‘Escape from Poverty’ and Occupations

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Contents

Abstract

This paper considers an approach to studying the concept of poverty by using data on occupations as indirect measures of poverty. It presents a number of candidate measures which are based on data on occupations, and compares their properties and analytical qualities with alternative measures of poverty (based upon income).

The analysis is motivated by the sociological axiom that occupations matter, more than any other factor, in defining individuals' own life experiences, and in defining the very contours of social structure and inequality. We present a number of results to justify this position. We argue that sociological evidence on how the distribution of social advantage and disadvantage is related to occupations should be leveraged to consider occupation-based measures of poverty.

It is an open question whether the social significance of occupations translates to their helpfulness in the analysis of poverty. There are substantial differences between the results of analysis using occupation-based and income-based measures of poverty, and we recognise that there are many scenarios where an occupation-based measure may not be at all useful. Typically, occupation-based measures generate a more stable, pessimistic account of the persistence of social disadvantage and poverty. Accordingly, we construct an argument that the evidence on social inequality derived from studying occupations is persuasive, and a sounder basis for policy decisions concerned with social exclusion and social justice, than is the evidence provided by income-based poverty indicators.

Introduction

Whilst occupations are seen by sociologists as the 'backbone of the class [social] structure' (Parkin, 1972: 18), data on detailed occupational positions has not normally been exploited in research on poverty. Common tools for measuring poverty are greatly influenced by whether an individual is in current employment, but the finer details of the occupational position, *contra* Parkin, are largely inconsequential. This paper argues that occupational data can and should be used in measuring poverty. It defines possible measures of poverty based upon occupations and explores their empirical properties using cross-sectional and longitudinal micro-data.

The concept of poverty, and the pledge to reduce it, are mainstays in political manifestos across nations (Spicker, Leguizamon, & Gordon, 2007: 2). Landmark empirical research projects have been motivated by the desire to understand and reduce the circumstances of extreme social deprivation and poverty (cf. Tonkiss, 1998). In recent years, Grusky and Kanbur (2006a: 1) have noted a number of emergent international factors which have provoked attention to poverty reduction on a global scale - to the extent, for instance, that the reduction of poverty is included in the United Nations' Millenium Development Goals (e.g. Atkinson, 2005).

Grusky and Kanbur's (2006b) collection focuses upon the need to address the measurement of poverty (and social inequality) in order to make progress towards such widely agreed aims. In common with numerous other reviews (see also Atkinson, 2005; Barnes et al., 2002; Spicker, 2007), differences in the precise details of what social scientists mean by poverty, and how they measure it, are shown to impact upon (i) research conclusions about the correlates of poverty, and, (ii) policies attempting to reduce poverty.

In the UK, research findings from income-based poverty thresholds have been influential in shaping contemporary social policies related to poverty. For instance, it is widely recognised that the 1997-elected Labour government privileged paid work within its programme of welfare policies, and that this choice was influenced by academic research which demonstrates the centrality of paid work to income-based classifications of poverty (e.g. Sefton, Hills, & Sutherland, 2009). A contention of this paper is that there are flaws with income-based poverty thresholds, and that these in turn have lead to flawed policy decisions related to poverty in the contemporary UK.

Defining poverty

Firstly, overarching most accounts, poverty is regarded as the experience of deprivation as a consequence of inequalities in the distribution of economic resources. Townsend's (1979) definition of poverty as the lack of access to resources enabling a normal standard of living is widely adopted as a standard definition. Second, poverty is usually (but not always) conceived of as a dichotomous state, in which individuals or families are either in, or are not, at a particular point in time (e.g. Cowell, 1977).

Beyond these basic positions, however, there are a plethora of alternative measures and conceptualisations of poverty. Spicker (2007), for instance, notes 'twelve clusters of meaning' associated with the idea of poverty, which can be broadly grouped into those that focus on the absence of material possessions; those that centre on the experience of economic disadvantage; those that centre on relative social position; and lastly a meaning that is defined exclusively in moral terms. Spicker's essay, and the wider collection in which it is published (Spicker et al., 2007), provides an authoritative review of concepts of poverty – though there are still further perspectives on the idea of poverty which might not fit easily within the typologies developed (e.g. Nussbaum, 2006). For the purposes of this discussion, we keep an open mind as to the exact conceptual interpretation of poverty. However with regard to its functional form we take as a working premise that poverty is a dichotomous quality, defined by a threshold position.

In this essay, we focus upon the operational measurement of poverty. Empirical reviews have typically contrasted 'direct measures' of poverty, in the form of measures of material deprivation, with 'indirect measures' which collect data on economic circumstances which are felt to be intrinsically tied to direct measures (e.g. Gordon, 2006; Gordon, Pantazis, & Townsend, 2000). This paper seeks to contribute to the literature on indirect measures (it targets the many examples of research data which do not contain sufficient information to calculate direct measures).

Recently, there has been widespread agreement that a range of components can contribute to poverty and deprivation. These do not necessarily overlap, and are ordinarily characterised as 'multi-dimensional' (e.g. Barnes et al., 2002; Gordon, 2006; Grusky & Kanbur, 2006a; Jenkins & Micklewright, 2007). In terms of measurement, the multi-dimensional approach conventionally advocates the collection of data from a wide range of domains (often including longitudinal life-course data) in order to support a multivariate, pluralistic or holistic classification system (e.g. Tomlinson, Walker, & Williams, 2008). Nevertheless, it has been noted that conceptual recognition of the multiple sources of deprivation need not necessarily imply that single dimensional indicator measures (such as income) are ineffective (Nolan & Whelan, 2007).

In this study, we assert that both the first (direct measures) and third (multidimensional monitoring) approaches to measuring poverty are often not feasible on non-specialist social survey datasets (due to lack of appropriate data). Therefore, we focus our review on the second class of measures (indirect indicators). Amongst these, income based measures dominate official statistics (see e.g. Shaw et al., 2007). In contrast, below we discuss – and ultimately advocate - using data on occupations to define comparable indicators. To our knowledge occupational measures have hitherto been rarely considered as prospective indirect measure of poverty.

Data and methods

Our analyses exploit representative individual micro-data to inspect the distribution of occupations and the classification of individuals according to poverty measures based upon data on income and on occupations. Our methods include constructing new poverty measures on the basis of nationally representative distributions of occupational advantage. We explore the properties of these measures and test patterns of association between these measures and other features of individual lives and experiences.

Data analysed is drawn from the British Household Panel Survey (BHPS, University of Essex & Institute for Social and Economic Research, 2009), IPUMS (Minnesota Population Center, 2009); and the 'Slow degrees' dataset exploited by Lambert et al (2007) in their paper of that name (which itself exploits records from the Family History Study and around 30 social survey datasets conducted in Britain and Ireland from 1963 to 2005). Our focus is on the indirect measurement of poverty in contemporary Britain, though several of our data sources also refer to other populations.

Much research on poverty is longitudinal in character. Substantive research is concerned with 'poverty dynamics' (the circumstances of transitions into and out of poverty and individuals' profiles of poverty status over time, e.g. Jarvis & Jenkins, 2000); and correlates with current poverty status which are themselves longitudinal and retrospective (e.g. Mayer, 2005). Household panel surveys such as the BHPS offer an outstanding resource for examining longitudinal associations with poverty since they include detailed individual level data in a longitudinal context, and relevant data on the full household and its structure (Jenkins & Siedler, 2007). Accordingly, the BHPS provides the basis of our substantive analysis, in which we present summary data on individual and household level classifications of poverty, and their correlations with other aspects of social lives.

The analyses below were conducted using routines for statistical analysis and modelling within Stata version 10 (StataCorp, 2008). Copies of the Stata command files used are available via www.dames.org.uk/documentation .

The bulk of this review compares poverty thresholds defined according to our analysis of distributions of income and occupations across the contemporary UK population. The thresholds we compare are usually based upon parameters of the BHPS adult interview population at wave 17 (when most interviews were conducted September-December 2007). Table 1 below summarises the specification of the most commonly used income- and occupation-based thresholds. The table notes the threshold points in the relevant distributions, and summarises the number of people with valid data, and the proportion of those who are classified as living in poverty, according to the different measures. We explain further features of the measures concerned at greater length later in the text.

Occupations and Inequality

In the text below we seek to persuade the reader that data about occupations is an especially revealing form of information about social position, and one that tends to be more parsimonious than other data on individuals' circumstances.

Why occupations matter

It is an item of historical sociological faith that occupations matter. Goblot wrote that 'nothing stamps a man as much as his occupation' (Goblot, 1961)[i] in a sentiment typical of its time. Occupations and occupational careers are presumed to comprise the dominant instruments through which the economic, social, cultural, political and environmental milieus of individuals are defined.

Contemporary empirical research has demonstrated that little - aside from conventions over gender-neutral terminology - has changed since Goblot's claim[ii]. Recent empirical evaluations on occupational structures have highlighted, for instance, their centrality to the structure of economic reward (McGovern, Hill, Mills, & White, 2007); the role of occupations in the definition of contemporary life-courses (e.g. Blossfeld, Mills, & Bernardi, 2006); and the centrality of occupations in defining other key contours of social inequality (e.g. Waldinger & Lichter, 2003). Occupations are, moreover, shown to have high social significance in wider domains of social life and social networks, having critical influences upon friendship, marriage, leisure, consumption, and subjective identities, and the wider structures of social order and reproduction which are defined and reproduced around these social behaviours (Archer, 2007; Bottero, Lambert, Prandy, & McTaggart, 2009; Devine, 2004; Guveli, Need, & De Graaf, 2007; Pettinger, Parry, Taylor, & Glucksmann, 2005).

Nevertheless, detailed occupational data is not normally exploited in the analysis of poverty. In high level reviews, the use of occupational information is often conflated with simplified sociological class schemes (Grusky & Kanbur, 2006a), and no clear connection is made between such schemes and poverty measurement. We claim that there are two principle reasons why occupational data is not normally used in the analysis of poverty: because its empirical parsimony is typically not appreciated by those involved in the analysis of poverty; and because many researchers are not confident on how to exploit occupational data effectively. Below, we provide contemporary evidence intended to persuade against these two perspectives by reviewing the properties of occupations and comparing them with other measures of social inequalities.

Subjective evaluations

Occupations can be shown to be very prominent in individuals' own evaluations of their circumstances and experiences. The centrality of occupations to individual's subjective well-being is well-established in social psychology (Burchell, 1994). Figure 1 highlights the responses given to a subjective question on the importance of having a fulfilling job answered by the BHPS respondents who form the population of

the majority of our analyses. As an illustrative example, it can be seen that the large majority of men and women ranked having a job as very important, and as slightly more important than several other issues including income. We can note, indeed, that many respondents, especially women, regarded having a job as very important to a happy life, despite not being in current or full-time employment at the time of interview.

The construct validity of occupations

Occupation-based measures prove to be effective means for predicting a wide range of phenomena related to social structure and inequality. Sociology in particular has undertaken a long programme of occupation-based research, and legion publications might be cited which illustrate construct validity in occupation-based measures of social structure (e.g. Rose & Pevalin, 2003). Several recent analyses also provide compelling evidence of the empirical significance of relatively detailed differences between particular occupational positions, rather than the more aggregate classifications of a few 'big classes' which are more widely found in previous research (e.g. Grusky & Weeden, 2006; Weeden & Grusky, 2005).

Table 2 shows one example of the construct validity of occupation-based measures, in this instance summarising the extent to which data on the occupations held by individuals improves our knowledge about whether individuals smoke. It shows moderate correlations between occupation-based measures and smoking, the strongest and most parsimonious correlations being with a scale of occupational inequality (the CAMSIS scale, discussed below, in column 1), and with a more disaggregated measure of occupations, the Standard Occupational Classification occupational title for each individual (column 4). These measures are better predictors of smoking than more aggregate measures of occupational difference, and than income based measures (the last two columns refer to net personal income and net household income measures – cf. Table 1).

Though it would have suited the argument of this paper were it true, it is not the case that occupation-based measures are always more effective predictors than income or other indicators of *any* other factors which might be expected to relate to the structure of social inequality. It is also not true that detailed occupational disaggregation always brings a premium over more condensed occupational measures (see esp. Ganzeboom, 2005). Figure 2b, for instance, shows a range of correlations between occupation-based measures and outcomes[iii], along with corresponding correlations with income and educational qualifications (Figure 2a shows an enlarged version of the first panel of figure 2b, to clarify the legends used).

