

# “Equality of Opportunity in Irish Schools” A Reassessment

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*Abstract:* In a recent publication, we examined the available evidence on social mobility in the Republic of Ireland. Our contention that substantial inequalities exist conflicts sharply with the conclusion of Greaney and Kellaghan “that the meritocratic ideal is at least being approached” in Irish second-level schools. In this paper we attempt to show that Greaney and Kellaghan have ignored substantial inequalities in their own data. Our criticisms centre on three major issues. (i) We contend that their measure of class is deficient in that it fails to distinguish adequately between manual and non-manual occupations and to distinguish occupations by employment status. (ii) Greaney and Kellaghan do not provide any formal statistical test of meritocracy. We define and test an appropriate model (based on their published data) which establishes the existence of substantial inequalities. Quoting research from other sources, we suggest that the importance of ability/gender interactions has been underestimated. The class-based inequalities in transition probabilities derived from our model *increase* as the students progress through the educational system. (iii) We believe that Greaney and Kellaghan fail to examine systematically the sources and consequences of ability differences. In particular, we draw attention to other research which emphasises the importance of family background in determining ability and related variables.

## I INTRODUCTION

In a recent publication (Whelan and Whelan, 1984) we examined the available evidence on social mobility in the Republic of Ireland. A significant amount of absolute mobility has certainly occurred, associated with a marked increase in the number of higher level occupational positions. We suggest, however, that it would be simplistic to infer that Irish society has become substantially more open. Indeed, we showed that enormous inequalities exist in the relative opportunities for mobility open to different social classes.

A variety of statistical models were used to “net out” the effect of demographic and occupational factors so facilitating international comparisons of mobility rates. When compared with Britain, France and Sweden, mobility patterns in Dublin were characterised by the highest tendencies towards immobility and the lowest probabilities of long-range mobility. We also found that, in Dublin, the effect of ascribed characteristics (such as father’s education and occupation) on respondent’s education and occupation was particularly strong. Even very recent data on the occupations of new entrants to the labour force showed little evidence that a radical re-structuring of mobility opportunities had occurred. We concluded that, despite the substantial increase in participation rates, educational inequalities of a considerable magnitude still exist.

It is clear that these conclusions differ significantly from those reached by Greaney and Kellaghan (1984). These authors had stated (p. 263) that

The fact that ability played such a dominant role in the educational progress of students in our study suggests that the meritocratic ideal is at least being approached if not quite attained.

The objective of this article is to summarise our earlier critique of this judgement (Whelan and Whelan, 1984, pp. 159-176).<sup>1</sup> Our basic contention is that Greaney and Kellaghan’s longitudinal data display substantial inequalities and are, in fact, consistent with the results from our cross-sectional surveys. We will focus on three major issues, which, we believe, explain why they reached erroneous conclusions.

- (i) the conceptualisation and measurement of social class;
- (ii) the failure to test how adequately a properly specified meritocratic model accounts for the outflow of students from different socio-economic backgrounds to educational destinations and the failure to recognise important interactions between ability and gender in estimating the effect of social class on probability of survival in the educational system;
- (iii) inadequate attention to the reasons for the substantial variations by social class in ability at age 11 and, in particular, the failure to acknowledge the evidence implicit in their own data and explicitly documented elsewhere (Halsey, *et al.*, 1980) regarding the importance of “family climate” factors.

1. Our critique is based entirely on the data included in Greaney and Kellaghan’s publication. In our re-analysis of these data we must necessarily accept the limitations imposed by the classifications and cut-off points employed by Greaney and Kellaghan.

