

equality mapping

A seminar held on
Wednesday 20th May 1999
11 Downing Street, London

Edited by John Wilson



THE SMITH INSTITUTE

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Preface

The Smith Institute has been set up to look at issues which flow from the changing relationship between social values and economic imperatives. The Institute takes its lead from the belief of the late John Smith MP that social justice and economic progress can go hand in hand, and it currently centres its work on these themes.

This booklet is based on the presentations made by Professor John Bynner and Professor Heather Joshi during a seminar held on 20th May 1999 at 11 Downing Street. We have tried to reflect the debate which followed. Inevitably, in transforming a live event into print, some of the colour and the texture of the original have been lost. We hope, however, that those who attended the seminar will recognise much of what is included here, and that those who read it fresh will respond to the flow of good ideas which emerged during the morning.

Introduction

Wilf Stevenson

Those of you who have been to our previous seminar series, Equality and the Modern Economy, should recognise that this event marks a bridging point for us. Having run a series of seven seminars in the autumn on equality, looking at the theoretical and philosophical aspects, we felt that we wanted to move on to see how this approach would play in policy terms. But before doing that, we felt we had to research some of the key issues.

We were put in touch with the Centre for Longitudinal Studies by Yvette Cooper MP who, as you know from the programme, is down to speak to us today. She is unfortunately not able to be with us because she is due to have a baby in a couple of weeks and her blood pressure has gone up, and as a result she is in hospital as we speak, thinking of us I know, but unable to be with us in person. She will be on the phone afterwards to find out what happened because she has been a very active partner in the development of this project.

It was her that brought us in contact with John Bynner and Heather Joshi who are going to speak today and introduced us to what we think is a really terrific, comprehensive data archive that is based on real lived experience, which provides deep insights into people's lives as they battle with their various life events.

John and Heather will now introduce the work that they have been

doing for us, which falls into two projects. One is on equality mapping and one on urban/rural dimensions. Neither of these is yet complete, so we are catching them, as it were, in a 'rough-cut' stage. However, I think you will find there is enough in it to get you excited about what they are doing. But before we hear from them, I would like to thank the Chancellor of the Exchequer for use of these splendid rooms for our seminars, and ask him to say a few words by way of introduction.

Rt. Hon. Gordon Brown MP

Chancellor of the Exchequer

Thank you very much, and can I first of all welcome all of you to Downing Street this morning and hope that you will enjoy this very special seminar we are having today.

I just wanted to say by way of a beginning that it is five years this month since John Smith died. Donald Dewar, the new Scottish First Minister, announced last week that part of the Scottish Parliament building will be named after John Smith. Tony Blair announced a few days ago that The Smith Institute will run a series of transatlantic lectures over the next year, bringing together people thinking of issues of justice and equality from America and from Europe. I think that will be a very exciting series. But of course the greatest memorial to John Smith is that we are meeting today, discussing some of the ideas that governed his political philosophy and his work.

I was reading some of John's speeches last week. He had a very straightforward philosophy, that we value the human above the simply material. He believed, as far as the Labour movement was concerned, that hardship and hard times had taught people not selfishness, but compassion. He believed that we had been able to rise above the difficulties of industrialisation and had transformed our hardships into a vision of a socially just society. He believed that at the centre of that was the idea of equality.

John Smith rejected equality of outcome as both undesirable and

impossible, but felt that equality of opportunity in its narrowest sense was merely the opportunity for people to be unequal. He sometimes quoted Tawney's comments that equality of opportunity, as presently practised, was rather like inviting an unwelcome guest to dinner in the knowledge that circumstances would prevent them from attending and that therefore we had to do far more to create a just and equal society. So it is entirely appropriate today that we should be discussing a long term study that has looked at inequalities in Britain over a very considerable period of time. I think we are very fortunate to have Heather Joshi and John Bynner here today and to be the first to hear the results of their work.