At first sight, such evidence may not seem especially persuasive. Occupation-based measures typically show a comparable degree of explanatory power to measures of income and educational attainment (at least in terms of how they have been measured in the surveys used). On some measures they perform better, but on others worse. However, in almost all circumstances, the most detailed occupational measures (the SOC-90 unit group codes) have a substantially higher correlation. Despite the possibility of over-fit in models using SOC-90[iv], we argue that this is evidence that detailed occupational information captures a great deal of individual heterogeneity.

Moreover, since occupational data is easy to document, and its distribution is less strongly related to birth cohort or life-course stage than are measures of educational qualifications and income, we argue that the decent performance of occupation-based measures in these cross-sectional correlations translates to compelling evidence for their exploitation.

Since the analysis of poverty involves longitudinal research questions, the construct validity of occupations need not be limited to correlations with present circumstances. Figure 3 shows summary data from patterns of association between self-reported smoking, and measures based upon occupations and two measures of income. The figure shows a simple population average panel model covering repeated observations on the same subjects between BHPS waves 9 and 17[v], with and without a lagged explanatory and lagged outcome variables supplementing the analysis. These simple longitudinal specifications offer respectively basic tests of the incremental influence of changes in the stratification measure (model 2), and of the effects of stratification measures upon changes in smoking patterns (model 3). The figure shows that in all three models, the explanatory power associated with occupation-based measures and with changes in occupation based measures is greater than that associated with income data. Likewise, the explanation associated with the more detailed occupation-based measures (the scale scores) is higher than that associated with the simpler occupation-based measure (two category NS-SEC). We interpret this analysis as showing us that information about occupations tends to have a greater purchase upon (changes in) consequential features of individuals' lifestyles than does information about income.

These outputs are intended to illustrate the explanatory potential of occupation-based measures of stratification and social position. Numerous alternative data can be used to assess social positions and social disadvantage, with measures based upon multiple indicators offering especially strong predictive power (cf. Gershuny, 2002; Tomlinson et al., 2008). However, the relative parsimony associated with collecting and preserving data on occupations, on income, and on educational qualifications, in both cross-sectional and longitudinal studies, usually makes such indicators more convenient instruments.

The criterion validity of occupations and the social structure

Sociologists have not conventionally stopped at highlighting correlations between occupations and other life outcomes. A wide range of sociological accounts of stratification highlight how the occupational division of labour is itself instrumental in the formation and reproduction of the structure of stratification inequality (e.g. Goldthorpe, 2007, c5; Wright, 2005). In such accounts, theories of social inequality regard occupations as devices which, in a sense, organise or stabilise differentiations within society. Accordingly, it follows that measures of occupations should prove central markers of the nature and reproduction of social inequality structures[vi]. Correlations between occupation-based measures and other key markers of social inequality are expected to be high, and occupations are expected to dominate the allocation of positions in the inequality structure. Confirmatory evidence can be regarded as 'criterion validity' on the centrality of occupation-based measures to the

social structure of stratification. For instance, evidence of patterns in the intergenerational transmission of occupational inequalities has long been taken as validation of the structure of occupational inequalities themselves (e.g. Weber, 1978).

Ample evidence can be presented of the centrality of occupational differentiation to the structure of social and economic inequalities. Figure 4, for example illustrates how occupational data can be readily used to generate visualisations of the geographical distribution of social inequality. Figure 5, for example, shows how data on occupations held by BHPS individuals over time has greater stability than data on income patterns (less variation around the mean), and serves to more clearly demarcate known socio-economic differences associated with housing tenure than do income based measures.

An important component of the structure of occupational stratification is that, with qualifications, is it widely agreed that the principle axes of occupational difference correspond to a single principle dimension of social inequality. This basic dimensional structure of occupational inequality is sometimes referred to as the 'Treiman constant' (Hout & DiPrete, 2006) after analyses revealing both the one-dimensionality of, and the consistency across societies, of prestige ratings of occupations (Treiman, 1977). It is certainly not agreed that all structures of inequality related to occupations fit neatly into a single dimension – for instance a central argument of the popular CASMIN sociological class measure, is that the differences in employment relations which serve to define social classes have some orthogonalities (Goldthorpe & McKnight, 2006). Nevertheless, sociologists have developed a compelling body of empirical evidence which ultimately foregrounds a single dimension of hierarchical inequalities in understanding social stratification (see discussions in Hout & Hauser, 1992; Prandy, 1998; Scott, 2006). Figure 6 summaries the empirical structure of occupational inequality measured by CAMSIS scales from large scale survey data from a range of countries and time periods. It is presented here in order to illustrate the apparent consistency of gradational structures of occupational inequality. We exploit the parameters of these structures in subsequent discussions below.

Dealing with occupational data

Data on occupations is widely collected in social survey research. Detailed data on occupational titles is routinely coded to national and international standard classifications, and is subsequently exploited for a range of analytical purposes and ordinarily made available to secondary analysts[vii]. These standard practices make for high standards of data collection, metadata access, and comparability of data resources over time and between countries in occupational records (Hoffmann, 1999). In the BHPS, occupational data on the British sample respondents[viii] was coded to the UK's Standard Occupational Classification 1990 ('SOC90', which consists of 371 occupational unit groups, see OPCS, 1990), and the CASOC/CAMCOM software routines (Elias, Halstead, & Prandy, 1993) were used to code the occupations into a range of well-known derived classifications of occupations, as well as the detailed categories of the International Standard Classification of Occupations 1988 ('ISCO88', which covers around 500 unit groups, see ILO, 1990).

Detailed occupational title data allows for a wealth of substantive comparisons which may otherwise be masked by broad occupational unit groups (though cf. Ganzeboom, 2005 on this issue). Users may, in principle, very rapidly exploit occupational title data, typically in conjunction with a little additional data on employment contract ('employment status') and industry, by linking it with summary statistics or data about the component occupations. Most commonly, this involves coding occupations into one of a range of occupation-based social classifications such as social class schemes or stratification scales (see Ganzeboom, 2008; P.S. Lambert, 2007 for popular internet resources for software code to achieve such translations). Nevertheless, in several recent publications we have been critical of social researchers' systematic under-exploitation of occupational data (e.g. P.S Lambert et al., 2009; P.S. Lambert, Tan, Gayle, Prandy, & Bergman, 2008; P.S. Lambert, Tan et al., 2007). In Figures 7 and 8 we illustrate typical scenarios. Figure 7 shows simply a representation of the complexity of individual occupational data typically found in national surveys (each point in the Figure represents a particular ISCO88 unit group, so the Figure represents the number of individuals in different ISCO88 unit group locations for the contemporary UK population). Typically, the categorical information on occupational differences represented by Figure 7 is too complex to exploit descriptively, and so the data is re-coded into an occupation-based social classification which exploits more or less occupational detail. Figure 8 shows a representation of the two occupation-based social classifications used most often in this analysis – the CAMSIS scale of occupational stratification advantage, and the 8-category version of the National Statistics Socio-Economic Classification (Rose & Pevalin, 2003).

As described below, we advocate the CAMSIS measures as conveniently continuous measures of relative position within the stratification structure (note that these are also the measures summaries in Figure 6). CAMSIS measures have the advantage of being standardised to the contemporary occupational structure, meaning that scale positions indicate relative location within the occupational structure in the relevant country at the relevant time (P.S. Lambert, Tan et al., 2008). CAMSIS scales also differ for men and women, minimising the effect of occupational gender segregation upon the placement of individuals (this effect is problematic for most other schemes, as illustrated in the stark distributional differences between males and females on the NS-SEC scheme shown in Figure Y. The important contribution of occupation-based social classifications is that they generally indicate the relative advantage typically associated with certain occupations, rather than simply the current objective circumstances of the occupations concerned. This is a critical point for our own argument: our key assertion is that such measures provide good data on individual's circumstances, and in fact better data than is obtained from other easily measured topics such as income and educational qualifications. CAMSIS scales in particular are demonstrably good indicators of the typical positions within the social structure of the incumbents of the occupations: these scales are based upon typical patterns of social interaction exhibited by the incumbents of occupations, and can be shown to be strongly related to longer-term social structural relative position within the stratification structure (e.g. Bottero et al., 2009; Prandy & Jones, 2001; Stewart, Prandy, & Blackburn, 1980).

In many previous publications we have argued the better use of occupational data requires greater fluency by social scientists in accessing and exploiting the

information resources on occupations which allow coding into these and other occupation-based social classifications. Such fluency should, in principle, be aided by new online resources being developed as part of a UK ESRC data initiative in which the current authors participate (see esp. P.S. Lambert, Gayle et al., 2008).

Defining occupation-based measures of poverty

Measuring poverty using micro-social survey data proves challenging. Common approaches involve defining an income threshold that may be defined relative to the national income distribution, or in absolute terms. Occupational data is sometimes more readily available than data on incomes, and, we have argued, is generally better suited to indicating life circumstances than is income data. Indeed, in comparative research spanning different countries or time periods, occupational data is relatively easy to collect and to harmonise in some manner. This paper therefore takes the unorthodox approach of attempting to exploit occupational data as an alternative indicator of poverty, and explores the implications of so doing for comparative social research on poverty transitions and trends, and their correlates.

Characterising the disadvantaged within the occupational distribution

Central to our occupationally-oriented approach is a claim that the shape of the occupational structure of stratification in most countries is a normally distributed continuum with truncation and modest positive skew. Figure 6 (also cited previously) shows characterisations of the distribution of occupational inequality for 9 sample societies, and imposes Gaussian density estimates for the entire populations concerned. It is our observation that in all societies a normal distribution is broadly adequate as a representation of occupational inequality; that a slight positive skew is observed in most distributions which tends to be more marked in societies with lower levels of industrial development; and that the characterisation can be distorted by 'clumping' into popular occupations due either to historical data dealing with societies with clustered occupations, or due to inadequate tools of measurement of the occupational differentiations (e.g. the UK census records, which release data at 3-digit level detail only).

So long as the reader is satisfied that the structure of social stratification can be reasonably summarised by measuring gradational occupational inequalities, it is easy to see how those gradational inequalities could be used to identify thresholds defining the state of 'poverty' (or, perhaps more appropriately 'social disadvantage'). With income distributions it is recognised that Gaussian characterisations may not be adequate (e.g. Cowell, Jenkins, & Litchfield, 1996). Accordingly, when measures of poverty are defined according to thresholds in the income distribution, non-parametric criteria (such as a proportion of the median) are widely used. With occupational distributions, however, the shape of stratification inequality gives the appearance of a stable Guassian distribution on which parametric statistics would be appropriate. The distribution of a measure such as CAMSIS is, moreover, defined in relative terms, making absolute criteria (such as proportions of the median) less appealing.

Figures 9a and 9b shows our proposal for a poverty threshold within the occupational distribution. It is defined as a position in the occupational structure more than one standard deviation below the arithmetic mean, with a additional adjustment for the degree of positive skew (whereby the threshold is increased the higher the positive

skew). The figures show that this definition will identify different volumes of individuals depending upon features such as the gender composition of the underlying population, and the relative birth cohorts involved. In particular, the volumes of people classified as in poverty by these criteria could fluctuate considerably according to whether or not the threshold covers certain populous occupational groups (this is most evident in Figure 9b, which shows peaks of occupational incumbents associated with the most common female occupations). At this stage, our proposal for where to define a poverty threshold within the distribution of occupational inequality is tentative. It represents an empirical decision with no particular substantive rationale. It seems very likely to us that further research will reveal an alternative, more effective, threshold position than our initial, somewhat arbitrary, specification.

Wherever the threshold is drawn, an occupation-based measure of poverty will serve to define a set of occupations – or more literally, their incumbents or associates - as the most disadvantaged. Figures 10a and 10b illustrate the most populous occupational unit groups within the 'poor' category according to the above criteria[ix]. It may be unconvincing to some that our measure would regard those linked to the occupations listed as 'disadvantaged', but our point is that empirical analyses of occupational structures suggest that the incumbents of these particular occupations experience, on average, the greatest social stratification disadvantage. The corollary for our wider argument about poverty is that 'true' social disadvantage involves having (or being linked to) a disadvantaged occupation.