## II CONCEPTUALISATION AND MEASUREMENT OF SOCIAL CLASS

The socio-economic status classification employed by Greaney and Kellaghan has a number of disadvantages, among the most important of which are (i) the failure to maintain the distinction between manual and non-manual occupations and (ii) the absence of differentiation on the basis of employment status and, in particular, the failure to distinguish the petty bourgeoisie. The skilled category which accounts for over 30 per cent of the students contains a mixture of manual and non-manual occupations. The higher professional and managerial category contains only 3 per cent of the students, in fact 15 cases. The inadequacies of the classification are likely to lead to an underestimation of the relationship of socio-economic status to the probability of survival in the educational system and to verbal reasoning ability. The correlation between verbal ability and socio-economic status which is described as only 0.3 appears to be similar in magnitude to correlations between what might appear to be comparable variables found in other countries (Jencks, 1972, Halsey, *et al.*, 1980). In fact, given the lack of differentiation in the measure employed in the Irish study, the possibility that the comparable correlation might be higher cannot be ruled out. The problems with the classification are exacerbated in that part of the analysis which examines the extent to which the education system is meritocratic. This arises from a need to merge the professional and managerial classes. Thus, 64 per cent of the students are contained in just two categories. Furthermore, all farmers above 30 acres are now included in the professional and managerial category.

## III TESTING A MERITOCRATIC MODEL

Greaney and Kellaghan do not, in fact, provide any formal statistical test of the hypothesis that the Irish second-level education system is meritocratic. While there are clearly a variety of possible definitions of meritocracy, a reasonable one for present purposes would be to require educational destination to be independent of socio-economic origin within ability group. This implies that one's probability of reaching a given level within the educational system is unaffected by one's origins.

We tested the hypothesis of meritocracy defined in this way by comparing the goodness of fit of two models. The first specifies that educational destination is independent of social origins while the second, which is termed a model of uniform association (Goodman, 1979; Breen 1984 and 1985) embodies non-meritocratic effects. The latter model presumes an ordering of the rows and/or columns of a cross-tabulation. In our case, we have scored origins and destinations as follows:

*Origins*

1. Professional and Managerial
2. Skilled
3. Partly skilled
4. Unskilled

*Destinations*

1. Entering third level
2. Completing senior cycle
3. Completing junior cycle
4. Entering post-primary
5. Not entering post-primary

The uniform association model assumes that origins and destinations are equally spaced. The advantage enjoyed by one origin class over another in the competition for a pair of destination classes is a simple function of the differences in ranks of those origin and destination classes. For both high and low ability groups the uniform association model provides a significantly better fit to the data than the independent model (Whelan and Whelan, 1984, p. 164).

*The Influence of Socio-Economic Group on Educational Destination: Ability-Gender Interactions*

Having established that the basic meritocratic hypothesis can be refuted it is useful to go on to consider whether the extent of the departure from meritocratic principles operates equally across ability/sex groups. The importance of distinguishing between males and females arises from the fact that, as Hannan *et al.* (1983, pp. 49-79) document, the participation and drop-out rates from successive levels of the education system are highly sex-specific. The uniform association model provides a satisfactory fit within each of the sub-groups. Thus, within each gender/ability group there remain substantial inequalities between socio-economic groups. However, the nature of these inequalities varies as between the two sexes. In particular, the results suggest that the effects of gender on the association between origins and destinations is reversed in the different ability groups. For the less able, the degree of association (i.e., the degree of inequality) is stronger for males. In contrast, the highly able females seem to encounter greater inequalities than do males of high ability.

The fit of the uniform association model was poorest for the less able/female sub-group. This fact prompted us to search for a better model. The uniform association model assumes that origins and destination are equally spaced. An alternative association model – the “row-effects model” – postulates that the origin/destination association depends upon a parameter specific to each origin. The destination classes are equally spaced and consequently the advantage enjoyed by one origin class over another in the competition for a pair of destination classes is a simple function of the differences in the rank-order scores of those destination classes. However, the odds of being in the higher of a pair of destination classes also depends

on the (unequal) distances between the origin classes. A "row-effects model" of this kind fits the less able female group significantly better than the uniform association model. The distances between the origins implied by the model help to explain the reversal in effects noted above. These distances imply that, for less able females, the rank order of the skilled and partly skilled destinations is the reverse of that implied by the uniform association model. It is students from partly skilled backgrounds who enjoy the advantage in competition for desirable educational destinations. No such reversal occurs for less able males. One possible explanation of this phenomenon is the fact that all farmers with less than 30 acres are included in the partly skilled group. The National Manpower Survey shows that differentials by gender to the advantage of females are greater among farmers than any of the other socio-economic groups.

