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Reflections on the meritocracy debate in Britain: a response to Richard Breen and John Goldthorpe[1]

ABSTRACT

A paper by Breen and Goldthorpe recently claimed to have exposed 'fatal flaws' in my work on meritocracy in Britain. This paper responds to their criticisms. The results of their re-analysis of the NCDS data set are shown to be consistent with my earlier findings and arguments. Furthermore, re-running some of my earlier models using measures that they favour and a method designed to privilege their position, the results once again demonstrate that, while class origins have some effect on class destinations (in particular, for those born into the middle class), ability and effort exert a much greater effect. Based on these results, the paper identifies three core propositions about meritocracy in Britain on which all parties to this debate should now be able to agree.

KEYWORDS: Social mobility; meritocracy; ability; social class; British society

In a series of publications, I have presented arguments and evidence to support the claim that recruitment into 'social classes' in Britain takes place to a large extent on the basis of individuals' ability and hard work (Saunders 1995, 1996, 1997; Bond and Saunders 1999).

This claim directly challenges what I have called the 'SAD' thesis – the common assumption in British sociology that the statistical association between people's class origins and their class destinations is a product of the *social advantages and disadvantages* accruing from their initial class backgrounds. While recognizing that patterns of class advantage and disadvantage do play some part in shaping people's destinies, I have argued that people's own individual characteristics – in particular, their cognitive ability and their motivation and determination to succeed – are generally much more important in influencing where they end up in life. This argument is broadly consistent with a 'meritocracy' hypothesis in which occupational achievement mainly reflects '*ability plus effort*'.

My suggestion that ability and effort generally count for more than class background in explaining why people end up in the jobs that they do has provoked strong criticism from sociologists concerned to defend the SAD thesis (e.g. Marshall and Swift 1996; Savage and Egerton 1997), but in this paper I respond in particular to the work of Breen and Goldthorpe (1999, 2001), for theirs is the most combative among the papers claiming to have discredited my arguments.

Breen and Goldthorpe claim that I am not only wrong in what I have been saying, but that I am incompetent and ill-informed.[2] In refuting these criticisms, I shall show that my original argument still stands even when the data are re-analysed to take account of Breen and Goldthorpe's methodological objections, and I shall attempt to bring this debate to a productive resolution by identifying three key core propositions on which all parties should be able to find common agreement.

1. MERITOCRACY IS A PLAUSIBLE EXPLANATION FOR THE INTER-GENERATIONAL TRANSMISSION OF CLASS POSITIONS

My debate with John Goldthorpe began with a paper (Saunders 1995) in which I showed that the patterns of association between class origins and destinations which he reported in his 1972 study of male social mobility rates were *consistent* with the pattern which would be expected if occupational placement were based solely on individual ability.

Goldthorpe had found that working-class children were less likely than middle-class children to achieve middle-class jobs, and that middle-class children were less likely than working-class children to end up in working-class jobs. Multiplying these two sets of probabilities together to produce a single measure of fluidity (an odds ratio), Goldthorpe reported odds as high as 36:1 against those born into Class I (the upper 'service class' on his schema) ending up in Class VII (semi- and unskilled manual workers) at the same time as those born into Class VII rise all the way to Class I. He then asserted that odds of this magnitude could not be explained by differences in people's abilities, but must rather be 'presumed' to derive from 'inequalities of opportunity that are rooted in the class structure' (1987: 328). In a situation of genuine equality of opportunity, where positions are allocated purely on the basis of talent and effort, he thought the odds ratio would be 1:1, not 36:1.

In my 1995 paper, I showed that this presumption is false. Even in a genuine meritocracy we should not expect to find odds ratios approaching unity. Indeed, I showed that odds of the magnitude reported by Goldthorpe were close to those we should *expect* to find in a genuine meritocracy where the most able children rise to the top positions and the least able gravitate to the bottom, irrespective of the class backgrounds from which they come. The reason for this is that able parents (who in a meritocracy will be recruited into top positions) will be more likely to produce

relatively able children (because of the genetic and environmental advantages that they can pass on), and these children will often therefore emulate the achievements of their parents.