Linking the whole population to occupations

It may be clear from the above that an analysis of the distribution of social disadvantage could be feasibly approached from the analysis of occupations. There remains a glaring problem, however, concerning how individuals are associated with an occupational position. In contemporary developed nations, typically around half of the total population undertakes full time employment. Whilst an individuals' current job is clearly plausible as an occupation to identify with that person, it may not be at all clear how jobs may be linked to people not currently in full time work. Additionally, we might expect an individual's current job to in some circumstances be temporary, and we might also expect the context of the occupation (such as its relative prevalence within the society being studied) to itself influence the relative advantage associated with the job.

Occupation-based poverty thresholds could, on the one hand, be measured and analysed only for the working population. Although obviously raising other problems, we argue that this demarcation can lead nevertheless to feasible measures of 'poverty' amongst that subpopulation. Perhaps more persuasively, occupation-based poverty thresholds could also be defined for the wider population of all individuals. To do this, we propose rules concerned with non-working individuals, previous jobs held, gender segregation in occupations, household composition, life-course career stage, and hours of work, which allow us to use existing measures of occupational positions in a manner which can effectively incorporate all population groups in an occupation-based analysis. Such rules and definitions are not revolutionary, or even particularly

novel, but we argue that their application can give us new insights into the analysis of the concept of poverty, the analysis of poverty transitions and the 'escape from poverty'; and the analysis of trends over time in population distributions.

There are two well established sociological approaches to imputing occupational positions to the non-working. This literature has primarily been concerned with studying social class in the context of multiple-adult households and/or households without employed individuals. First, Erikson (1984) proposed an influential 'dominance' approach to assigning occupation-based social class categories to a household, which we adopt as the first of our principles. In this approach, a 'dominant' occupation for the household is identified as being the most advantaged full time job in the household. This classification requires data on the relative advantage of each job in the household (in our terms, this is the highest CAMSIS score), plus data on the hours worked by the incumbents of the jobs. Second, sociological researchers and survey analysts have adopted a convention of using data on the last job held by an individual as a tool of classification, if they do not currently have an occupation. In some instances, this is taken further to the conceptualisation that individuals have a 'career' occupation which might, for some people, not be the job currently held (Slocum, 1966; Stewart et al., 1980: c9). We adopt this position, but we should note that it does mark a point of disagreement between social scientists. Some researchers, ourselves included, regard the social positions of jobs within a defined career structure as stable over time, despite possible changes in objective circumstances (for instance, if every medical student went on to become a junior doctor and then a surgeon, those three positions would occupy the same relative stratification position). Others regard occupational change as intrinsically consequential, and would classify career trajectories as genuine 'intra-generational mobility' if they were associated with changes in the objective circumstances of the jobs. Since few career trajectories are guaranteed, the empirical difference between the two positions is smaller than the conceptual gap (because, in the first position, the probabilistic position of the early career status becomes an average of the position of those who do follow on to become surgeons, and those who done).

Our wider conception in this analysis is one of a 'latent' measure of an individual's occupational position. We conceptualise that every adult can reasonably be placed in a position within the stratification structure which is usually commensurate to their occupational circumstances of the current time or the recent past. To measure that position, we identify their current occupation or the dominant current occupation of their household. However, if no household members are currently working, we argue that this latent position can still be measured using occupations which should be objectively meaningful for the individuals concerned. For older adults, those occupations should be the last main occupation held in their career (that occupation being, for most people, the typical source of pension or other benefits, and of enduring social connections). For adults under 30, we argue, that occupation can be measured by using parental occupational data (since at that age, parents still commonly provide financial and social support).

The outcome of these arguments is a suite of potential occupations associated with people and, concomitantly, poverty classifications derived from those occupations. We concentrate upon seven different possible measures. Empirical data on the distribution of cases into each of these measures is summarised in Table 1 (previously

discussed). For clarification, we list below the seven measures and the means by which they are derived.

- **Current job of the individual [cji]** – Defined as the job held by an individual at the time of interview (we use any current job, whether full or part-time, though we could equally restrict analysis to full-time jobs only)

- **Current or recent individual job [rji]** - Defined as the job held by an individual at the time of interview or, if no such job is currently held, the last main job reportedly held by the individual

- **Current or recent individual job or parents job [pji]** – As [rji], except for adults aged under 30, for whom, if current job data is missing, or the current job is part-time, or they list their current status as being a student in education, then the most advantaged of their parent's jobs is used

- **Current dominant job of the household [cdj]** – Defined as the most advantaged full time job held by an individual within the household (or the most advantaged part-time job if all jobs are part-time)

- **Current or recent dominant job of the household [rdj]** – As [cdj], except that if no current jobs are held in the household, then the most advantaged of the recent jobs held is identified and used

- **Current or recent or parental dominant job of the household [pdj]** – As [rdj], except for adults aged under 30, for whom, if current job data is missing, or the current job is part-time, or they list their current status as being a student in education, then the most advantaged of their parent's jobs is used

- **Current, recent or parental dominant job of the household with income imputation [pad]** – As [pdj] except that for those adults for whom no occupation can be identified using [pdj], then income data is used to assign those adults to suitable positions within a poverty measure.

Figure 11, which is based upon the data from Table 1, serves to illustrate the decline in the number of non-classified individuals from the BHPS associated with each of these seven measures. Points to highlight include that using any measure after the second most inclusive, individual recent job, allows successful classification of most of the population. Using parental data allows a cluster of youths to have occupations assigned to them who would otherwise not have been classified (cf. panels 2 and 3), whilst using household data, recent job data and parental data is still not enough to assign occupations to every single BHPS individual – a small cluster of older respondents can still not be successfully linked with an occupation[x].

The operationalisation of occupation-based measures in this way is tractable, but not trivial, on most major surveys. Current or last main job of all household members is usually recorded[xi], whilst parental job, though easily recorded, is only measured on some studies. The sequence of steps needed to calculate the occupational measure suitable to each individual on each of the above measures is however convoluted. Our

Stata format commands for operationalising these measures on the BHPS are supplied at www.dames.org.uk/documentation .

Numerous alternative occupation-based measures of poverty could be derived. It may be, for instance, that the conception of a 'latent job' could be modified for the non-working according to the non-working status. For instance, if the non-working state is due to education or looking after the home, it may be sensible to use the latent occupation of a household sharer or the last main job. If however the non-working state is unemployment, we could consider penalising the occupational advantage score by a certain degree to reflect the disadvantage known to accrue to unemployment (for example, we could subtract one standard deviation from the occupational score, ensuring those in middle or lower range occupations who are unemployed become classified as 'poor', but those whose previous job was more advantaged was not). In future research we hope to explore further such additional permutations.

Our hypothesis is that the seven occupation-based measures proposed above are preferable tools for analysing poverty and social disadvantage. Their definition and operationalisation is more parsimonious than commonly used alternatives (such as multidimensional indicators); we expect occupation-based measures to minimise the number of artefactual or inconsequential transitions in and out of poverty (such as can be induced in income-based poverty measures by household composition transitions or changes in working hours); and we expect these measures to offer more substantial purchase on the sociological mechanisms associated with poverty transitions. In the next section, we present preliminary analyses exploiting these measures.

Findings

Table 4 shows the pairwise correlations between the seven binary poverty indicators constructed upon the basis of occupations as described above (and in Table 1), alongside their correlations with three income based poverty measures (defined as less than 60% median of the BHPS wave 17 unweighted distributions of personal income [fi], total household income [hh] and equivalised household income [he] respectively – also see Table 1). The tables show that the differently derived candidate binary poverty measures have only low correlations between each other. Substantially different groups of people are identified by different criteria, in particular with regard to the difference between occupation-based and income-based measures. The correlations reiterate that the choice of poverty measure could be highly consequential for subsequent analyses (and derivate social policies). In the sections below we explore the correlates and properties of the different candidate measures of poverty and social disadvantage.

The circumstances of the poor in contemporary Britain

Tables 5, 6 and 7 show some exploratory correlations between our suggested poverty measures, income based poverty measures, and other factors commonly associated with the analysis of poverty and social disadvantage.

In Table 5, following Tsakloglou and Papadopoulos's approach in their review of ECHP data (2003), we pick out four common socio-demographic characteristics which often correlate with poverty measures (whether individual respondents are retired; self-classified as long-term illness or disability; aged under 25; or living within single parent households). Because research on migration is often linked to data on occupations and income, we supplement these standard indicators with an additional measure of whether the respondents migrated between regions within the UK in the last year. The Table indicates the proportion of people from the relevant groups who are classified as 'poor' according to our different measures, and the significance of the association between the two classifications (the total population percentages classified as poor are shown in the leftmost column). We see by and large that both the retired and the 'sick' a somewhat more likely to be classified as 'poor' across measures, that there is little association with migrant status, and only a relatively modest association with single parent status. We also see that youth is more strongly correlated to poverty status on income-based measures than on occupation-based measures (an entirely expected finding given the correlation between age and income).

In Table 6, we present correlations between the same range of measures of poverty, and selected indicators of current lifestyles and social circumstances. We use shading to highlight the relatively bigger correlations. Points of overview include that age is much more influential upon income measures than on occupational measures; one important measures of lifestyle, smoking, is more strongly related to occupation-based measures than income-based measures; a second important lifestyle measure, housing

tenure, is strongly correlated with all measures; that leisure expenditure correlates more strongly within income-based measures but also exhibits a comparable relation with occupation-based measures; and that white goods ownership measured in terms of tumble driers is not generally correlated with any indicators, expect for total household income.

In Table 7, we show correlations between the poverty measures and four important social-structural measures. Parental occupational advantage is measured using the CAMSIS scale score for the parents job when the respondent was aged 14 (based on either retrospective questions or on co-residence with parents during the respondents youth). The correlations with Educational qualifications are measured using dummy categories for each of the BHPS's 12 possible 'highest educational qualification' categories (variable name 'qqfedhi' in wave 17). The correlations with ethnicity are measured by applying an effect proportional scaling to the categories of ethnic identify according to parent's occupations[xii]. The correlations with household type are measured using dummy variables for the BHPS's typology of 9 household types (variable name 'qhhtype' in wave 17). In Table 7, correlations between occupation-based poverty measures and parental advantage and education are generally considerably higher than the corresponding correlations with income based measures; correlations with ethnicity do not vary greatly between measures; and correlations with household type are generally small with the notable exception of a very strong association between administrative household type and classification according to household income data.

We interpret Tables 5, 6 and 7 as preliminary support for two claims which are expanded upon in the next section. First, that occupation-based measures of poverty have comparable structural correlates as income-based measures (even though they identify many different people to those highlighted by income-based measures – cf. Table 4). Second, that occupation-based measures tend towards having slightly better (i.e. higher) correlations with things we would want poverty measures to correlate with (structural-economic measures, social background, and lifestyle deprivation indicators), and substantially better (i.e. lower) correlations with measures which we would not ordinarily want poverty measures to correlate with (socio-demographic measures, such as age and household type).

Modelling poverty and poverty transitions

Table 8 and 9, and Figure 12, show summaries of analyses of the determinants of poverty status according to the different potential poverty measures. The two tables summarize simple panel models with additional controls for age and gender alongside the explanatory coefficients listed. Measures used cover parental occupational advantage (pa_mcam); educational qualification effects parameterised by effect proportional scaling for the mean parental CAMSIS scale score for each educational qualification level (fedhi_c); a dummy indicating the respondent is currently married or cohabiting (cohab), and dummies indicating status in the five socio-demographic groups examined in Table 5. Table 8 merely seeks to generate a full multivariate account of predictors of current status, whereas Table 8 seeks to model the transition out of poverty, for those classified as in poverty in the previous year of the BHPS

survey (the explanatory variable ‘lcohab’ used in Table 8 only refers to the lag response for cohabiting status, from the previous year).

Tables 8 and 9 give a preliminary account of the processes determining current poverty status and transitions from poverty. We interpret that both tables as showing evidence for the greater structural influence upon occupation-based poverty measures than on income-based measures. Poverty and the escape from poverty as defined by the former are more substantially determined by parental background and educational qualifications (see the larger t-statistic values associated with the variables ‘pa_mcam’ and ‘fedhi_c’). Poverty as defined by income criteria is more influenced by socio-demographic status and, in the case of individual income measures, by gender. We suggest that these patterns indicate that occupation-based measures are more consistent markers of enduring social disadvantage.