The differences in association parameters for males and females are not statistically significant. However, the pattern of differences is entirely consistent with the available evidence on the structure of sex differences in the Irish educational system. This is clear from the predicted outflow patterns from socio-economic origins to educational destinations set out in Table 1 below. Girls are significantly more likely to complete the Leaving Certificate. Our association models suggest that this overall participation rate reflects the substantially greater tendency for less able females from partly skilled (including small farming) and unskilled backgrounds to complete the senior cycle, as compared with corresponding males. This leads to a lower level of association between socio-economic group and educational destination for the females. Previous research also shows that boys who complete second level are much more likely to go on to third level. Our analysis suggests that this feature of the system is linked to the higher level of socio-economic group inequalities existing among more able females than more able males. More able females from professional and managerial origins enjoy relative advantages over other females in relation to the probabilities of making the transition from second level to third level. These advantages are substantially greater than those found in the corresponding male group.

In view of these substantive considerations, we will continue in our subsequent analysis to operate with four sub-groups. For the low ability female group we will employ the expected results arising from the row-effects model since the uniform association model leads one to significantly underestimate the association of origin with destination. For the other sub-groups we employ the uniform association model. We will refer to these models as the best fitting association models. In the section that follows we will discuss the outflow from origins to destinations implied by these models.

*Outflow Patterns*

Table 1 shows the educational destinations predicted by the best fitting association model for each gender/ability sub-group. We can see that for less able males, students from unskilled origins are ten times more likely to fail to enter the post-primary sector than those from professional and managerial origins. The advantages enjoyed by the latter group with regard to completion of junior cycle, completion of senior cycle and entry to third level are reflected in disparity ratios of, respectively 2.4, 6.0 and 20.2. The smallest inequalities are between the professional and managerial and skilled groups. However, even here the former group is almost three times less likely to fail to enter the post-primary system, almost two and a half times more likely to

Table 1: *Educational destinations predicted on the basis of the best fitting association models for each gender/ability sub-group (per cent by row)*

	<i>Not entering post- primary</i>	<i>Entering post- primary</i>	<i>Completing junior cycle</i>	<i>Completing senior cycle</i>	<i>Entering third level</i>	<i>N</i>
<i>Males: VRA &lt; 108</i>						
Professional and managerial	2.9	97.1	83.7	46.8	10.1	42
Skilled	7.5	92.5	70.2	30.3	4.6	46
Partly skilled	16.1	83.9	52.8	16.7	1.7	27
Unskilled	28.9	71.1	35.0	7.8	0.5	38
Total	13.1	86.9	62.1	26.8	4.6	153
<i>Females: VRA &lt; 108</i>						
Professional and managerial	2.9	97.1	86.4	53.2	10.9	46
Skilled	9.3	90.7	70.3	32.7	4.3	51
Partly skilled	5.0	95.0	80.3	44.1	7.5	41
Unskilled	20.3	79.7	51.2	17.7	1.6	44
Total	9.3	90.7	72.9	36.8	6.0	182
<i>Males: VRA ≥ 108</i>						
Professional and managerial	0.0	100.0	96.3	77.0	37.3	36
Skilled	0.0	100.0	94.5	70.8	30.8	37
Partly skilled	0.0	100.0	91.9	63.7	24.7	13
Unskilled	0.0	100.0	88.6	56.0	19.1	5
Total	0.0	100.0	94.5	71.4	31.9	91
<i>Females ≥ 108</i>						
Professional and managerial	0.0	100.0	98.4	82.7	34.2	30
Skilled	0.0	100.0	95.9	70.4	21.5	26
Partly skilled	0.0	100.0	90.8	54.7	11.7	8
Unskilled	0.0	100.0	81.9	38.0	5.5	4
Total	0.0	100.0	95.6	72.1	25.0	68

Source: Whelan and Whelan (1984), Table 7.12, p. 167.

complete the junior cycle, one and a half times more likely to complete the senior cycle and over twice as likely to enter third level.