Professor John Bynner

The Value of Longitudinal Studies

We are concerned at the Institute of Education with two of Britain's unique research resources. They are longitudinal birth cohort studies, following up whole samples of the population born in particular weeks from birth right into adult life. There is nothing quite like them in the world, so we are very privileged to have the opportunity to look after them and to use them. They are, in fact, resources that are widely used across the world. In addition, we support work on the Office of National Statistics Longitudinal Study, based on 1% of the Census, for which my colleague Heather Joshi is particularly responsible. We enable researchers to access this data set - a vast number of people, up to 800,000 people followed up from census to census, with all the information about vital registrations and statistics attached to them.

By way of background to this presentation, I remember years ago, when I did a project for the Economic and Social Research Council, trying to find out why people didn't use longitudinal data. A lot of investment went into it, but it was felt it could be used much more widely. There were all sorts of technical reasons why it wasn't, but another reason was the attitude of policy makers. Someone made a comment that struck home particularly. He said, "Policy makers are just not interested in aetiology. They're interested in the here and now - is it working, is it not working?" But the origins of it, where it comes from, where it's going, had not really got into the framework of policy formation.

It is very pleasing to say that a total change has come about in that

respect. An interest in aetiology, long-term thinking both forward and backward, the origins of problems and the solutions to them in the long term, are increasingly on the policy agenda. It is a great credit to the current political framework in which we operate, to the government particularly, that we are able to bring to bear on policy these unique resources for research.

What Factors Impact on Inequality?

There is nowhere more obvious for this to apply than in the area of social exclusion, because that particular agenda requires the identification of the obstacles to achievement and security in adult life, and the extent to which one factor builds upon or is mitigated by another in determining life chances.

Another way of looking at it is to ask what adds to or reduces inequalities in adult life. We are going to talk about equality mapping as a theme for this seminar, but the issue is, what is adding to inequality and what is reducing it? That's obviously central to getting the policies to reduce it right. At the same time, we need to set the exclusion processes involved into the context of societal change, and particularly the transformation of employment and the labour market brought about by new technology - the technological transformation of the way we operate and live. We need to be able to look at cohort shifts, changes that are going on in the life histories of individuals, as the impact of social change works upon the way they operate and how they function.

We also need to know, are these obstacles becoming more or less of a problem in restricting opportunities and increasing polarisation

(another way of describing inequality?) And are there differences in the impact these obstacles have on men and women? Are their life histories different? Are they affected differently in the way in which social change impacts upon them and obstacles arise in their lives? We want to find out, as well, whether there are particular penalties or advantages in living in a rural as opposed to an urban environment, another central theme for this seminar.

These are ongoing issues. We are reporting results here that are very much work in progress. But we hope to draw some conclusions of interest and to raise questions that people can then pursue in their own work, and we can pursue in the further research we are doing. As you have heard, the work we are reporting has been funded by the Smith Institute. I should add that our colleague Maria Tsatsas carried out a lot of the computing for the project.