In Figure 12, we give a description of the trajectories experienced by BHPS respondents over a 9 year period in terms of their classification in poverty by these measures. This figure also suggests that occupation-based measures lead to longer term and more stable markers of disadvantage than do income-based measures. It shows first that relatively fewer people move in and out of poverty between waves when poverty is defined by occupations, compared to when poverty is defined by income (the height of the bars). The figure also shows that the profiles of the persistently disadvantaged in occupational terms are moderately more influenced by other markers of socio-economic circumstances, such as housing tenure, that we would expect them to be. Though we are well aware that our initial analysis is speculative and requires further elaboration, when examining transitions and trajectories in poverty according we suggest that there does appear to be sufficient evidence to support our hypotheses that occupation-based measures offer fuller, longer-term markers of inequality positions.

Conclusions

Given the weight of empirical evidence on the centrality of occupations to the structure of social stratification, it is, apparently, a paradox that income rather than occupational data is conventionally used as an indirect measure of poverty. Part of the explanation may be that analysts are not widely aware of effective means of assigning occupational records to the whole population, or of accessible measurement instruments to identify the most disadvantaged occupations. In addition many researchers will, quite naturally, be committed to a conceptualisation of poverty which sets current income deprivation (and transitions in and out of income deprivation) as the very defining characteristics of poverty research.

It is clear that the approaches introduced above may have very different impacts on the classification of individuals as moving out of or into the state of poverty over time. When using income based thresholds, numerous changes in circumstances could lead an individual to change their state of poverty. Changes such as a small decrease or increase in working hours; a change in household composition; or a career-stage related income accreditation are all often identified as changes likely to influence income classifications, but less central to many conceptualisations of poverty. On the other hand, an occupation-based measure may be insensitive to changes in circumstances over time. The appropriate approach is difficult to resolve. High volumes of transitions in and out of poverty may be worth studying. Writing nearly thirty years ago, Heath concluded:

> *"..I suspect that deprivation is a vicissitude (sometimes transitory) which strikes broadly and unpredictably across the working class (and indeed white-collar groups) as the vagaries of economic policy and fortune eliminate overtime in a particular industry or factory, throw men out of work, or drive them into low-wage sectors of the economy" (Heath, 1981: 163).*

The occupation-based measures of poverty that we have proposed would have difficulty identifying such vicissitudes, which focus upon cross-sectional and potentially transitory states. Accordingly, we have little evidence from our review to reject the use of income-based poverty indicators, which generally respond effectively to rapid changes in individuals circumstances (Jenkins & Micklewright, 2007).

But what occurs when researchers wish to use poverty measures to study social disadvantage and social exclusion? In these terms, the focus is on an understanding of poverty as part of an unfolding social and economic experience within the life-course. In this perspective the most disadvantaged and socially excluded may well have occupations. Their jobs may be characterised by disadvantaged material circumstances (Blackburn & Mann, 1979; McGovern et al., 2007). More critically, disadvantaged occupations may be characterised – and identified – by average relative social disadvantage within the stratification structure (Stewart et al., 1980). Here occupation-based measures prove useful indicators. On the other hand, income-based measures of poverty assign a relatively high premium to any form of current job, regardless of its position in the stratification structure. Accordingly, it is well documented that income-based measures often regard individuals and their families

who are currently employed as not in poverty despite other abject circumstances; whilst individuals who are not currently in work, but whose last or next occupation may be relatively privileged, may be classified as 'poor' on income definitions, despite (arguably) not suffering substantial social exclusion.

For such reasons, analyses and policy responses to social disadvantage which exploit income-based poverty indicators can go badly wrong. An illustration in the UK is provided by the 'Working Families Tax Credits' welfare benefits introduced (and later restructured) by the 1997 Labour Government. This policy embodies that Government's 'Welfare to Work' strategy which sees labour market activity as the central means to reduce poverty. Here, the logic is that greater labour market activity is always better (since it is likely to raise household income levels), a view itself largely inspired by literature on income-based poverty thresholds (Sefton et al., 2009). Accordingly, the WFTC scheme put in place measures to facilitate the parents of children in increasing their labour market activity. However, evidence on social disadvantage such as shown above would suggest that there is little benefit to encouraging adults into relatively disadvantaged jobs. Moreover, the WFTC brought substantial unanticipated operational costs associated with monitoring labour market activity changes. The result was substantial reclaiming of over-payments from recipients, which itself resulted in the inducement of severe hardship and anxiety in large proportions of the most disadvantaged families who had received WFTC. Part of this catastrophic outcome may be explained by policy-makers' inability to appreciate the bureaucratic overheads of new welfare arrangements, but it may also be attributed to the unrealistic equation of low income achieved through relatively disadvantaged employment with the escape from poverty. For instance, an occupationally oriented measure of poverty would not regard a single mother gaining work as a checkout assistant as an escape from poverty, but a household-income based measure would do so.

The message from our analyses above is that social disadvantage is longer term and more stable than is often appreciated through income-based analyses of poverty. This paper has shown preliminary evidence that occupation-based measures may be better than income-based measures at identifying the socially excluded by providing a plausible basis for the measurement of poverty. This is because occupation-based measures correlate with stable, longer-term socio-economic disadvantage, and are less influenced by demographic shocks, than are income based measures. More research is required to test occupation-based indicators, by we hope that our analysis will persuade readers that occupational data can make an effective, parsimonious contribution to the measurement and analysis of the concept of poverty, conceived of broadly as longer term lifetime economic disadvantage, than is often appreciated. In due course, by re-focusing on occupational circumstances and occupational change, we anticipate generating evidence about comparative inequalities, and institutional effects upon poverty, which will often be of a different nature to that which has been found when focussing upon measurements rooted in current economic assets and resources.

Tables referred to in the text

Table 1

Classifications and thresholds used in the measures of poverty reviewed

				% poor	
		N men	**N fem**	***m***	***f***
	All valid respondents	5695	6793		
Income based thresholds					
[fi]	Personal income	5371	6375	*15.4*	*29.7*
Threshold = less than 60% median personal income for full time workers, calculated as equal to £561 per month for BHPS wave 17.BHPS variable qfimn (all sources personal income)					
[hh]	Total household income	5424	6385	*11.5*	*16.7*
Threshold = less than 60% median household income for all households, calculated as equal to £1140 per month for BHPS wave 17. BHPS variable qfihhmn (sum of all sources).					
[he]	Equivalised household income	5424	6385	*9.1*	*10.6*
Threshold = less than 60% equivalised household income for all individuals in households, calculated as equal to £1040 per month for BHPS wave 17. Derived from BHPS variables qfihhmn and qfieqfcb.					
Occupation-based thresholds					
All thresholds are calculated by assigning a CAMSIS scale score to the relevant individuals on the basis of their SOC 90 occupational units (see implementation instructions at www.camsis.stir.ac.uk), then using the male CAMSIS threshold=36.0, female threshold=38.5 (CAMSIS scales have mean 50, sd 15 for national population).					
(1) [cji]	Current job, indv.	3869	3832	*15.1*	*11.6*
(2) [rji]	Current or recent job, indv.	4968	5610	*18.9*	*17.8*
(3) [pji]	(2) + parents job if <30 & missing, PT or student	5123	5767	*18.3*	*10.4*
(4) [cjd]	Current Hld dom job	4393	4835	*9.2*	*7.5*
(5) [rjd]	Current/recent Hhld dom job	5294	6053	*10.6*	*9.3*
(6) [pjd]	***(5) + parent's job if < 30 & missing, PT or student***	***5306*** *(93%)*	***6068*** *(89%)*	***11.0***	***9.8***
(7) [pad]	(6) + [hhp] if (6) is missing	5671 *(99%)*	6729 *(99%)*	11.3	10.6
Source: Data from BHPS Wave 17 adult interviews.					

Table 2

Variable	CAM	NS_2	NS_8	SOC90	PINC	HHINC
mcam	**-.02872*** **					
ns_sec_s		**-.5622*** **				
_Ins_sec_2			**-.5701**			
_Ins_sec_3			**-.00575**			
_Ins_sec_4			**-.00227**			
_Ins_sec_5			**.3827**			
_Ins_sec_6			**.558**			
_Ins_sec_7			**.5991**			
_Ins_sec_8			**.8483***			
qfimn					**-.00018*** **	
qfihhmn						**-.00014*** **
r2_a				**.05038**		
r2_p	**.03158**	**.02027**	**.03058**		**.01727**	**.02149**
bic	**7407**	**7493**	**7467**	**7110**	**7515**	**7483**
N	**7130**	**7130**	**7130**	**7130**	**7130**	**7130**
ll	**-3681**	**-3724**	**-3685**	**-3537**	**-3735**	**-3719**

legend: * p<0.05; ** p<0.01; *** p<0.001

Table 3

Stability of measures over time: Design effects for income and occupations
BHPS annual panel, waves 9-17

	England		**Wales**		**Scotland**	
Personal income [fimn]	4.71	12157; 5.5	3.91	4356; 5.4	4.49	4691; 5.4
Household inc. [fihhmn]	4.09	12339; 5.6	3.37	4457; 5.4	4.00	4766; 5.4
Current job CAMSIS	5.51	8956; 5.0	5.40	2874; 4.8	5.36	3341; 4.9
Current / recent job	5.51	11748; 5.8	5.39	4092; 5.6	5.36	4525; 5.6
HH dom. current job	5.06	10386; 5.2	4.83	3499; 4.9	4.99	3864; 5.0
HH dom current/recent	5.07	12442; 5.6	4.83	4411; 5.4	4.99	4766; 5.4

Cells show DEFF statistics (Kish 1965, via Stata's svymean), & N indvs; mean(#responses/#indvs)

Table 4
Correlations between binary poverty measures, BHPS, Individuals from wave 17

	*Correlation*100 and pairwise number of cases*								
	[rji]	**[pji]**	**[cjd]**	**[rjd]**	**[pjd]**	**[pad]**	**[fi]**	**[hh]**	**[he]**
[cji]	95 7701	71 7701	53 7701	51 7701	50 7701	50 7701	2 7209	1 7256	-1 7256
[rji]		73 10578	44 8757	49 10578	48 10578	48 10578	8 9962	11 10014	10 10014
[pji]			49 9002	58 10863	62 10890	62 10890	4 10262	10 10317	9 10317
[cjd]				96 9228	91 9228	91 9228	2 8678	2 8733	2 8733
[rjd]					96 11347	96 11347	2 10699	14 10758	10 10758
[pjd]						100 11374	5 10724	13 10783	10 10783
[pad]							9 11748	19 11809	22 11809
[fi]								18 11746	36 11746
[hh]									59 11809

Table 5

Who are the 'poor' in Britain?
% classed as 'poor', with significance of correlation (cf. Tsakloglou & Papadopoulos, 2003)

		Retired	**Sick**	**Young adults**	**Single parents**	**Migrants in year**
[cji]	Current job (n=7701) (13%)	n/a	n/a	15	15	14
[rji]	recent job (n=10551) (18%)	24*	44*	19	22*	15*
	(almost) all adults..					
[cjd]	Current / hhld (8%)	13*	18*	7	9	10
[rjd]	recent / hhld (10%)	14*	23*	9	12*	11
[pjd]	recent / hhld/ parent (10%)	14*	24*	12	13*	11
[pad]	[pjd] + [he] (11%)	14*	24*	12	14*	11
[pi]	Pers. Income (23%)	28	32*	50*	24	25
[hi]	HHld income (14%)	37*	30*	10*	14	8
[hh]	Equiv. hhld income (10%)	15*	21*	14*	15*	16*

n/a: Figures not shown if less than 20 individuals in category.

Table 6
Selected correlations with binary poverty indicators

		*Correlations*100*					
		qAge	**Smokes**	**Health**	**Tenure**	**Leisure expend.**	**Tumble drier**
[cji]	current job (n=7701)	6	13	5	15	-6	-1
[rji]	recent job (n=10578)	7	16	13	23	-11	-1
	(almost) all adults..						
[rjd]	recent / hhld	8	12	9	20	-10	-4
[pjd]	recent / hhld/parent	8	12	9	20	-10	-3
[pad]	[pjd] + [he] if missing	10	11	9	18	-11	-5
[pi]	Pers. Income	23	1	4	9	-16	1
[hi]	HHld income	35	3	14	29	-20	-18
[hh]	Equiv. hhld income	14	7	8	22	-13	-7

Source: BHPS Wave 17, N=12448.
Value for qAge is regression R for prediction using quadratic function of age. Values for smoking, health, leisure expenditure and having a tumble drier in the household are linear correlation statistics R. Value for tenure is Cramer's V.