Nobody has ever queried the calculations on which I based this argument. We may therefore assume that all parties to this debate now accept that the existence of a meritocracy does not require (as Goldthorpe had previously suggested) that there be no association between class of origin and class of destination, and that the SAD thesis cannot be 'presumed' to be true simply because class origins and destinations are found to co-vary. This represents a major departure from the conventional assumptions of most sociological work on stratification and social mobility down the years, for it means it is no longer acceptable to 'presume' support for the SAD thesis from mere correlations in mobility tables:

> *Proposition I: Evidence of inter-generational transmission of class identities does not of itself demonstrate that meritocratic selection is failing to occur, nor that class advantages and disadvantages are necessarily influencing individual outcomes.*

2. THE MAIN DEPARTURE FROM GENUINE MERITOCRACY CONCERNS THE ABILITY OF THE MIDDLE CLASSES TO DEFEND THEIR LESS ABLE OFFSPRING

Although my analysis of Goldthorpe's findings showed that his data were broadly consistent with what would be predicted in a meritocratic society, there was one area where greater movement between classes should have been expected had recruitment been based on ability alone. This concerned downward mobility from the service class to the working class. I wrote at the time, 'The extent of downward mobility from the service class into the working class . . . is about 25% less than would be predicted' (1995: 36–7). Given that the rate of working-class upward mobility into the service class was more-or-less as predicted in the meritocracy model, I concluded that the main 'blockage' in social mobility has less to do with talented lower-class individuals failing to move up the system than with less talented higher-class individuals failing to move down it.

This conclusion was borne out in my later work, where I drew on data from the National Child Development Study (NCDS) to provide evidence on the relative strength of the SAD and meritocracy theses. I found that relatively low rates of downward mobility are the major source of non-meritocratic selection in the British occupational class system: 'The barriers against bright working class children succeeding are quite low, but . . . the safeguards against failure enjoyed by dull middle class children are still quite strong' (Saunders 1997: 269). And in a later paper with Rod Bond, we demonstrated that, while ability is the single key factor driving achievement (it accounted for half of the explained variance in occupational outcomes at age 33), less able middle-class children still sometimes manage to avoid downward mobility as a result of factors like private schooling and higher levels of parental support and encouragement.

I have throughout my work repeatedly drawn attention to this principal weakness in the meritocracy thesis: namely, the 'stickiness' of middle-class downward mobility rates. Breen and Goldthorpe are clearly mistaken therefore when they accuse me of ignoring downward mobility and thereby of producing 'misleading' results.[3]

> *Proposition II: The* main *factor preventing a true meritocracy from operating in Britain is not the failure of bright working-class children to rise in the occupational class system, but is the ability of middle-class parents to reduce the chances that their less talented children will fall.*

Again, this is a crucial insight, and it is one that was often overlooked in the past when so much attention was focused on the apparent problem of the 'wastage of working-class talent'. Of course, some bright and hard-working children from lower-class origins still do not achieve as high a position as they 'should', but the main 'problem' with meritocracy today appears to be the continuing success of the 'undeserving' children of the middle classes.[4]

This has important policy, as well as academic, implications, for it means that the most effective way of increasing meritocracy in Britain would be to adopt policies designed to force more middle-class children to fail. As most participants at a recent government seminar recognized, however, there are many good sociological and political reasons for drawing back from such a 'strong' form of meritocratic policy (Aldridge 2001), particularly at a time when the size of the middle class is expanding while that of the working class is shrinking. Perhaps, therefore, we should not worry too much about middle-class over-achievers and should concentrate instead on maintaining and improving the opportunities for talented lower-class children to succeed.[5]

APPROPRIATE MEASURES AND METHODS

My analysis of the NCDS data found that ability and motivation are the single most important factors influencing where people end up at age 33. Class background also plays a part, but it is a relatively small one. Breen and Goldthorpe attack these findings by developing five criticisms of the methodology which generated them.

(a) Measuring Ability and Motivation

In my early work analysing the NCDS data (Saunders 1996, 1997), I measured *ability* using the same variable that Breen and Goldthorpe use in their subsequent re-analysis (variable N920). This records the scores achieved by respondents on an 80 item test taken at age 11. Also, like Breen and Goldthorpe, I measured *motivation* using variable N1760 which is based on answers at age 16 to a series of attitude questions about school. Unlike

them, however, I also derived two further measures of motivation: 'absenteeism' (a behavioural factor based on school truancy and attendance records), and 'work attitudes' (based on responses to three questions about work asked when respondents were aged 33).

In my later paper with Bond we constructed more complex latent measures of both ability and motivation. *Ability* was measured at three different ages using arithmetic test scores, reading comprehension test scores and teacher ratings as well as the results of the general ability test at age 11, and *motivation* at age 16 was measured by a single factor created from the weighted loadings of teacher ratings, truancy data and trivial absenteeism data, as well as scores on the Academic Motivation Scale.