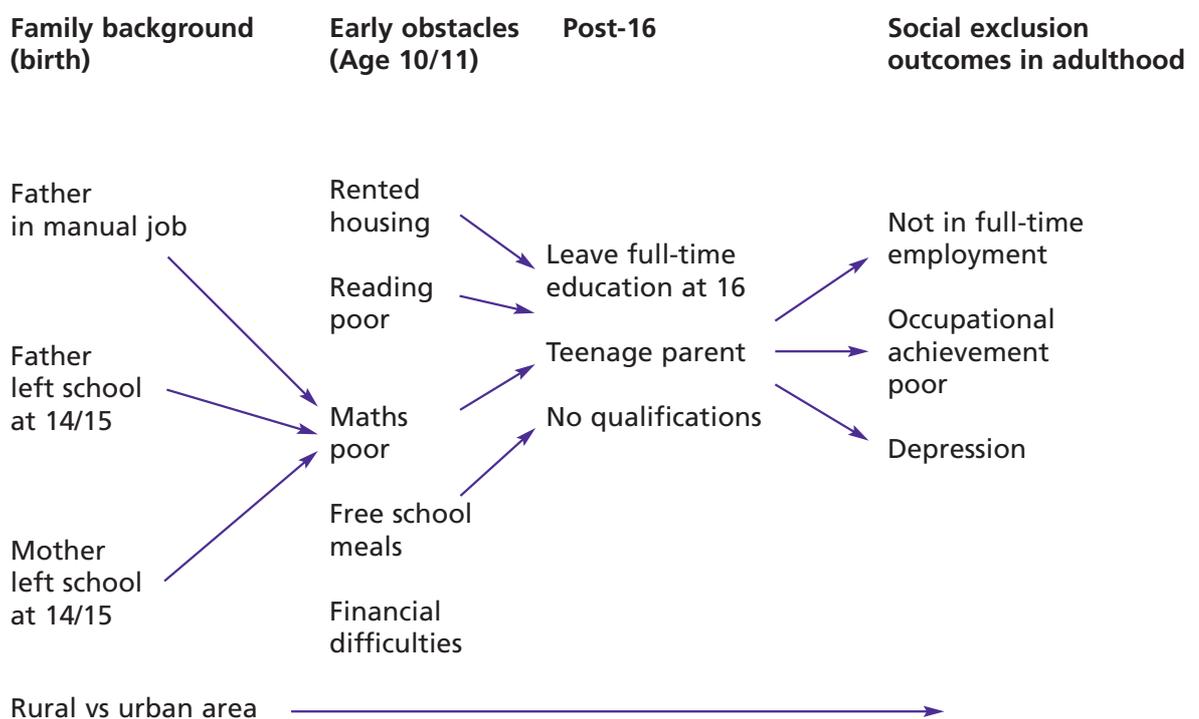
The Research Strategy

The opportunity to address these questions comes from the analysis of data from two of the studies I have mentioned, the world renowned National Child Development Study, which began with all births in a single week in March 1958 (about 17,000 in all), and the 1970 British Cohort Study, which began similarly with all 17,000 births in a single week in April 1970. Both studies have involved following up the cohort members to adulthood. We are going to draw on data collected at birth, 11, 16 and 33 in the NCDS, and at birth, 10, 16 and 26 in the cohort born in 1970.

The strategy adopted for undertaking this analysis and developing and

drawing out these results is best illustrated through a chart that sets out all the selected variables from the study and how we might expect them to be related.

Obstacles to achievement: The routes to social exclusion



We are going to examine the impact of different obstacles at different stages in peoples' lives. We begin with family background. We move through early obstacles in primary school, at the turn from primary to secondary school aged 10 and 11. We shall then relate these earlier experiences and circumstances to social exclusion outcomes post 16 (the minimum statutory school leaving age) and then in adulthood.

At the left are the family background variables we are going to examine

and investigate: whether the father was in a manual job when the individual was born (father's social class being another way of describing it); whether father and mother left school at 15 or left later; and also (a context that runs through the whole of this) whether the location where people are based is rural or urban.

The early obstacles age is 10 in one study, 11 in the other. The variables comprise poverty indicators - rented housing, free school meals, financial difficulties as reported in the family - together with indicators of primary school achievement. We have two indicators of achievement, whether reading is poor and whether maths is poor (the products, if you like, of education), with alongside them the poverty-related circumstances at 10 or 11, building on the circumstances within which the cohort members began their lives.

The social exclusion outcomes at 16 are leaving school at the minimum age, and leaving without any qualifications. Finally, in adulthood, we shall look particularly today at two outcomes: not being in full-time employment and poor occupational achievement. Achievement here relates to the kind of earnings you would expect from the level of job you are in. It is a rough indication of earnings related to occupation. We have also explored two other outcomes which we are not going into in much detail today, one being teenage parenthood and the other depression. Remember again that this is all contextualised in the rural versus urban location.

Just a few facts about these variables. First, as we might expect, there are quite substantial changes between the two cohorts in relation to some

of these characteristics, and remarkable stability in others. For example, the number of people leaving school at the minimum age drops for boys from 62% in the 1958 cohort to 49% in the 1970 cohort; for girls, who have always tended to stay on more, the comparable figures are 55% in the older cohort and 42% in the younger. Still roughly half, certainly in the case of boys, were leaving the education system at the first opportunity they had to do so. Again, fewer leave without any qualifications than used to do so. There has been, not a huge rise, but a steady rise in those leaving with some kind of qualification, NVQ1 or above.

