2009; Contini and Scagni 2011), or a slight decrease of IEO, mainly in the case of agricultural classes (Ballarino et al. 2006; Ballarino and Schadee 2007; Barone 2009) and for women (Meraviglia and Ganzeboom 2009).

The contribution of this paper is three-fold. Firstly, since one of the weaknesses of previous studies consisted in small samples from one or two surveys (Breen et al. 2009), the data base used in this study

originates from pooling seventeen surveys collected between 1985 and 2008, which cover cohorts born between 1900 and 1984.

The second contribution concerns the technique of analysis used, i.e. log-multiplicative (Clogg 1982) or RC-II models (Goodman 1979), which model the trend of the overall association between origin and education, as well as of the specific pattern of educational opportunities relative to class origin over time. Relying on previous research (Meraviglia and Ganzeboom 2009), a new variety of log-multiplicative models is proposed which makes the relative chances of the various educational transitions, given class origin, to follow a linear trend over time.

Finally, following Korupp et al. (2002) and Meraviglia and Ganzeboom (2008), the paper proposes and tests five alternative ways to operationalize class origin: the conventional model (class origin is father's class), the anti-conventional model (class origin is mother's class), the joint classification model (class origin is a combination of father's and mother's class) (Britten and Heath 1983), the dominance model (class origin is the highest among father's and mother's class) (Erikson 1984), and the individual model (class origin as both father's and mother's class separately). As usual, the choice of considering mother's class in addition to father's class narrows down the sample size to a third of the available cases (which still amount to 50 thousand), a shortcoming which is balanced by the insight that it allows in the pattern of IEO over time for the offspring of dual-earner families.

Provisional results show that, as found by Meraviglia and Ganzeboom (2009), linear constraints on the relative distances between educational levels give a better fitting model under all conditions of class origin operationalization. The major gap in IEO is found at lower grades of education, however this gap shifted from the first transition (from primary to lower secondary school) to the second transition (from lower to higher secondary school). The overall pattern of association between origin and education is sensitive to whether and how mother's class enters the model. When only father's class, or a combination of father's and mother's class (joint classification or dominance approach) is considered, the association varies over time without any clear pattern; when only mother's class is used, or when both father's and mother's class are considered in the same model, the overall association declines from the Sixties onwards. Analyses performed on women and men separately point to a general stability of IEO over time if father's class is used as a measure of origin, while a decrease is observed for both genders when mother's class enters the picture.

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**Susan Murray** (Applied Social Science, University of Stirling)

### **A sequence analysis of contemporary youth transitions using the BHPS**

New evidence in this research is consistent with the narrative that there has been a lengthening of the time spent by young people making education to employment transitions. Also, that whilst some young people do make more non-linear transitions, this is not the case for all young people and the divisions defining which 'type' of trajectory one will have still appears hugely influential. A young person from a disadvantaged background is highly less likely to gain the basic qualifications at compulsory schooling level and, net of this, they still face barriers due to their social stratification, despite making it further than predicted in their GCSEs. Beck and Giddens contribute to the argument that lifecourse paths can no longer be taken for granted, and this is not denied here, however, evidence in this research shows that the argument put forward that a career is a 'middle class expectation' (MacDonald 2009) and any stability or apparent choice is masking the move into precarious jobs, which gives an illusion of stability in the trajectories. This is supported by the analyses displayed in this research showing that background is still hugely important and decides which cluster an individual is grouped in and also that the categories used do not show changes *within* states (e.g. unstable employment). So, it may be that, as Goldthorpe (2005) argues, education is less important as an explanatory measure as qualifications are more commonly held; other skills are now more important, due to a decline in industries where qualifications are valued.

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**Roger Penn and Damon Berridge** (Centre for Applied Statistics, Lancaster University)

**‘Modelling gender inequalities: A longitudinal analysis of repeated ordinal data’**

We propose a paper that will present longitudinal statistical models of gender inequalities. The paper will present the results of an analysis of three ordinal responses on gender inequality taken from the BHPS between 1991 and 2007. Cumulative logit [or proportional odds] models with correlated random effects will be presented.

These correlated random effects models provide the capacity to test formally whether there is significant association between the three ordinal responses.

The paper will address a number of sociological questions including:

- Is there one underlying dimension [or latent variable] measuring attitudes to gender inequalities?
- Does this dimension vary over time?
- What explanatory factors determine variations in patterns of responses?

The analysis will explore the possible effects of a wide range of explanatory variables including age, ethnicity, social class, marital status, household size, political affiliation and gender.

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**Kevin Ralston** (MRC Social and Public Health Sciences Unit, University of Glasgow)

**Considering the concept of a fertility threshold**

Some recent empirical analyses and theorizing suggests risk and uncertainty results in delay in childbearing. Indeed, generalist theory around risk put forward that those who are economically disadvantaged tend to be those who are in the most risky situations. Nevertheless, those who are least advantaged on measures of social stratification are observed as starting families earlier. This paper draws upon data sources such as the *Scottish Longitudinal Study* and the *Scottish Social Attitudes Study: Fertility Module* to examine how measures of social stratification, including occupational categorizations, educational attainment or housing tenures relate to fertility outcomes, of, for example, current parities or timing of first birth. The paper draws upon theories of normative behaviour and opportunity cost to posit an original position, that timings of birth events (particularly first birth) can be usefully conceptualized in terms of a threshold. This is because births and first births are likely to occur within a certain set of social circumstances. However, people enter the circumstances resonant with childbearing at different stages of the life course and this relates to the positions of relative advantage that people occupy. The explicit attempt to synthesis opportunity cost and normative approaches in the analysis of childbearing has forerunners, yet the concept of the fertility threshold has theoretical implications. The threshold concept brings to the fore the circumstances of childbearing and shows that those who may be considered as relatively disadvantaged enter the circumstances in which childbearing occurs prior to those in more advantaged situations, and this explains their earlier childbearing. This also has connotations for what is considered to constitute advantage in respect of social stratification and family formation.

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**Wiebke Schulz, Ineke Maas, and Marco H.D. van Leeuwen** (Sociology/ICS, Utrecht University)

**Occupational career success 1865-1930: a multilevel study in Dutch municipalities**

Did occupational careers become more successful during modernization? In this paper we put the theoretical ideas on the effects of modernization processes on individual career success to an empirical

test. Based on the logic of industrialism we hypothesize that a number of modernization processes, e.g. industrialization, mass communication and mass transport let men's career start on a higher level of status and cause men's occupational status to grow faster over the life course.

We combine a sample of careers of 7000 men with a number of modernization indicators, measured on the municipality level. The results of cross-classified multilevel growth models show that men's careers start on higher level of status in more modernized municipalities, however their status grows slower over life course.

In sum, our findings indicate that the relation between modernisation and career success is more complex. Although men start their career on a higher level of status, there was no enormous increase in career success due to modernization processes over men's life course.

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