Breen and Goldthorpe are highly critical of all of this. As regards my earlier work, they attack my use of absenteeism data on the grounds that trivial absences do not indicate disenchantment with schooling, and they criticize my use of work attitudes at age 33 on the grounds that these do not predate people's occupational attainment and cannot therefore be included as possible causal influences upon it.

This latter argument is valid, for the attitudes about work which respondents expressed at age 33 may not have been present when they were younger. This variable can therefore be dropped from the analysis. To appease Breen and Goldthorpe, we can also drop the absenteeism factor (even though truancy is a plausible behavioural indicator of low motivation at school). But the key point to remember about both of these measures is that they were used in my analysis *in addition to* the Academic Motivation Scale scores which Breen and Goldthorpe favour. It is difficult to see how including these additional measures can be said to have 'biased' my results.[6]

As for their criticism of the more complex measures of ability and motivation developed in my later work with Bond, Breen and Goldthorpe seem to be suggesting that our attempt to create more robust and reliable measures by using several different indicators is 'inappropriate' (1999: 21), and that an approach which uses only one measure of ability (the general test result at age 11) and only one measure of motivation (the attitude score at age 16) is to be preferred as somehow more valid and reliable. This is a strange argument, for use of multiple indicators is a standard procedure for minimizing measurement error. However, in the interests of finding common ground, I shall revert in my re-analysis to use of the simpler measures that they prefer. We shall see that it makes little difference to the final result.

(b) Measurement of Class

Throughout my work, I have used the Registrar General class schema rather than Goldthorpe's to analyse parental occupations. Breen and Goldthorpe insist that I should have used Goldthorpe's schema, and that my failure to do so renders my analysis less 'refined' than theirs.

Perhaps – but it is doubtful whether this had much of an effect on my results. The collapsed three-category version of the Registrar General schema that I used (classes I/II, IIIn/IIIm, and IV/V) correlates highly with the Goldthorpe schema when it is collapsed to the corresponding three categories of 'service' (I/II), 'intermediate/skilled manual' (III/IV/V/VI) and semi- and unskilled 'working' (VII) classes. Analysing their occupations in 1974 (when the NCDS children were aged 16), 84 per cent of the fathers in Goldthorpe's service class were coded to Registrar General classes I/II in my analysis; 78 per cent of those in Goldthorpe's intermediate and skilled manual classes were coded to Registrar General class IIIn/IIIm in my analysis; and 98 per cent of those in Goldthorpe's bottom class were coded to Registrar General class IV/V in my analysis. Treating both schema as ordinal scales produces a correlation between them (Spearman's Rho) of 0.782 (p <0.001). It is doubtful, therefore, whether my results were materially affected by my choice of the Registrar General over John Goldthorpe.

Breen and Goldthorpe also criticize me for using this three-level class schema as a single interval variable rather than as a series dummy variables, and they suggest that this has 'blunted' the potential explanatory power of 'class' in my various models. In my paper with Bond we measured class as a single interval scale variable so as to simplify the model, but I concede that this could have reduced the explanatory power of the class measure, and to check for this, we can re-run the regression using dummies.[7] In the end, we shall see that neither this, nor the substitution of Goldthorpe for Registrar General categories, will make much difference to our final results.

(c) Identifying the Social Class of Those Without Jobs

Breen and Goldthorpe suggest that my approach was overly 'restricted' as a result of my decision to exclude from the analysis all those who did not have a full-time job at age 33. They prefer to retain these people in the sample, determining their class of destination on the basis of the most recent job that they had held (a procedure which they describe as 'standard practice in social mobility research' (1999: 9)).

Standard practice or not, this decision is clearly inappropriate for present purposes, for it means comparing different people's 'class of destination' at different stages of their lives. Given the age of the NCDS panel members (just 33 in 1991), Breen and Goldthorpe will have allocated many to a 'class of destination' based on jobs they were doing in their twenties or even their teens! Taking people's jobs at age 33 as the point of comparison for mobility research is just about acceptable, for career trajectories are beginning to settle by this age (Goldthorpe himself identifies the age of 35 as the point of 'relative occupational maturity' at which we can begin to assess people's likely class destinations (1987: 69)). Allocating some people to a class of destination on the basis of jobs they are doing at 33 while others are allocated on the basis of jobs they were doing in their teens and twenties

is clearly not acceptable, however, and it will result in a considerable distortion of the social class profile of the sample. It is for this reason that I included only those in employment at age 33 in my analysis – a decision I repeat in the re-analysis.