Table 7

Determinants of being 'poor'?
Correlations (and significance) with poverty indicators
('Ethnicity' = effect proportional scaling of ethgp, ranked by parental CAMSIS)

		Parental CAMSIS (r)	Own Educ. (r2)	Ethnicity (r; UK)	Hhld fam type (r2)
[cji]	Current job (n=6739)	-16*	9*	-1	1*
[rji]	recent job (n=9379)	-20*	11*	-1	1*
	(almost) all adults..				
[cjd]	Current / hhld	-13*	7*	-3*	0*
[rjd]	recent / hhld	-15*	8*	-3*	1*
[pjd]	recent / hhld/ parent	-18*	8*	-3*	1*
[pad]	[pjd]+[he]	-16*	8*	-2*	1*
[pi]	Pers. Income	0	5*	3*	1*
[hh]	HHld income	-11*	9*	-2*	27*
[he]	Equiv. hhld income	-4*	4*	0	3*

Source: BHPS wave 17 adult interviews.

Table 8

Logit predictors of being in poverty by alternate measures

Variable	CJI	RJI	CJD	RJD	PJD	PAD	FI_POV	HH_POV	HE_POV
fem	-.21	-.1	-.22	-.18	-.16	-.14	1.1	.3	.16
	-4.25	-2.47	-4.31	-4	-3.63	-3.26	33.9	7.56	4.4
pa_mcam	-.024	-.023	-.024	-.024	-.031	-.028	.0048	-.0034	-.0015
	-12.7	-15	-12.3	-13.8	-17	-16.4	4.27	-2.44	-1.15
fedhi_c	-.14	-.15	-.12	-.12	-.12	-.11	-.075	-.066	-.064
	-27.3	-34	-22.3	-26.2	-25.4	-25.3	-22	-17.4	-17
cohab	-.056	-.23	.0047	-.51	-.52	-.5	.63	-1.9	-.36
	-.879	-4.76	.0635	-9.27	-9.57	-9.54	14.6	-41.7	-7.84
wave	-.035	-.017	-.03	-.01	-.014	-.015	-.039	.033	-.017
	-5.94	-4.07	-4.64	-1.94	-2.66	-2.98	-9.85	6.5	-3.24
retir	-.092	.042	-.13	-.11	-.11	-.12	.83	.93	.57
	-.374	.605	-1.01	-1.37	-1.41	-1.57	14	14.6	8.51
sick	.51	.72	.31	.45	.44	.44	.82	1.1	.94
	2.33	7.85	2.62	4.99	4.86	4.96	11.8	16.4	14.3
singpar	.19	.1	.089	-.15	-.12	-.11	-.27	-.82	.43
	2.29	1.55	.961	-1.88	-1.54	-1.43	-4.54	-10.4	7
yadult	.21	.065	-.22	-.49	-.1	-.12	2.2	-.13	.26
	1.9	.736	-2.05	-4.86	-1.1	-1.25	26.5	-1.33	3.06
migr	-.028	.09	.17	.2	.14	.13	-.058	.84	.62
	-.61	2.53	3.63	4.7	3.44	3.33	-1.55	19.4	15.9
N	61290	92577	73167	95207	95322	97728	95457	94560	94560
r2_p	.11	.13	.082	.1	.11	.1	.14	.27	.071
ll	-23042	-40770	-21402	-30084	-30712	-32063	-44784	-28542	-29187

legend: b/t

Table 9

Logit predictors of escape from poverty (given in poverty last year)

Variable	e_CJI	e_RJI	e_CJD	e_RJD	e_PJD	e_PAD	e_FI_~V	e_HH_~V	e_HE_~V
fem	-.24	-.31	.19	.15	.076	.15	-.99	-.12	-.11
	-2.62	-4.06	2.4	2.03	1.02	2.03	-16.6	-1.92	-1.78
pa_mcam	.0069	.0099	.0051	.0069	.012	.015	-.0037	.0023	.00015
	2.06	3.59	1.74	2.47	4.11	5.47	-1.97	1.08	.0728
fedhi_c	.047	.076	.034	.04	.031	.042	.083	.03	.036
	4.56	8.91	3.89	4.7	3.74	5.03	14.6	4.94	5.76
owner	.26	.56	.21	.46	.34	.46	-.51	.54	.26
	2.85	7.53	2.63	6.09	4.65	6.21	-8.97	8.39	4.15
lcohab	-.091	-.15	.01	-.14	-.021	-.038	.25	-.39	-.16
	-.547	-1.16	.0687	-1.08	-.159	-.295	2.02	-3.6	-1.39
cohab	.07	.077	.1	.49	.54	.49	-.74	1.8	.4
	.411	.586	.684	3.74	4.14	3.8	-5.78	17	3.39
N	7921	16644	6161	9418	9667	10132	18992	12516	8638
r2_p									
ll	-3693	-5705	-3632	-4704	-4797	-5261	-10162	-6623	-5754