Looking at the circumstance variables, fewer parents had left school at 15 in the younger cohort, down from three quarters to three fifths. Rented housing dropped from half to one third between the two cohorts. On the other hand, free school meals (found to be a key indicator of poverty in many studies) is, at 8%, about the same in both cohorts.

As to the urban/rural base, the percentage living in urban areas dropped slightly between the cohorts, from 86% to 81%. Roughly four fifths were living in urban and metropolitan areas. In the younger cohort, 4% were living in sparsely populated areas (less than 43 people per square kilometre) and about 15% in rural but less sparsely populated areas (less than 250 people per square kilometre). As far as mobility in and out of rural areas is concerned, over a period of about 12 years about half stayed in the area they were in and half moved out, with a small drift towards the more rural areas.

The Overall Picture

That's the background to our analysis. I just want to add one or two general conclusions before my colleague Heather Joshi goes into the more precise details of what we are able to say about obstacles and opportunities.

It is perhaps not hugely unexpected, but disappointing nevertheless, that social class seems to be as important as ever as an obstacle to life chances, particularly through the effects it exercises on educational achievement and opportunity. You see very little difference in the strength of that relationship. Moving up into primary school, childhood poverty takes over from class in restricting achievement to a certain degree, but does not entirely replace it. The family origin effects seem to carry through right from birth into later life. But poverty (as indicated by free school meals, living in council rented housing and financial difficulties in the family) places an additional burden, restricting educational achievement even further.

As to the value of education, there are signs across the cohorts that it is becoming increasingly important in providing protection against labour market problems. There is less likelihood of unemployment as education goes up, and there is less likelihood of poorly paid casual, unskilled employment.

Despite the stability of class as an obstacle to achievement, there is one shift in a much more positive direction, a shift at which equal opportunities policies have been very much directed over the years. Gender is becoming less of an obstacle to achievement. The gap

between men and women, particularly at the upper ends of the occupational spectrum, is actually getting much less. This holds in relation to pay, but also in relation to various kinds of security, to high level jobs, to training, and to a lot of other indicators that we are not reporting here. This can be seen as a major step forward that policy has to be responsible for.

What about the rural and urban area characteristics? Here we found slightly surprising results, which we need to pursue much further. One overall finding we shall elaborate a bit further is that living in a rural area appeared to increase the chances of being in full time employment for men, but to reduce it for women. This seems a kind of contradictory finding in a way, but one needs to explore precisely why that was. The protection for men was presumably because of the nature of employment in rural areas (agricultural work, casual employment). By comparison with the urban areas, men in that situation were protected. On the other hand, being in a rural area, especially a sparsely populated area, was quite strongly connected with lower levels of educational achievement. This was particularly so for men. It maybe reflects the relative scarcity of educational institutions and provisions. Women in sparsely populated rural areas tended, surprisingly, to be slightly better educational achievers.