(d) Treatment of Missing Cases

By excluding those without jobs at age 33, I ended up with just 6,795 cases in my 1997 paper, and in my work with Bond (where we focused only on males) this was further reduced to 4,298. Although they criticize me for deleting too many cases from my analysis, Breen and Goldthorpe actually end up dropping more cases from their sample than I did: in their 1999 paper, they analysed just 5,090 NCDS cases, and in their 2001 paper this falls to 3,566 – a mere 20 per cent of the original panel membership.

The reason for the small sample size in their work is that, although they include those without jobs, they delete cases where information on any single variable is missing. This strategy is feasible only when dealing with a small number of variables (in their 1999 paper, Breen and Goldthorpe analyse just five – class of origin, class of destination, ability score at 11, motivation score at 16 and level of qualification obtained). In my 1997 paper, by contrast, I analysed a total of 19 different variables, and the path model developed with Bond included 28 observed or latent variables based on an initial analysis covering no fewer than 73 different items. When we are dealing with this many variables, deletion of all cases where information is missing on any one would reduce the final sample size beyond usable limits.

Like others who have analysed this data set (e.g. Kerckhoff 1990), I therefore substituted sample mean values (differentiated in this instance by gender) in cases where data were missing. While the substitution of sample means is a common strategy in research like this, it is a somewhat crude solution to the problem, for it has the effect of compressing the total variance in each variable, thereby reducing all measures of association between them. Whether this justifies Breen and Goldthorpe's claim that mean substitution is 'likely to introduce additional biases' (1999: fn.9) is, however, another matter, for there is no reason to believe that it has reduced the strength of association between variables likely to support the SAD thesis any more than between variables which measure meritocracy. Mean substitution may have been an inelegant solution, but it was not a partial one.

(e) Modelling Techniques

My approach to evaluating the SAD and meritocracy hypotheses has been to measure the relative predictive strength of different sets of variables representing each of the two positions in the debate. The meritocracy thesis suggests that ability test scores and motivation indicators will account

for most of the explained variation in people's class destinations, while the SAD thesis would expect more of the variation to be accounted for by things like parental occupations, parental support for their children's education, material conditions in the home, the type of school attended, and so on. We can therefore evaluate the two hypotheses by measuring the relative strength of the variables associated with them.

In my 1997 paper, I did this by comparing standardized (Beta) co-efficients in least squares regression models to determine which variables were best predicting occupational outcomes at age 33. In my paper with Bond, we did it by calculating the proportion of variance explained by the total (direct and indirect) effects of all the different variables included in our final path model. In both papers, the results were clear and consistent: class background has some effect on the class destination achieved by age 33, but ability and motivation has a much bigger effect.[8]

Breen and Goldthorpe claim that it is a mistake to set up a 'variable race' in this way because some variables are more accurately measured than others. Instead, they develop a three-step approach.

First, they establish the strength of statistical association between class origins and destinations. Secondly, they measure the extent to which this association weakens when mediating variables (ability, motivation and qualifications) are introduced into the analysis. Third, they equate the association that remains with the effect of class origins. They explain their logic thus: 'If a substantial association remains, the meritocracy thesis is undermined; if the association largely disappears, the thesis is supported. In a perfect meritocracy, class of origin and class of destination would be statistically independent once merit was taken into account' (1999: 6).

This reasoning only holds, however, if two highly implausible assumptions are accepted. First, we must assume that there is no error in any of the measures (in particular, that ability and effort are *fully* and *accurately* measured by the variables included in the model). Secondly, we must assume that there are no third variables which could possibly account for the observed link between class origins and class destinations.

The first assumption can be rejected because in social science we *never* account for all the variance in a dependent variable.[9] A key reason for this is that our measures are *always* imprecise and incomplete. Breen and Goldthorpe's approach assumes that any residual variation in occupational outcomes that is not explained by variables included in their models should automatically be attributed to class origins, but much of it should actually be explained as due to measurement error.

Similarly, their second assumption should be rejected since we can *never* be sure that there are not confounding variables influencing patterns of statistical association. We cannot measure (or even be aware of) every potentially relevant influence, yet in Breen and Goldthorpe's approach, *all* residual co-variation not explained by merit is automatically attributed to class with no allowance made for possible effects from other factors not included in the model.

In my regression and path models, the contribution of each predictor variable was independently calculated, and any variance left unexplained at the end (either because of measurement error or the effect of variables not included in the analysis) was clearly identified. In Breen and Goldthorpe's approach, however, we start with the association between class of origin and class of destination, and any co-variation not explained by merit variables automatically defaults as a class effect.