It is clear that less able females from all origins are substantially more likely than their male counterparts to complete the junior/senior cycle. However, this relative advantage is particularly marked among those from partly skilled and unskilled backgrounds. They are, for instance, two to three times more likely than their male peers to complete senior cycle successfully. In fact, the partly skilled group has a higher rate of completion of senior cycle and entry to third level than the skilled group. Overall, the relativities between the highest and lowest socio-economic groups are substantially smaller than those for less able males, the disparity ratios at senior cycle and third level stages are, respectively, 3 and 7 approximately.

For high ability males the degree of inequality is less than in any of the other four sub-groups, the disparity ratios between the professional and managerial and unskilled groups for completion of senior cycle and entry to third level are approximately 1.4 and 2.0. A sharp contrast is evident in the corresponding ratios for able females which are 2.2 and 6.2. The latter figure is, in part, a consequence of the fact that, outside the professional and managerial class, able females are much less likely to enter third level. In fact, for those with unskilled origins, able males have a relative advantage over able females of three and a half to one.

#### *Educational Transition Probabilities*

We now move on to derive estimates of educational transition probabilities. These will allow us to consider what Boudon (1974) had termed the primary and secondary effects of educational stratification. For our present purposes we may take the primary effects as being reflected in the differences in verbal reasoning ability scores at age 11. The secondary effects are those whereby the students at the same ability level, but differing in terms of social origins, have different probabilities of surviving in the educational system. The higher one goes in the educational system the greater are the inequalities in participation by socio-economic group. The question arises whether this pattern is due to a greater departure from meritocratic principles at the higher level of the educational system or whether it is a consequence of the cumulative effect of disparities at earlier stages in the system. Greaney and Kellaghan (p. 252) conclude that the evidence indicates that for the students in their study

... the role of a student's socio-economic status as a discriminator between persistence in and withdrawal from the educational system diminished as the students advanced through it.

This finding they note, is in line with evidence from a number of other

European countries.

In fact, the evidence on transition probabilities derived from the best fitting association models suggests a conclusion which is directly contrary to that drawn by Greaney and Kellaghan. We find that less able male students from professional and managerial origins who complete the senior cycle have a probability of 0.22 of proceeding to third level while the corresponding probability for those from unskilled backgrounds is 0.06 giving a disparity ratio of 3.7. The disparity next in magnitude occurs in the transition from the completion of junior cycle to completion of senior cycle; at this point more able male students from the highest class have a 0.56 chance of surviving while the probability for those from the lowest group is 0.22. Thus, the disparity ratio is 2.6. In moving from entry to post-primary to completion of the junior cycle the corresponding probabilities are 0.86 and 0.49 and the disparity ratio is 1.8, while in moving from the primary to the post-primary sector the relevant disparity ratio is 1.4. In the case of less able males, the socio-economic inequalities in likelihood of survival, rather than declining as one moves up through the system, in fact increase quite substantially.

Although the degree of inequality in transition probabilities is generally smaller for less able females the trend as one moves from the bottom to the top of the educational system is in the same direction. In this group 20 per cent of those from professional and managerial backgrounds survive the transition to third level while the corresponding figure for those with unskilled origins is 9 per cent, the disparity ratio is 2.3. In the movement from completion of the junior cycle to completion of the senior cycle among less able females, the transition probabilities for the highest and lowest socio-economic groups are 0.62 and 0.35, respectively, giving a disparity ratio of 1.8. The disparity ratios for the remaining transition are in descending order 1.4 and 1.2.