legend: b/t

Figures referred to in the text

Figure 1

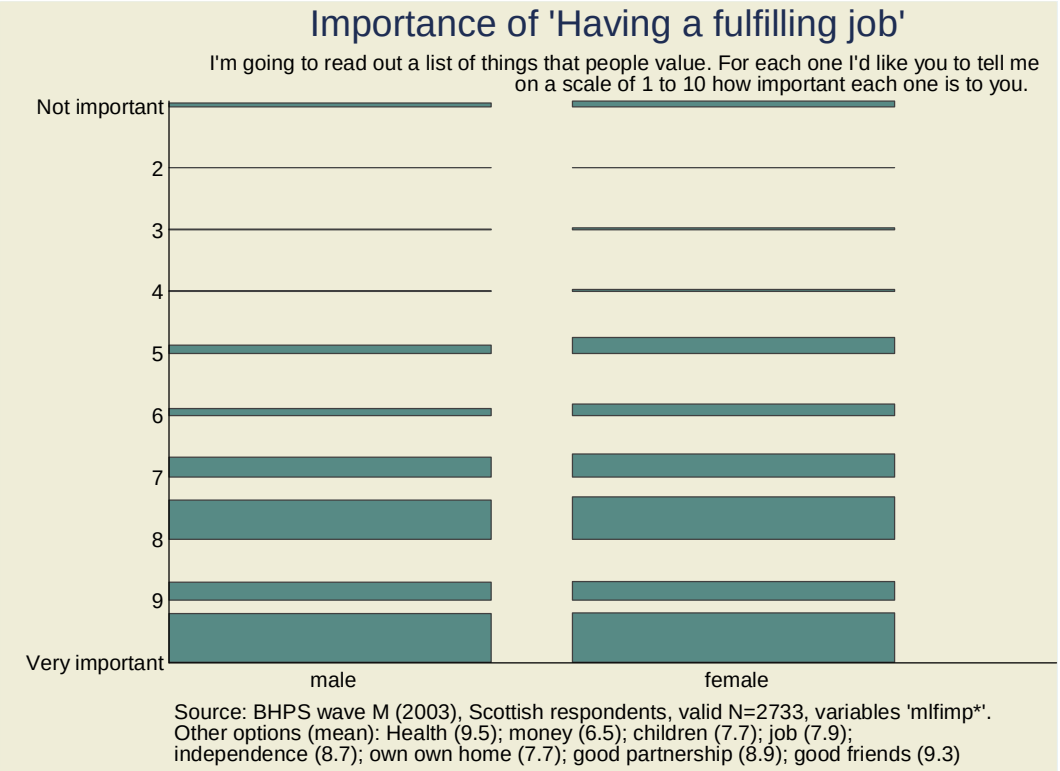


Figure 2a

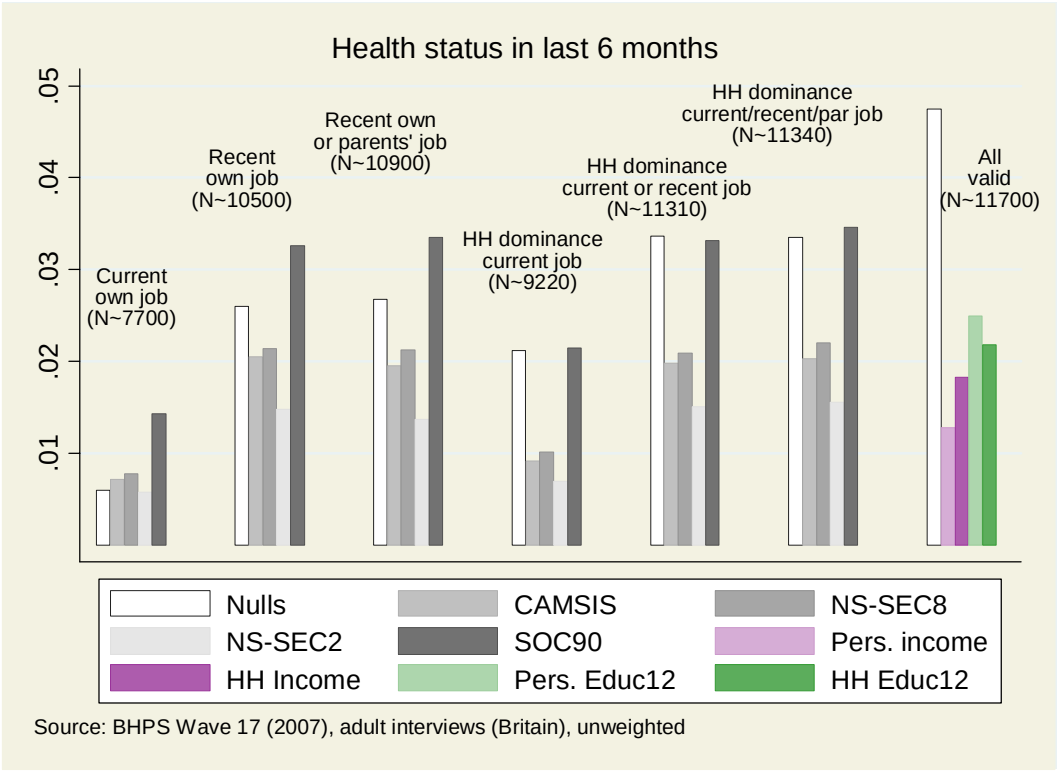


Figure 2b

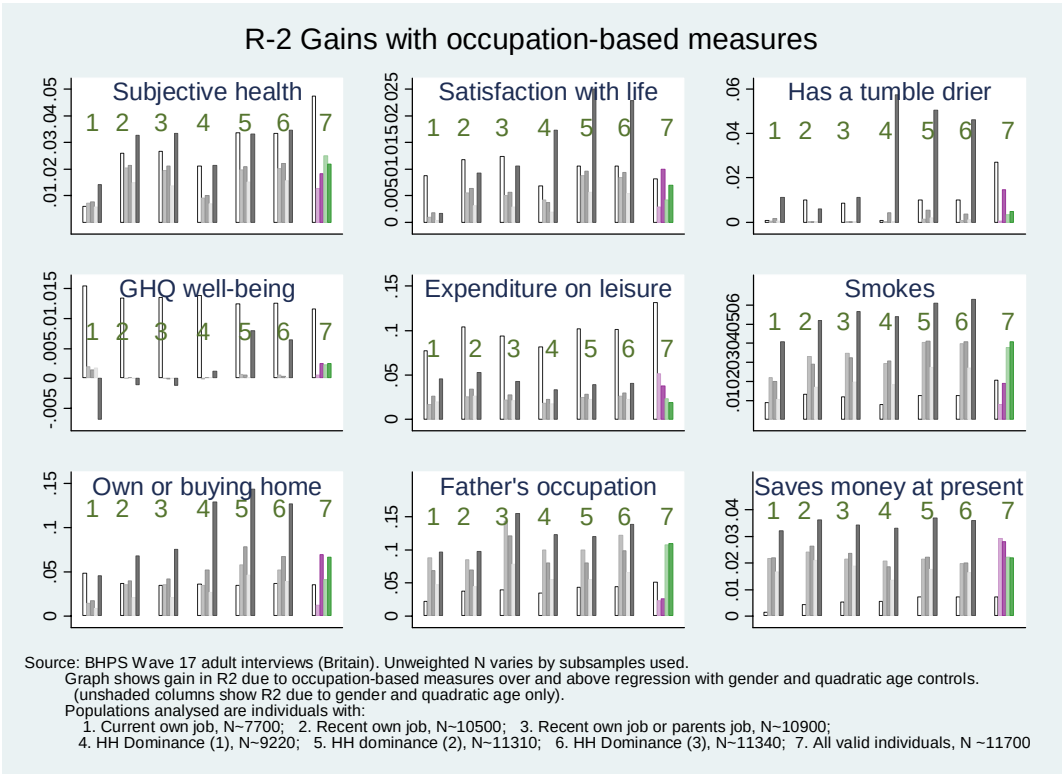
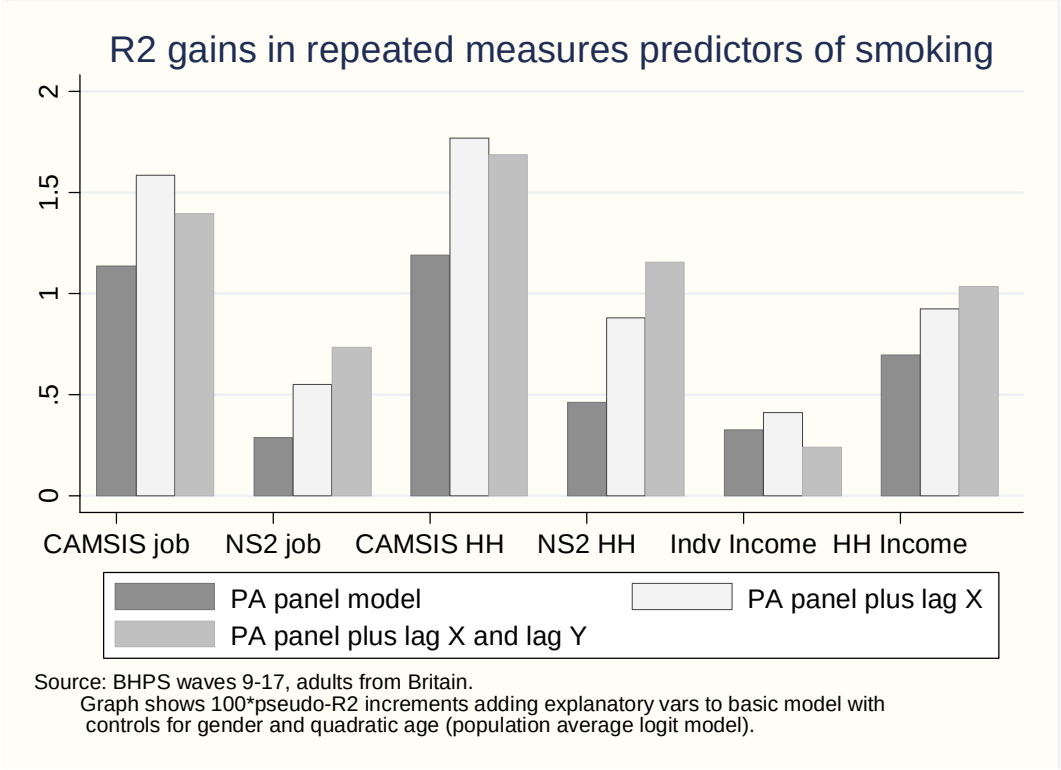
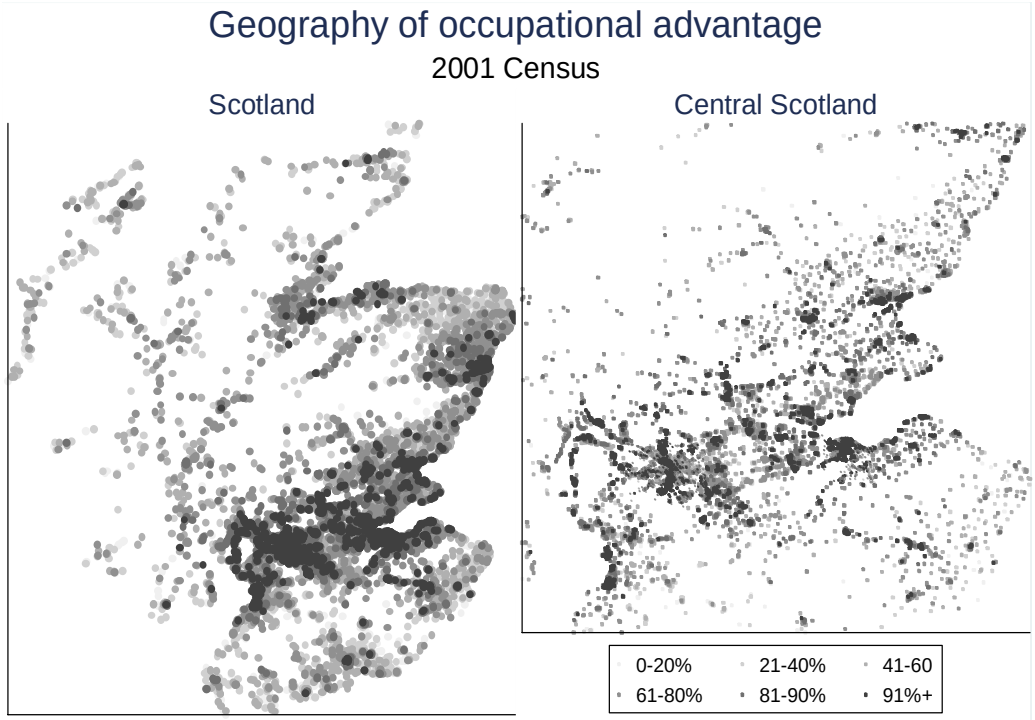


Figure 3



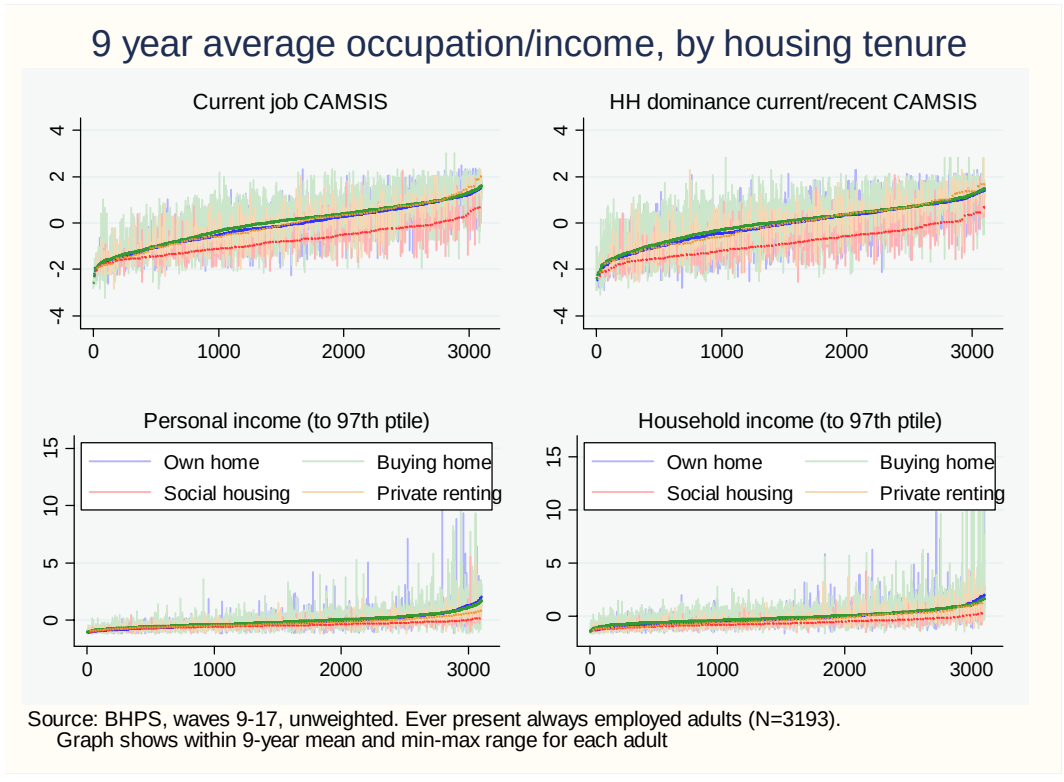
Source: BHPS waves 9-17, adults from Britain.
Graph shows 100*pseudo-R2 increments adding explanatory vars to basic model with controls for gender and quadratic age (population average logit model).

Figure 4



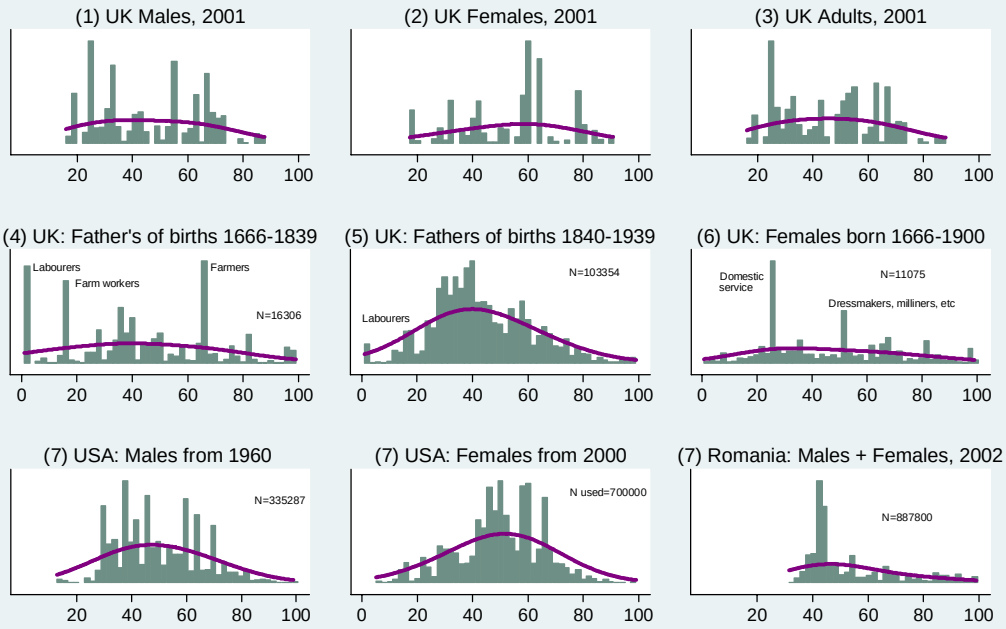
Source: CASWEB, Census 2001 Output areas.
Points show percentile mean average CAMSIS score for males in work.