Breen and Goldthorpe's approach thus sets an impossibly high hurdle for the meritocracy thesis to clear (virtually *all* the co-variation must disappear when ability and effort are entered into the model) while at the same time setting the default to favour the SAD thesis (*any* co-variation left unexplained is attributed to the influence of class origins). The better alternative is to develop a multi-stage regression model which can partial out the relative effects of the different clusters of variables while also clearly measuring the proportion of variance which remains unexplained by any of them.

5. HOW MUCH MERITOCRACY?

Let us develop a regression model as favourable as possible to Goldthorpe and his SAD thesis. We can do this by using his own social class schema, by analysing class as a series of discrete dummy variables as he demands, and by scrapping our more sophisticated measures of ability and motivation in favour of the simpler ones that Breen and Goldthorpe prefer. In addition, we can also construct our model in such a way as to give the SAD variables the maximum possible explanatory power.

In my 1997 paper I constructed my regression models in an exploratory 'stepwise' manner, allowing the sequence in which each variable was entered to be determined by the size of its association with the dependent variable. There is nothing 'wrong' with this, but it is well known that variables entered first in a multiple regression can appear stronger than they really are, for they can claim all the variance that they share with other variables which are not entered until later. In order to ensure that the SAD hypothesis gets all the help we can possibly give it, let us therefore enter the class of origin dummy variables at the first step in our model so that their potential explanatory power is maximized. Let us then enter at step two all the other variables which might point to the importance of middle-class advantages or working-class disadvantages in determining occupational outcomes. Let us handicap the two simplified merit variables as much as we can by entering them only at the third step, following which we can complete the model by entering the qualifications which people have accumulated at school and later in life. The results are presented in Table I.

There are three sets of information to consider in Table I. The first is the relative size of the Beta coefficients. We have seen that Breen and

TABLE I: *Building a regression model predicting Hope-Goldthorpe occupational scale scores at age 33*

	MODEL 1	MODEL 2	MODEL 3	MODEL 4
Class origins:				
Father class I	0.270***	0.165***	0.118***	0.081***
Father class II	0.148***	0.087***	0.055***	0.038**
Father class III	0.100***	0.066***	0.040**	0.022
Father class IV	0.180***	0.115***	0.083***	0.065***
Father class V	0.076***	0.056***	0.038**	0.028*
Father class VI	0.064***	0.051**	0.031*	0.019
Other social advantages/ disadvantages:				
Parents' education		0.148***	0.092***	0.049***
Parental contact with school		0.066***	0.024*	0.020
Parents read to child age 7		0.043***	0.030**	0.013
Overcrowding in parental home		0.054***	0.027*	0.020
Home lacked basic amenities		0.019	0.011	0.005
Pre-school education		0.011	0.011	0.009
Private education		0.035**	0.038**	0.023*
Ability plus effort:				
Ability test score, age 11			0.262***	0.157***
Motivation score, age 16			0.143***	0.076***
Qualifications:				
School exam results				0.140***
Post-school qualifications				0.260***
CUMULATIVE ADJ R^2:	0.065	0.103	0.193	0.273

Notes:

The statistics in Table I are Beta coefficients. Significance levels: * <0.05, ** <0.01, *** <0.001. N = 6795 (missing cases are replaced by mean values grouped by gender).

Father's class is measured on the Goldthorpe 7-class schema as a set of dummy variables with Class VII as comparison, and is based on father's occupation in 1974, or in 1969 if not employed in 1974. It has been derived from data on father's SEG (variables n2385 and n1175 in NCDS) following the procedure outlined in Appendix 2 of Savage et al. (1992), with the undifferentiated SEG2 classified to class IV and SEG5 to the lower service class (Class II) as recommended by Egerton and Savage (1997: 651).

Parents' education measures whether none, one or both parents stayed at school beyond the minimum leaving age and is derived from variables n194 and n537.

Parental contact with school is a 4 point scale measuring whether either parent visited the child's school at ages 7, 11 and 16, and is derived from variables n41, n849 and n2322 (it is preferred to other possible indicators of parental interest in the child's education, such as teacher evaluations, because it is behavioural and it has a relatively low number of missing cases).

Parents read to child age 7 is a 6 point scale derived from variables n179 and n180.

Overcrowding in parental home measures occupants per room at ages 7, 11 and 16 and is derived from variables n607, n1683 and n1734.

Home lacked basic amenities measures access to basic amenities in the parental home at ages 7, 11 and 16 and is derived from variables n621, n1681 and n1736.