The inequalities in transition probabilities for the more able male students are lower than for any of the other groups. However, the pattern of increasing disparity ratios as one climbs up the educational system is maintained by the following set of ratios 1.0, 1.1, 1.3 and 1.4. Inequalities for more able females are somewhat greater and increase steadily from 1 to 2.7.

The substantive significance of these findings can be drawn out by considering Greaney and Kellaghan's conclusions regarding the appropriate stage for educational intervention. They emphasise that the conditions which determine a student's educational prospects have their effect relatively early in life. Gross differences in participation beyond the level of compulsory education might, therefore, lead policy makers into seeking solutions at the wrong level. Our analysis suggests that even though class inequalities were substantial at the age of 11, students from lower socio-economic group



origins still experience a set of further barriers at the higher levels of the educational system. These departures from meritocracy within gender/ability groups are evident in the variations we have documented in the chances enjoyed by students from different backgrounds of entering the post-primary sector. They emerge even more strikingly in differences in likelihood of survival subsequent to entry to the post-primary system. For less able males the uniform association model suggests that the professional and managerial group enjoys advantages over the unskilled group of 6:1 with regard to their chances of completing the senior cycle and 20:1 with regard to the probability of entering third level. Equalising survival probabilities within the second level would bring them down to 1.4:1 in both cases. For less able females the advantages suggested by the best fitting association model are 3:1 for completion of the senior cycle and 6.8:1 for entry to third level. Removing the effects of socio-economic group within the post-primary system brings these ratios down to 1.2:1. For the more able groups removing such effects would produce complete equality of opportunity.

A final illustration of how socio-economic group effects operate can be given by considering the hypothetical consequences for students from unskilled origins of removing (i) socio-economic group differences in verbal reasoning ability at the age of 11 and (ii) removing socio-economic group variations within ability group in educational survival probabilities after the age of 11.

- (i) Removing the former effect produces predictions of 24.4 per cent and 4.9 per cent overall, 25.8 per cent and 7.4 per cent for males and 23.2 per cent and 2.7 per cent for females.
- (ii) Controlling for the latter effect gives figures of 36.0 per cent and 7.7 per cent overall, 32 per cent and 7.8 per cent for males and 39.7 per cent and 7.6 per cent for females.

Thus it is the socio-economic group effects after the age of 11 which have the greater impact. This is particularly true for females, reflecting the fact that the relative advantages of membership of the more able group are substantially less for more able females from unskilled backgrounds than for males with comparable origins.

These results suggest that non-meritocratic factors of substantial size operate within the post-primary system. They therefore call into question Greaney and Kellaghan's heavy emphasis on the meritocratic nature of the Irish educational system. It is not, of course, our intention to devalue the significance of the very strong association between origins and verbal reasoning ability nor the consequences of such differences. However, such consequences should not blind us to the appreciable class effects of a clearly

non-meritocratic form which came into play throughout the second-level system. Even granted that major class effects come into play before age 11, the analysis we have conducted shows clearly that the students in the Greaney and Kellaghan study from lower socio-economic groups experience substantial disadvantages within the post-primary sector which could not be explained by ability differences prior to entry. Failure to emphasise the importance of such departures from meritocratic principles at this level encourages the notion that our post-primary educational institutions have a very limited potential to contribute to the reduction of class differentials. This would, we believe, be quite erroneous.

#### IV "ABILITY" – CAUSES AND CONSEQUENCES

Our final major criticism of the Greaney and Kellaghan study arises from their failure to question systematically the sources and consequences of the differences in verbal reasoning ability. These differences (which were, it will be recalled, measured at age 11) are substantial. The percentage in each class with verbal reasoning ability of 108 or above, together with our estimates of the mean VRA in each class are shown in Table 2. Clearly, the lower social classes start off their careers in second-level education under a substantial handicap.