Figure 5



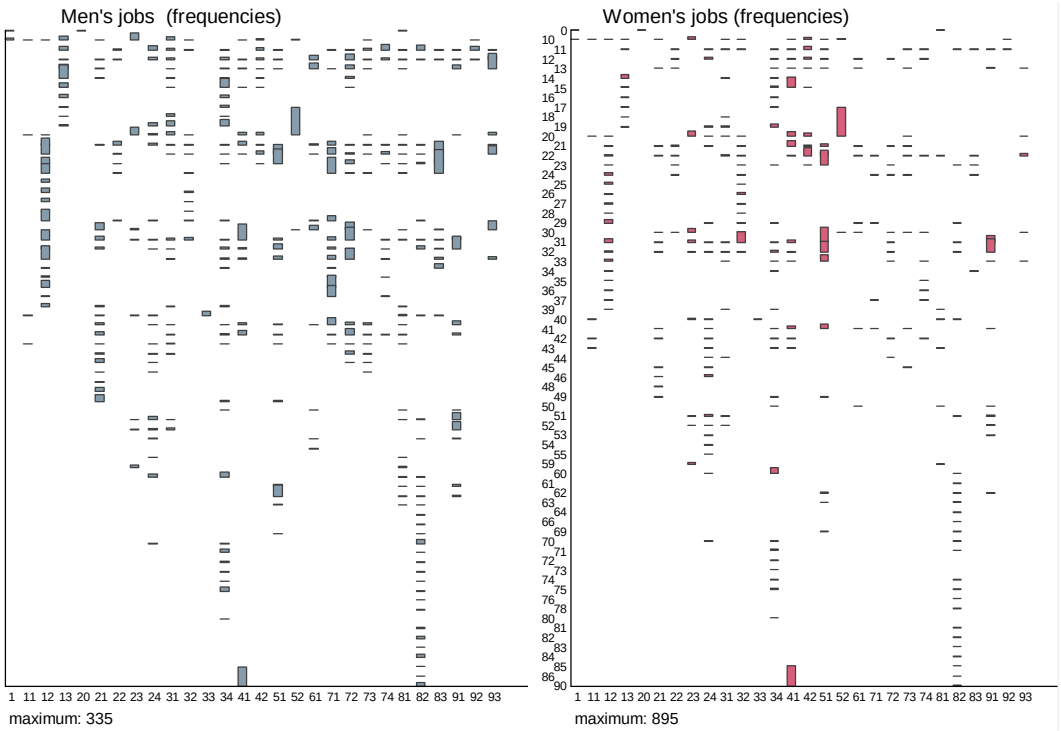
Source: BHPS, waves 9-17, unweighted. Ever present always employed adults (N=3193).
Graph shows within 9-year mean and min-max range for each adult

Figure 6



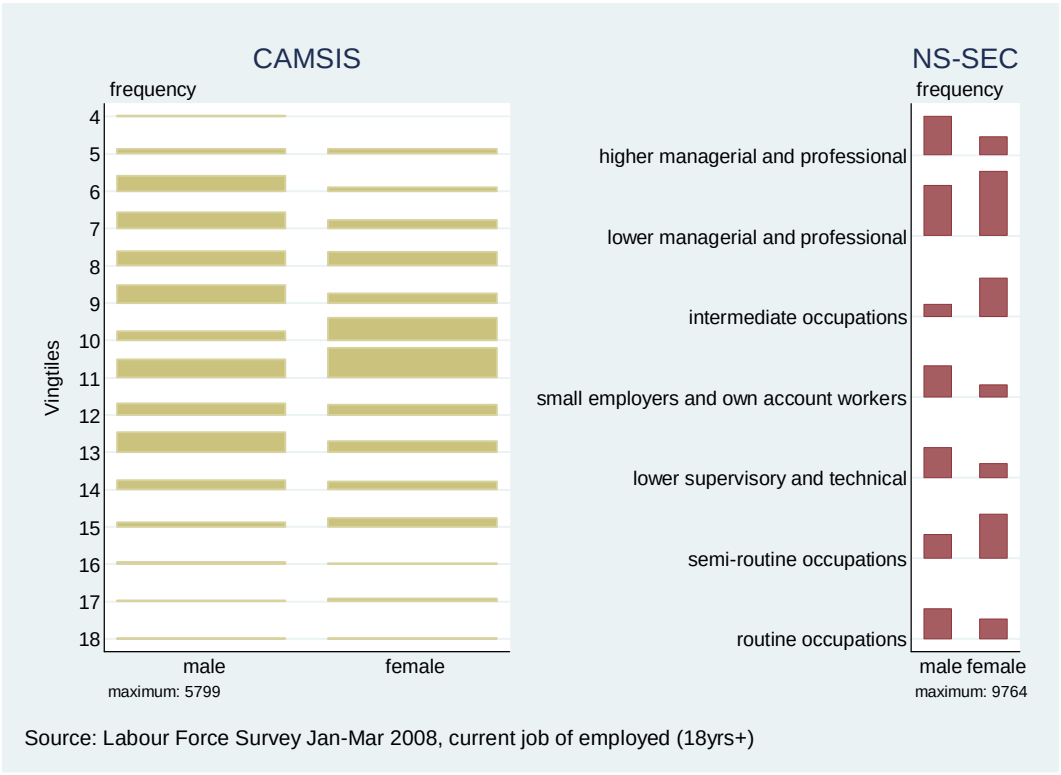
CAMSIS scales have mean 50, sd 15 for derivation population. Histogram bins=2 points. Kdensity width=15.
Source: (1),(2),(3): UK Census Samples of Annonymised Records, Individual samples, aggregated occupational minor groups;
(4),(5),(6): Family History Study (Prandy & Bottero, 1998);
(7),(8),(9): IPUMS-International (Minnesota Population Center, 2008).

Figure 7



Source: British Household Panel Survey, last reported current jobs of adults, waves 1-17, N Males = 10223; N Females=9934
X-asis shows ISCO-88 Sub-Major group of job; Y-axis shows ISCO-88 3rd and 4th digit codes.

Figure 8



Source: Labour Force Survey Jan-Mar 2008, current job of employed (18yrs+)

Figure 9a

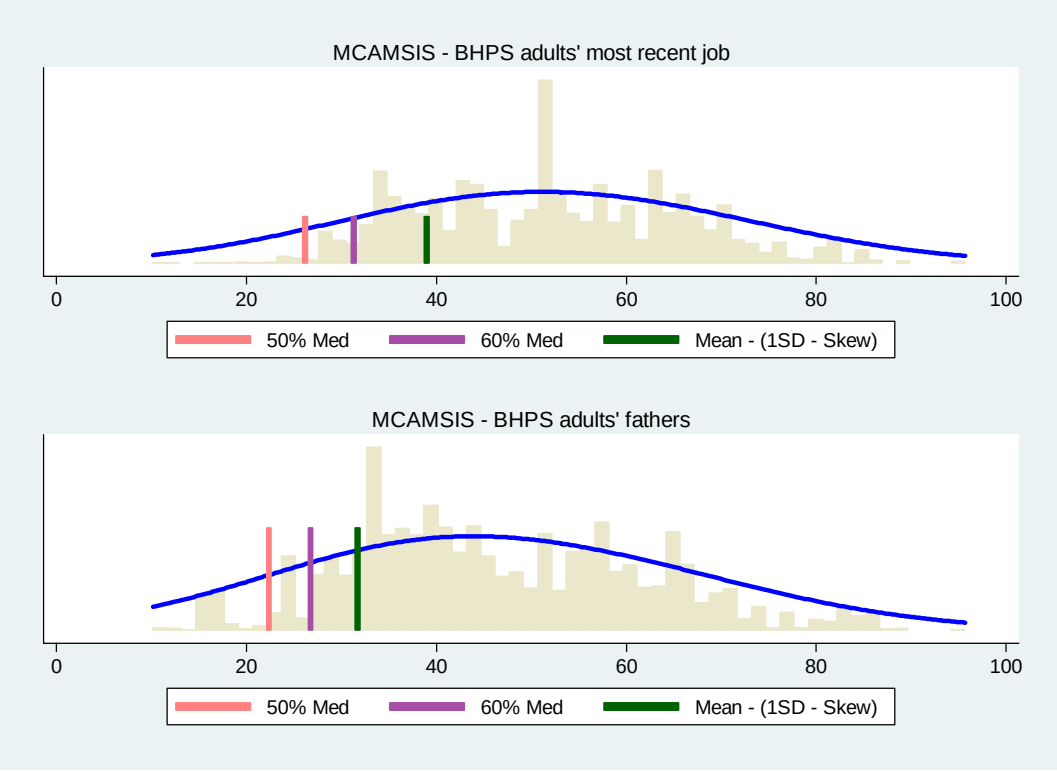


Figure 9b

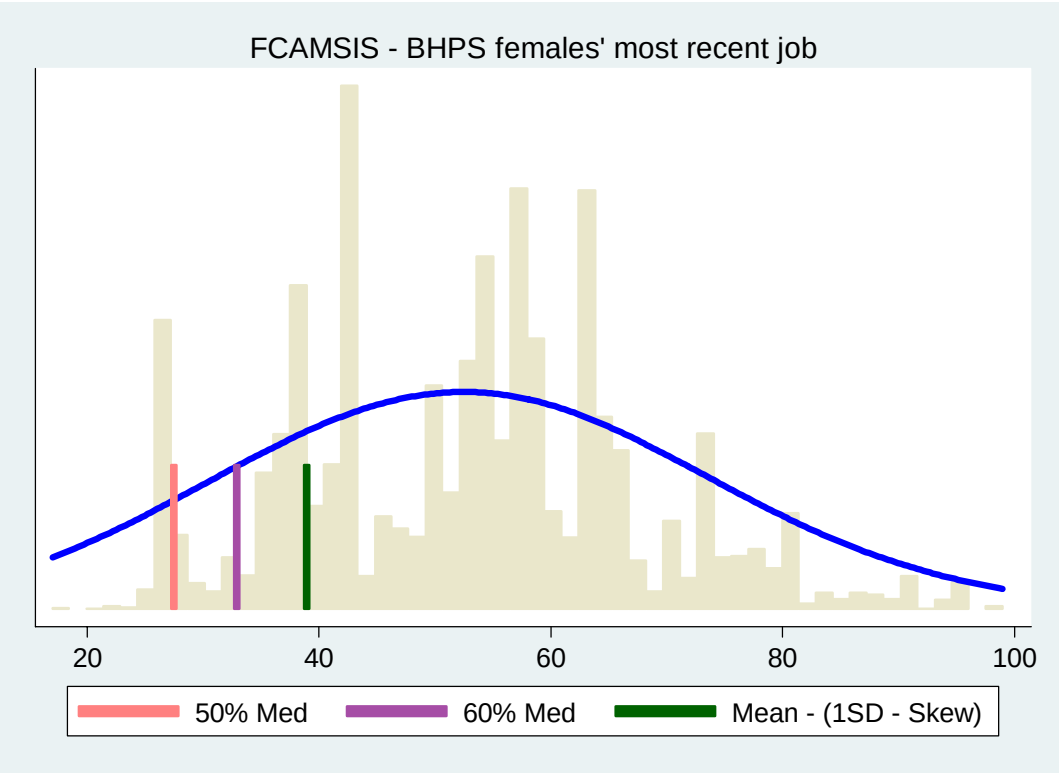


Figure 10a
All jobs (M + F), CAMSIS threshold 38.51, Occupational Unit groups with >90 in BHPS (most recent job of individual, any BHPS wave)

occupation (soc): current main job	mean(mcam)	N(mcam)
401. Local government clerical officers	38	96
440. Stores despatch production control	35.4	142
441. Storekeepers, warehousemen/women	36.5	1,259
500. Bricklayers, masons fixer	34.3	417
501. Roofers, slaters, tilers, sheeters,	32.3	234
507. Painters and decorators	31.3	206
509. Other construction trades n.e.c. bu	34.7	99
537. Welding trades	32.7	357
553. Sewing machinists, menders, darners	31.2	338
554. Coach trimmers, upholsterers and ma	36.8	104
555. Shoe repairers, leather cutters and	37.9	91
569. Other printing and related trades n	38.1	178
570. Carpenters and joiners	37.9	524
581. Butchers, meat cutters	33.6	195
590. Glass product and ceramics makers	29.6	118
594. Gardeners, groundsmen/women	33.4	287
596. Coach painters, other spray painter	34.4	90
615. Security guards and related occupat	38.1	468
622. Bar staff	36.1	928
721. Retail cash desk and check-out oper	35	1,034
722. Petrol pump forecourt attendants	37.3	99
800. Bakery confectionery process hand f	30.7	116
809. Other food, drink and tobacco proce	28.3	363
820. Chemical, gas and petroleum process	36.3	233
825. Plastic process operatives, moulder	28.5	147
839. Other metal making treating process	28.2	97
840. Machine tool operatives (inc. CNC m	36.5	162
850. Assemblers/lineworkers (electrical/	36.1	428
851. Assemblers/lineworkers vehicles met	36.3	209
859. Other assemblers/lineworkers poppy	19.6	98
862. Packers, bottlers, canners, fillers	29.2	857
872. Drivers of road goods vehicles	33.1	1,788
873. Bus and coach drivers	34.5	444
882. Rail drivers railways second	36.5	101
887. Fork lift and mechanical truck driv	28.9	267
896. Construction and related operatives	35.7	108
899. Other plant and machine operatives	35.1	581
900. Farm workers livestock hand	30.8	280
902. All other occupations in farming an	34.4	139
929. Other building and civil engineerin	28.1	250
931. Goods porters	32.5	125
952. Kitchen porters, hands	37.9	373
954. Shelf fillers	34.4	416
958. Cleaners, domestics	34.5	2,575
990. All other labourers and related wor	28	162