Continued

Goldthorpe are sceptical about measuring the relative predictive power of different variables by comparing their Beta coefficients, and in this case the difficulties are exacerbated by the fact that we have forced one set of variables to enter our model first (thereby scooping up all available shared variance), and that the class variable is split into six dummies (which makes the standardized coefficients somewhat meaningless as well as making it impossible to derive an overall Beta). Nevertheless, it is still worth noting that, at step 3, ability (0.26) and motivation (0.14) far outweigh any of the other variables entered at earlier stages, and that at step 4, ability (0.16) in particular is still having a substantial effect, even after school and post-school qualifications are taken into account. All of this reinforces the findings in my 1997 paper (Tables 6 and 7) where it was reported that ability and motivation have much larger standardized coefficients than any of the SAD variables and that they continue to exert a relatively large effect even when qualifications are added to the model.

The second set of information to take from Table I relates to the significance levels. With a sample size of 6,795, it is not difficult for a variable to achieve a 'statistically significant' effect, and we should probably discount anything above 0.01, and perhaps even insist on a level of 0.001 or lower. Inspecting model 3, we see that both ability and motivation achieve significance at this highest level, as do three of the class dummies (Classes I, II and IV) and the measure of parental education. This pattern continues once qualifications are included (model 4), although the significance of Class II membership now becomes marginal.

Ability (measured by an IQ-type test at age 11) and motivation (measured very crudely at age 16 by eight questions about school) thus have a significant independent effect on people's class destinies, as do qualifications. Parents' level of education is also important, and if the father is a member of the service class (particularly the 'upper' service class), or if he is a self-employed small businessman (Class IV), then class origins also play a significant part in influencing class destinations. This is not, however, true of any other class background, and this reinforces my earlier argument that class origins have their main effect through the ability of middle-class parents to prevent their children from sliding downwards. Knowing

whether or not somebody has working-class origins simply does not help us predict where they end up at age 33.

The third, and most important, information to be taken from Table I concerns the change in the adjusted R^2 as we move from Model 1 to Model 4. We see from this that class origins, defined and measured as Goldthorpe wants them to be, explain at most just 7 per cent of the variance in occupational destinies at age 33. Adding other measures of socially advantaged or disadvantaged backgrounds raises this to 10 per cent. When we then add the ability test scores at age 11 and a crude scale measuring motivation at school, the total proportion of variance explained almost doubles, to 19 per cent, and when qualifications are added, we can raise this again, to 27 per cent.[10] Class origins thus account *at most* for a quarter of the explained variance in class destinations, while ability and motivation account for *at least* one-third, and ability, motivation and qualifications together account for *at least* 62 per cent of it.

As Table II demonstrates, these findings are broadly consistent with those reported in my earlier work, and they also appear to be in line with Breen and Goldthorpe's own results. In all cases, we see that class origins

TABLE II: *Estimates of relative strength of SAD and meritocracy variables*

	(1) Regression model (class effect maximized)	(2) Regression model (merit effect maximized)	(3) Path model	(4) Breen and Goldthorpe model
	% of total explained variance	% of total explained variance	% of total explained variance	% reduction in odds ratios
Class origin	24	4	9	Not estimated
Other SAD factors	14	1	11	Not estimated
Ability and effort	33	57	63	*Men*: 46 *Women*: 61
Qualifications	29	37	17	*Men*: 33 *Women*: 48

Notes:

Model 1 is based on change in R^2 statistics in Table I above (total variance explained = 27%).

Model 2 is based on change in R^2 in a regression model using the same variables but where ability and motivation are entered first, exam results and post-school qualifications are entered second, father's class is entered third (as six dummy variables) and the remaining variables are entered last.

Model 3 (the path model) is based on Table 4 in Bond and Saunders (1999) (total variance explained = 35%).

The Breen and Goldthorpe findings (model 4) are based on their 1999 paper. Percentage reductions in odds ratios calculated on reductions from 20.7 to 11.1 to 7.4 for men, and from 16.3 to 6.3 to 3.3 for women.

count for something (mainly because of the ability of middle-class parents to shelter their less intelligent offspring), but ability and motivation count for much more.