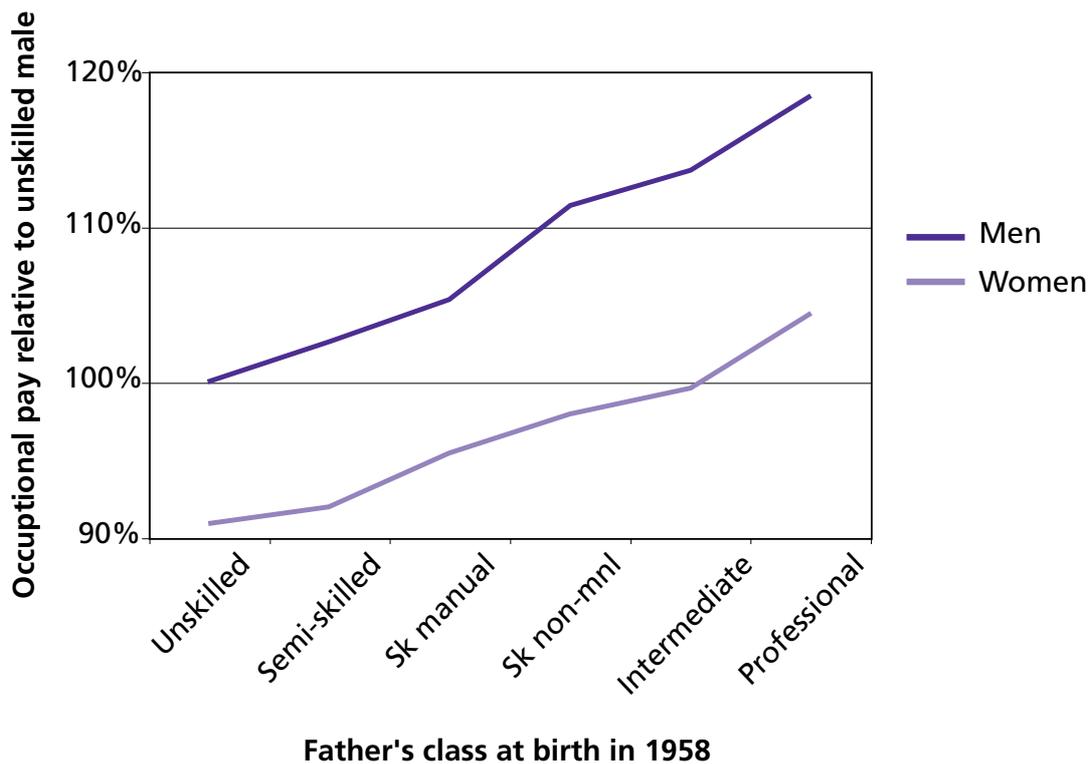
These then are some findings which give you a broad picture of the kind of results we are getting from this work. Heather Joshi will now give you more of the details.

Professor Heather Joshi

Occupational Attainment and Father's Social Class

I promise not to give you all of the details! I am pulling out of the modelling exercise just some of the relationships we detected - in particular, between the family's social class when the child was born and various outcomes later on in life.

Occupational attainment at 33 by father's social class, cohort born in 1958, controlling for parents' school leaving age



The first picture summarises what we found about the impact on occupational attainment of the father's class at the child's birth in 1958, using the Registrar-General's social class categories (which range from unskilled through semi-skilled and skilled manual up to professional,

or social class one). These are the homes into which almost all of these children were born and could be classified. Very few in 1958 were born into homes where there was only a mother, and those don't come into this classification, but the children without a father do about the same as the children with less skilled manual fathers.

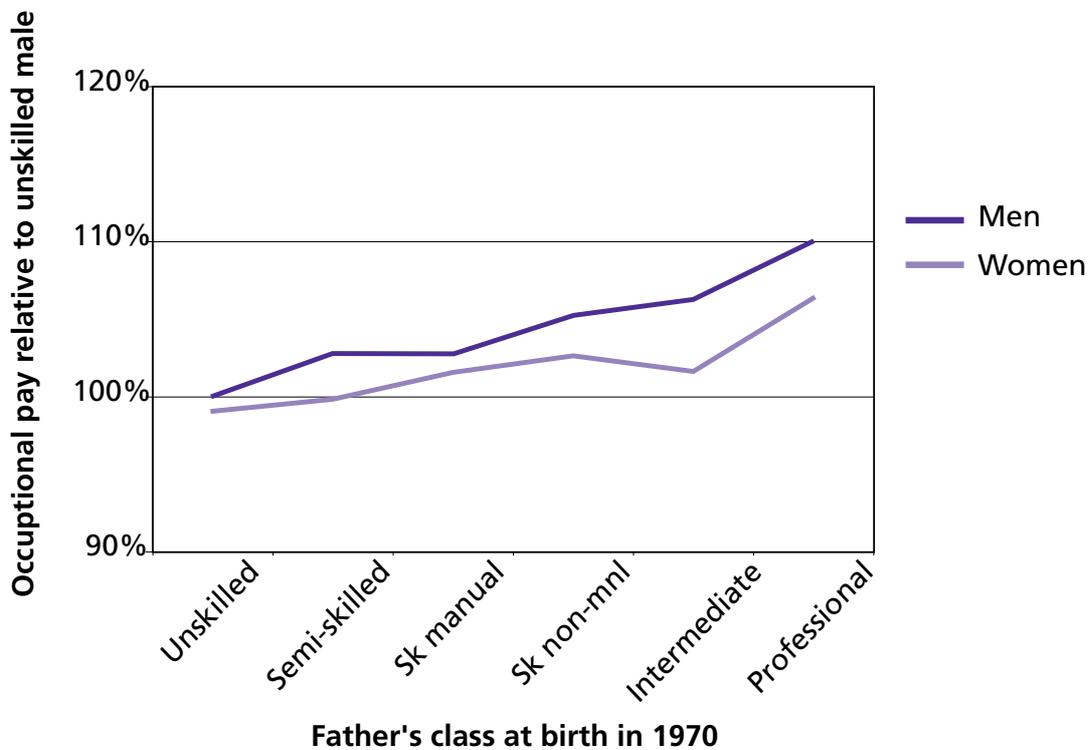
We are starting them off with these different sorts of fathers and seeing where they get to in the occupational hierarchy as adults, in this case at age 33. We have ranked everybody in the cohort by the social class of their adult occupation. But here we haven't just added up the codes for the six class categories, we have weighted each type of occupation to reflect the average wage rates in that occupation. So this is just one of many possible indices of occupational attainment.