What might be the source of these enormous differences? In the absence of a longitudinal study starting even earlier than age 11, this question cannot be answered with certainty. There are, however, some important insights that can be gleaned from the existing information.

Table 2: *Percentage of each socio-economic group with verbal reasoning ability greater than or equal to 108, and estimated mean verbal reasoning ability, classified by gender*

	<i>Percentage with VRA <math>\geq</math> 108</i>		<i>Estimated mean VRA</i>	
	<i>Males</i>	<i>Females</i>	<i>Males</i>	<i>Females</i>
Professional/Intermediate				
Professional	46.2	39.6	106	103
Skilled	44.6	33.8	105	102
Partly skilled	32.5	16.3	100	92
Unskilled	11.6	8.3	89	86
All groups	37.3	27.2	102	98

*Source:* Whelan and Whelan (1984) Table 7.15, p. 174.

One useful starting point is the observed differences between males and females. Some 37 per cent of males were in the more able group compared with 27 per cent of females. These overall differences in verbal reasoning between males and females cannot be accounted for by class-related factors since they are relatively constant across socio-economic groups. Unless one wishes to argue that such differences should be considered innate, one is forced to seek their source in factors such as differential experiences within the family and in primary school. Research in other countries suggests that gender differences of this kind are likely to be, at least in part, a consequence of differences in the extent to which children's "home environments" induce and facilitate achievement. Clearly, the scale of such differences is substantially greater across such socio-economic groups than between males and females.

It is of particular importance in the present context to note that, when "home environment" is taken into account, one's evaluation of the importance of ability and consequently of the extent to which the educational system is meritocratic, is likely to be significantly altered. Thus, Halsey *et al.* (1980, pp. 155-164) in their analysis of the English educational system found that the degree of similarity in the educational performance of brothers could not be adequately accounted for by the evidence on the extent of correlation between brothers' IQ scores. In order to explain the degree of similarity in educational performance it was necessary to postulate:

... the existence of unmeasured family background factors, factors which appear to do much of the work that we might otherwise have attributed to IQ (Halsey *et al.*, 1980, p. 172).

In our previous analysis it was assumed that differences in achievement between gender/ability groups could be attributed to factors of an entirely meritocratic nature. Evidence such as that of Halsey *et al.* (1980) indicates that it is misleading to interpret the impact of verbal reasoning ability differences in this manner. Clearly, there is a variety of important influences on measures such as children's IQ or verbal reasoning scores which continue to affect educational attainment and by no means entirely through ability. Thus, our previous analysis almost certainly overstates the extent to which the Irish educational system is meritocratic.

## V CLASS FACTORS AND MERITOCRACY – A SYNTHESIS

We have now presented three major criticisms of Greaney and Kellaghan's analysis: relating to (i) inadequacies in the conceptualisation and measurement of socio-economic status; (ii) failure to specify and test a formal model of meritocracy and to recognise important interactions between ability and

gender in estimating the effect of class on probability of survival in the educational system and (iii) inadequate attention to the likely causes and consequences of class-related variations in ability. Each of these deficiencies has tended to lead to an underestimation of effect of class on education.

These criticisms should not be seen as detracting from the importance of their work. They have helped to elucidate the manner in which educational inequalities operate. Their focus on educationally relevant variables is important as is their stress on defining at what level in the educational system intervention would be most effective. Most important of all, in our view, is the documentation they provide on the size of ability differences between classes at a very early age. Indeed, we would endorse Greaney and Kellaghan's argument in favour of intervention at primary level. If class differentials in ability at age 11 could be eliminated or even significantly reduced, this would almost certainly set in motion a process of change throughout the educational system.

Our criticisms should, rather, be seen as an attempt to redress the balance by emphasising the roles of both meritocratic and non-meritocratic factors. Clearly, educational participation rates are heavily influenced by social class. Equally clearly, "ability" is a major factor in determining progress through the system. If the goal of equality of opportunity is to be attained or even approached more closely, policy must take both sets of factors into account.

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