Breen and Goldthorpe found, when ability and motivation measures were taken into account, that odds ratios comparing Class I and Class VII origins and destinations fell from 20.7 to 11.1 for men (a drop of 46 per cent), and from 16.3 to 6.3 for women (a drop of 61 per cent). When qualifications (measured in a single variable) were also added, odds ratios fell further still (Breen and Goldthorpe do not report the figures, but from their data I calculate them to be just 7.4 for men and 3.3 for women – representing additional falls of 33 and 48 per cent respectively).[11]

Surveying their findings, Breen and Goldthorpe seek to assure us that 'inequality is far from eliminated when "merit" variables are brought into the analysis' (1999: 17), and that 'there is a far from negligible part of the association between class origins and class position as at age 33 that is not attributable to merit in terms of ability, effort or educational attainment' (1999: 18). Two points, however, stand out.

First, the reductions that they report in their odds ratios point to the same sort of conclusion as that derived from the proportion of variance explained by these same merit variables in my regression models (columns 1 and 2 in Table II), and in the path model reported in my paper with Bond (column 3). From Table II, we can conclude that ability and motivation account for at least one-third (and possibly more than half) of the explained variance in class destinations, and that when qualifications are added,[12] the proportion of variance explained increases to as much as two-thirds.

Secondly, class origins explain only a small proportion of what is left over. Breen and Goldthorpe's models do not directly measure the effect of class origins on class destinations, but much of the unexplained co-variation that remains between them after 'merit' has been taken into account is undoubtedly due to measurement error and the effect of other variables not included in the model rather than to the influence of class. Our regression modelling indicates that, when we do measure the 'class origin effect' directly, it is actually quite small.

Drawing all this together, it is clear from Breen and Goldthorpe's work as well as my own that 'merit' substantially outweighs the social advantages and disadvantages associated with class origins in influencing class destinations. This then gives us our third and final proposition:

Proposition III: Class origins play some part in influencing class destinations (mainly as a result of middle-class parents protecting their children against downward mobility). Individual ability and effort, however, are much stronger predictors of class of destination than are class origins, as are the qualifications which individuals achieve at school and thereafter.

This does not mean that Britain is a perfect meritocracy, but I never claimed that it was. What it does mean is that Britain is a society where

talent and hard work count for much more than class origins, and where bright and hard-working children enjoy the realistic prospect of career success, irrespective of where they start out from.[13]

CONCLUSION

Despite dismissing my results as 'misleading' and 'biased', we have seen that Breen and Goldthorpe's analysis actually ends up with complementary findings. This has enabled us to identify three key propositions regarding social mobility and meritocracy in Britain.

The first is that the amount of movement between classes is not inconsistent with the operation of a system of meritocratic selection. The second identifies the main departure from meritocratic selection as being the ability of the middle class to retain and transmit its position more successfully than it 'should'. The third (and most important) is that class origins play only a small role in shaping class destinations in Britain, and that individual ability, individual effort and the achievement of qualifications now play a much bigger part in shaping where people end up in the class system.

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NOTES

1. Thanks are due to Alan Buckingham, John Holmwood and Trevor Noble for helpful comments, suggestions and support.

2. Breen and Goldthorpe (1999) say that I 'disregard a large body of relevant literature' (op.cit.: 6), I should have been 'better acquainted with obviously relevant literature' (op.cit.: 8), I need to 're-read' the literature on IQ (op.cit.: footnote 10); and my 'disregard' of earlier studies 'is conspicuous (op.cit.: footnote 21). They also question my methodological competence: I do not 'securely grasp the "logic" of odds ratios' (op.cit.: .5); I 'ignore' the complexity in interpreting regression models (op.cit.: 7); I 'introduced biases' in my measures to favour my own position (op.cit.: 21); I use 'undesirable' and 'ad hoc' procedures for dealing with missing cases (op.cit.: footnote 9); and my methodology is 'biased' (op.cit.: 8).

3. 'In his empirical work Saunders does tend to focus on just one half of the picture: that is, on disparity ratios that pertain to upward rather than to downward mobility chances. There is, of course, no justification for this partiality, and it can – and indeed in certain circumstances does – prove misleading' (1999: 4).

4. Breen and Goldthorpe (1999: 21) are right to point out that ability scores do not account for *all* class effects, and that working-class children have on average to display more ability than middle-class children to achieve the same result. However, this is mainly due to the 'undeserved' success of dull middle-class children, and in my 1997 paper, I explicitly noted that, 'Low ability middle class children are twice as likely to succeed as

low ability children from semi-skilled and unskilled manual worker homes' (Saunders 1997: 268–9).