The picture shows the results separately for men and women. What it shows is how much difference father's class made, other things being equal. That's controlling for the other characteristics of the family at the child's birth, i.e. whether or not each parent left school at the minimum age. We are holding that constant and saying, given the parents' education, what difference did it make to be born to a father of a given class, rather than to one at the bottom of the scale? In terms of the particular metric we are using today, there is about a 20% pay off for having been born the son or daughter of a professional father, compared to an unskilled father. The lines for men and women have the same slope, each representing a gain of around twenty points. The women's line is lower than the men's because the women's occupational attainments were not so far up the labour market at age 33. So we have a class advantage represented by the upward slope and a gender

advantage represented by the vertical distance between the two lines.

We do the same exercise for the 1970 cohort, but plotting the occupational attainment index for young men and young women in 1996, when they were 26. There is still a class effect, because the

Occupational attainment at 26 by father's social class, cohort born in 1970, controlling for parents' school leaving age

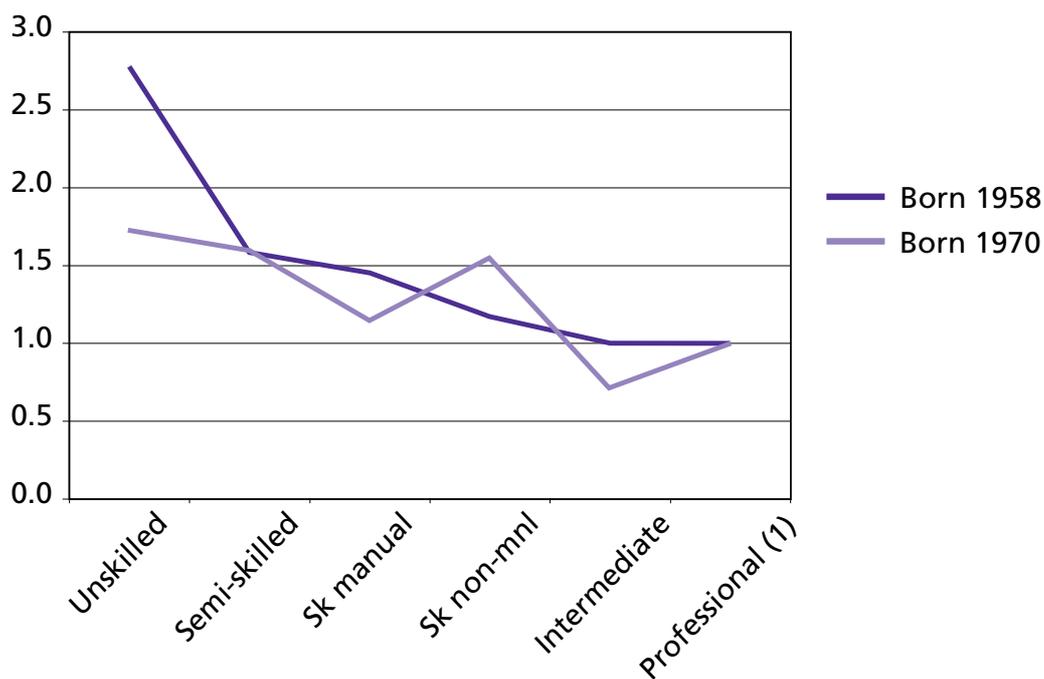


slope remains upwards. There is much less of a gender difference, the two lines being closer together. You might be tempted to conclude that the class difference has weakened, because the male line goes from 100% to 110%, instead of to 120% as in the previous cohort. I would ask you to suspend your belief on this point until we have seen a bit more. Remember, we are here measuring occupational attainment at