Figure 10b
Female jobs, CAMSIS threshold 38.45, Occupational Unit groups with >50 in women in BHPS (most recent job of individual, any BHPS wave)

occupation (soc): current main job	mean(fcam)	N(fcam)
441. Storekeepers, warehousemen/women	35.6	260
553. Sewing machinists, menders, darners	27.2	354
555. Shoe repairers, leather cutters and	30.3	61
569. Other printing and related trades n	34	89
591. Glass product and ceramics finisher	30.9	55
599. Other craft and related occupations	29.4	44
619. Other security protective service o	30.2	69
620. Chefs, cooks hotel supervisor	37.2	139
622. Bar staff	36.4	654
641. Hospital ward assistants	32.1	16
644. Care assistants and attendants old	36.7	1,758
671. Housekeepers (non-domestic)	33.7	142
672. Caretakers school	27	100
673. Launderers, dry cleaners, pressers	26.3	114
722. Petrol pump forecourt attendants	38	64
800. Bakery confectionery process hand f	28	74
809. Other food, drink and tobacco proce	27.3	139
825. Plastic process operatives, moulder	29.4	74
850. Assemblers/lineworkers (electrical/	32	217
851. Assemblers/lineworkers vehicles met	28.4	64
859. Other assemblers/lineworkers poppy	29.6	64
861. Inspectors viewers testers examiner	32.1	98
862. Packers, bottlers, canners, fillers	28.9	576
899. Other plant and machine operatives	28.3	86
900. Farm workers livestock hand	35.3	104
940. Postal workers, mail sorters	38.1	91
941. Messengers, couriers	36.9	78
952. Kitchen porters, hands	33.9	410
953. Counterhands, catering assistants h	35.3	813
954. Shelf fillers	37.9	205
958. Cleaners, domestics	26.9	2,374

Figure 11
BHPS adults (2007): Data of birth of respondents (first panel) and distribution of population who are not successfully assigned to an occupational position according to the seven measures of occupations [data corresponds to distributions in Table 1]

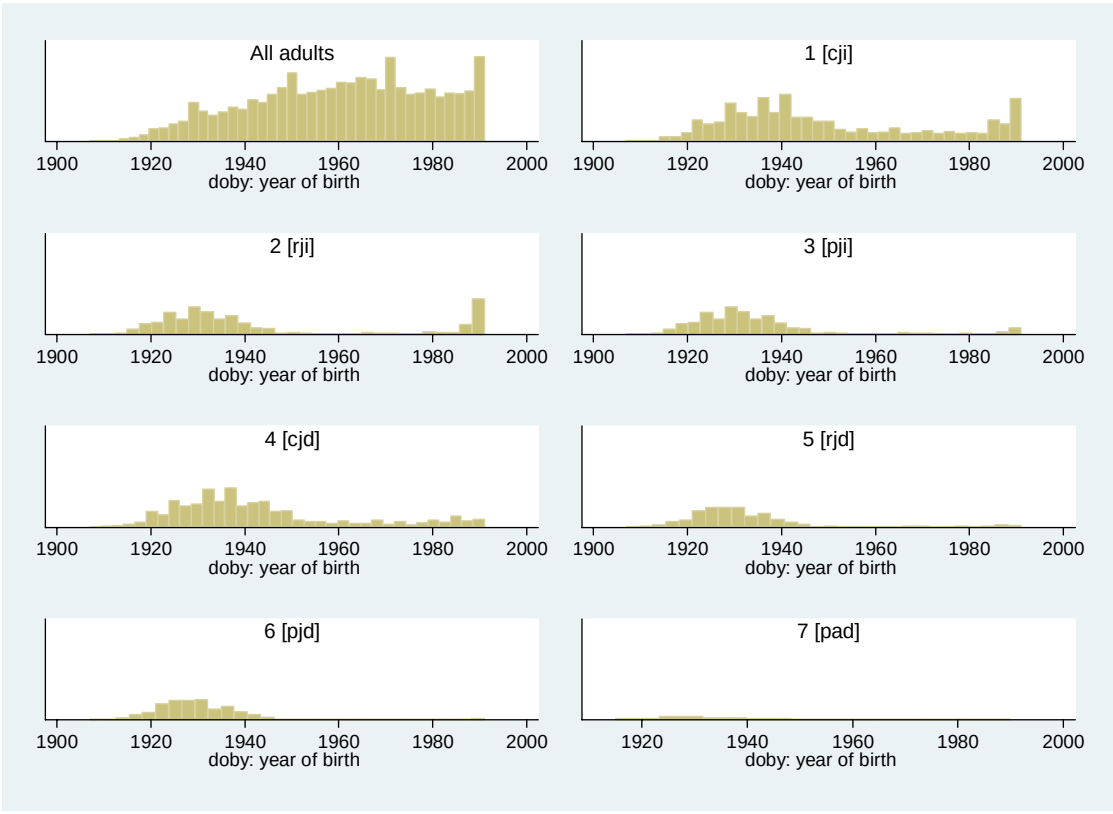
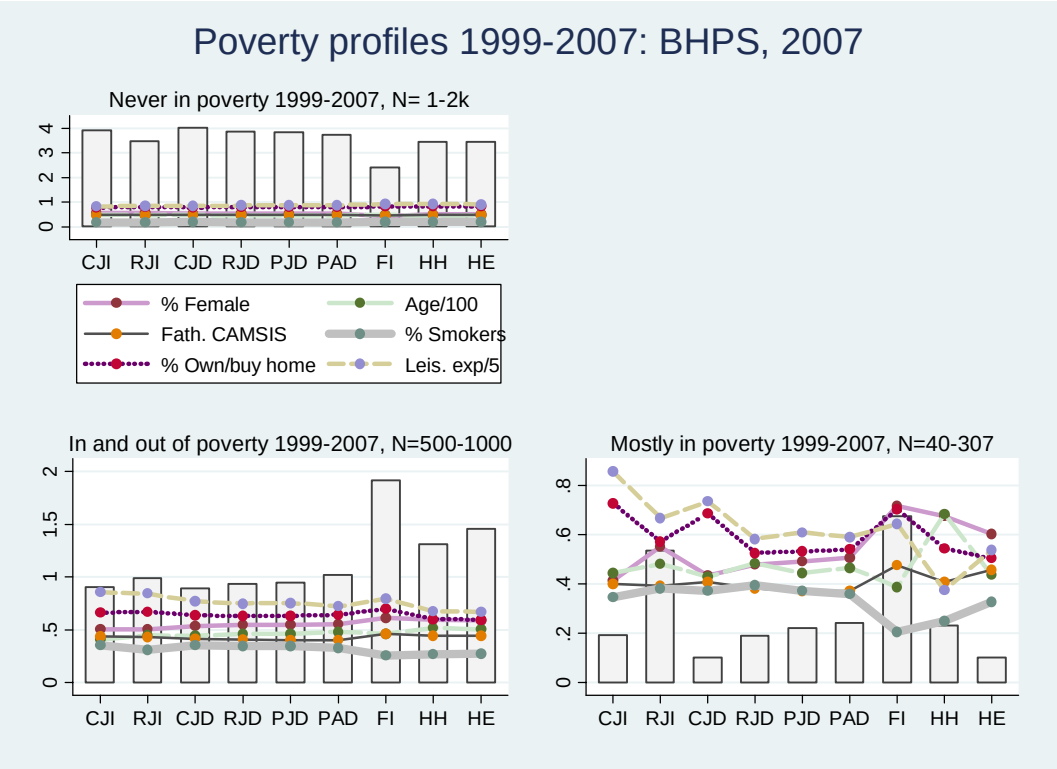


Figure 12


Poverty profiles 1999-2007: BHPS, 2007
Never in poverty 1999-2007, N= 1-2k
0 1 2 3 4
CJI RJI CJD RJD PJD PAD FI HH HE
% Female
Age/100
Fath. CAMSIS
% Smokers
% Own/buy home
Leis. exp/5
In and out of poverty 1999-2007, N=500-1000
0 .5 1 1.5 2
CJI RJI CJD RJD PJD PAD FI HH HE
Mostly in poverty 1999-2007, N=40-307
0 .2 .4 .6 .8
CJI RJI CJD RJD PJD PAD FI HH HE

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Endnotes

[i] Quote as reproduced by Coxon and Jones (1978: 10).
[ii] A few contemporary sociological texts do reject the centrality of occupations, and argue for a new era characterised by the lessening significance of traditional structural forces in influencing individual lives (e.g. Beck, 2000; Pakulski & Waters, 1996). Such texts, however, lack empirical credibility (cf. Goldthorpe, 2002).
[iii] The figure shows what are effectively partial correlations. The first column shows the model explanation, measured by an r2 statistic, associated with a null model including only gender and quadratic age as predictors of the outcome. Subsequent columns indicate the increase in r2 obtained by adding the relevant measure of occupational position, or income or educational attainment.
[iv] The 371 different occupational unit groups are represented, on average, by around 20 individuals, but there are many occupational unit groups with fewer adults representing them in the survey.
[v] Most of our panel data analyses use BHPS waves 9-17. We begin with wave 9 since this is the first year in which large volumes of cases from Scotland and Wales were added to the BHPS sample in those nations' boost samples. We anticipate that the descriptive results we present should not be dramatically altered with an altered if an alternative selection of panel years were specified.
[vi] The same argument could be made about educational qualifications. Systems of educational credentialisation themselves serve to reproduce and define structures of social inequality (e.g. Bills, 2004). However, substantial variation across birth cohorts in the prevalence of educational qualifications make such measures problematic as indicators of relative stratification advantage (e.g. Shavit, Arum, & Gamoran, 2007). Moreover, the relative influence of formal educational qualifications varies across segments of the labour market (Tahlin, 2007), to the extent that opportunities in certain sizeable sectors of the economy may be largely uninfluenced by variations in routinely documented educational credentials. For these two reasons, we consider that occupational details tend to be more revealing indicators of individual social circumstances.
[vii] It is pertinent to note that the BHPS is now one of only a few large scale social surveys in the UK where detailed occupational data is routinely made available to all secondary analysts. Unlike the situation in most other nations, such detail has recently been withdrawn from the general release versions of several other major UK social surveys on the grounds of spurious administrative motivations.
[viii] For simplicity this analysis excludes the BHPS's Northern Irish boost sample, for whom occupational data was collected to the UK's Standard Occuaptional Classification 2000 scheme (ONS, 2000) rather than SOC90. The two schemes have certain small incompatibilities which are reasonably easy to address – see for instance coding resources supplied at www.geode.stir.ac.uk which can serve to compare the schemes.
[ix] It should be noted that the occupations themselves are subdivided by employment status in a manner not illustrated in the figures – thus some occupations shown may have some units classified as poor with a disadvantaged employment status (such as 'employee'); other units, with a more advantaged employment status (such as 'employer') may not share the same threshold position.
[x] In our opinion, this non-classified population are the result of measurement error. We believe that they will at some stage have had jobs within their own careers, or will have shared a household with individuals who have had jobs, but we have simply not been able to identify those jobs from our own use of the BHPS data,
[xi] These definitions are contingent upon the definition of households. The BHPS uses the standard UK government definition of households, namely all individuals living at the same address in the long term and sharing common facilities such as use of a living room or sharing meals (Taylor, Brice, Buck, & Prentice-Lane, 2009). This definition however may not represent the optimum means of identifying people who genuinely share their economic circumstances of advantage or disadvantage. For the BHPS dataset, we have in other papers proposed several alternative 'person group' identifiers which are readily derived and may be used to define alternative units of analysis and, consequently, poverty thresholds according to those units (P.S. Lambert, 2001; P.S. Lambert & Gayle, 2008). Nevertheless, the impact of using alternative definitions is not usually substantial (P.S. Lambert & Gayle, 2008), and

in this analysis we retain the standard definition, which also has a convenient level of international comparability (Hoffmeyer-Zlotnik & Warner, 2008; Mejer 2003).

[xii] 'Effect proportional scaling' involves representing categories according to their positions in a dimension of difference calculated according to some other measure. It can be a suitable means to estimate effects involves categorical measures with many unordered categories and sparse distributions within categories (Treiman, 2009: 257-8). See Lambert (2005) for further discussion of this approach in the context of measuring ethnicity.