5. Considerations like these once again raise the question of whether odds ratios are an appropriate way of measuring the openness of a society, given that they conflate working-class upward mobility chances with middle-class downward mobility chances. Following Noble (1995), I have argued in previous work that a significant reduction in odds ratios will normally require that more middle-class people fall into a shrinking working class at the same time as increasing numbers of working-class people move upward into an expanding middle class. Precisely because the working class is shrinking, however, this is unlikely to happen, which means that odds ratios may remain constant, or even deteriorate, even when opportunities are expanding. Breen and Goldthorpe (1999: 5) deny this, claiming that odds ratios can still improve even when the middle class is expanding. If barriers to working-class achievement were 'to some degree reduced', they say, then talented working-class children will take advantage of any expansion in middle-class jobs faster than dull middle-class children will, in which case odds ratios will fall. All that is required for this to happen is that there should be 'a more rapid improvement in the chances of upward mobility of working class children than of children of more advantaged backgrounds' (op.cit.: 5). This is, however, erroneous, for with an expanding middle class, even if more of the newly-created higher positions go to working-class children than to middle-class children, 'social fluidity' as measured by odds ratios will still 'deteriorate' if middle-class downward mobility rates ease faster as a result of the declining size of the working class. It is for this reason that policy makers concerned to measure improvements in working-class opportunities over time would be well advised to avoid using odds ratios.

6. The motivation scale score proved to be the strongest of the motivation predictors of class at age 33 (Beta = 0.13), but absenteeism (0.07) and work attitudes (0.07) also achieved significant additional effects (Saunders 1997: Table 6).

7. Goldthorpe denies that classes in his schema can be ranked ordinally (other than in the division between the service class and the rest), which is why Bond and I chose to use the Registrar General schema instead. Breen and Goldthorpe claim that, by crunching this schema into three categories, we deliberately limited its potential explanatory power, but as footnote 10 in our paper makes clear, we drew boundaries between classes in such a way as to sharpen as far as possible the divisions of income, status, autonomy and power between them. Nevertheless, I accept that estimating effects as a set of dummy variables is likely to result in a stronger association than is possible by using a single linear variable with one degree of freedom.

8. Regression analysis (Saunders 1997: Table 6) showed that ability is twice as powerful a predictor as motivation at school and is about three times as powerful as parental class. The path model confirmed this – ability accounted for half of the explained variance in occupational scale scores, motivation explained another one-seventh, and parental class explained about one-tenth (Bond and Saunders 1999: Table IV).

9. My work, for example, found that most of the variance in class destinations still remains unexplained even after meritocracy *and* SAD measures are taken into account. My best fitting regression model explained only 32% of the variance in occupational scale scores at age 33 (1997: Table 7), and the path model developed with Bond explained just 35%.

10. In my earlier work, my regression models explained a higher proportion of the variance – up to 32% (Saunders 1997: Table 7). The fall is partly because fewer variables have been included this time round, but is also because the merit variables are more crudely measured, thereby increasing measurement error. Note that in my earlier work I included gender as a dummy variable, but if we run separate models for males and females we find that the overall model is weaker when predicting women's destinations (final R-square = 0.23 for women and 0.30 for men), and that class origins count for less in the case of women (no class origin is significant for

women and the R-square for model 1 is only 0.04; classes I, II and IV are significant, <0.01, for men and the R-square for model 1 is 0.08).

11. Savage and Egerton report similar calculations on the same data set, with odds ratios at least halving when ability is taken into account (1997: Tables 8 and 9).

12. Breen and Goldthorpe (1999) make much of the fact that qualifications explain more than ability and motivation (something I myself reported in my earlier work), and they seem to think that this undermines my argument about the importance of ability. But what does this result actually tell us? In my 1997 paper I suggested that the effect of qualifications in itself supports neither the meritocracy nor SAD hypotheses since neither thesis denies that qualifications are important (while the latter sees qualifications as a product of class-bias in education, the former sees them as the result of ability and effort). However, the path model in Bond and Saunders (1999) later demonstrated that qualifications are more a product of ability and effort than of class origins. Furthermore, because ability and motivation are logically prior to the achievement of qualifications, they should clearly be included *before* qualifications in any model. Breen and Goldthorpe, however, enter qualifications first. It is also important to recognize that ability continues to exert a substantial independent effect on occupational success, even *after* qualifications are taken into account. As the path model makes clear, bright people achieve a higher position than their less able contemporaries at all levels of qualification (which is one reason why I continue to insist that measures of education and qualifications cannot substitute for ability in our analysis).

13. Savage and Egerton seem (somewhat reluctantly) to agree: 'Those who do well in ability tests from any social class background have reasonable chances of moving into advantaged jobs' (1997: 664).

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