age 26, when people haven't been able to take full advantage of the upward mobility a yuppie might well experience in his or her late twenties. This is before all of that has taken place. While there isn't such a big gradient as before, it may yet emerge if we look at what these people are doing when they are in their thirties. In due course we will be able to tell you.

Being Out of Work or a Teenage Mother

Chances of being unemployed or sick at 33/26 by class of origin, controlling for parents' school leaving age - men only

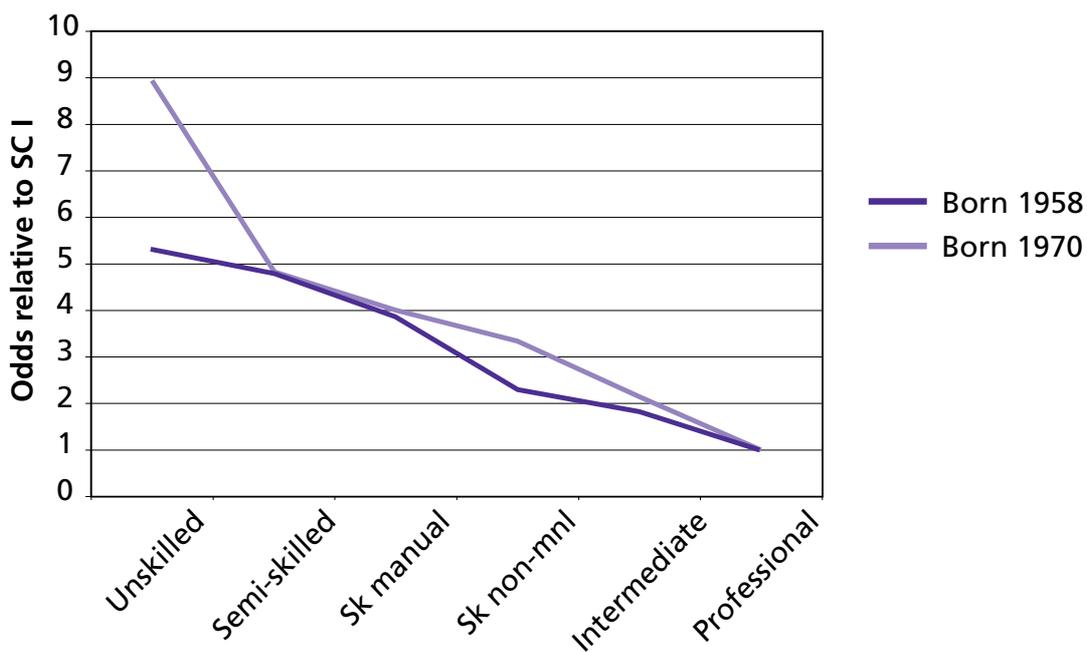


This is for men only, and shows separate lines for the two cohorts. We are repeating the analysis, but the outcome is now the chances of their being out of work (unemployed or sick) at the last interview they did, either at 33 or 26. The social class gradient goes the other way here,

because it is an unfavourable outcome. If you had an unskilled father, you are more likely to be found out of work as a young man. For most of this picture the class effect is pretty similar across cohorts, with the exception of the admittedly small group who had unskilled fathers. For them, the disadvantage is greater for the original cohort.

We can't do that analysis for women, because at these ages, 26 or 33, so many are out of the labour market that to count whether they are out

Chances of becoming a teenage mother by father's social class, controlling for parents' school leaving age - women only

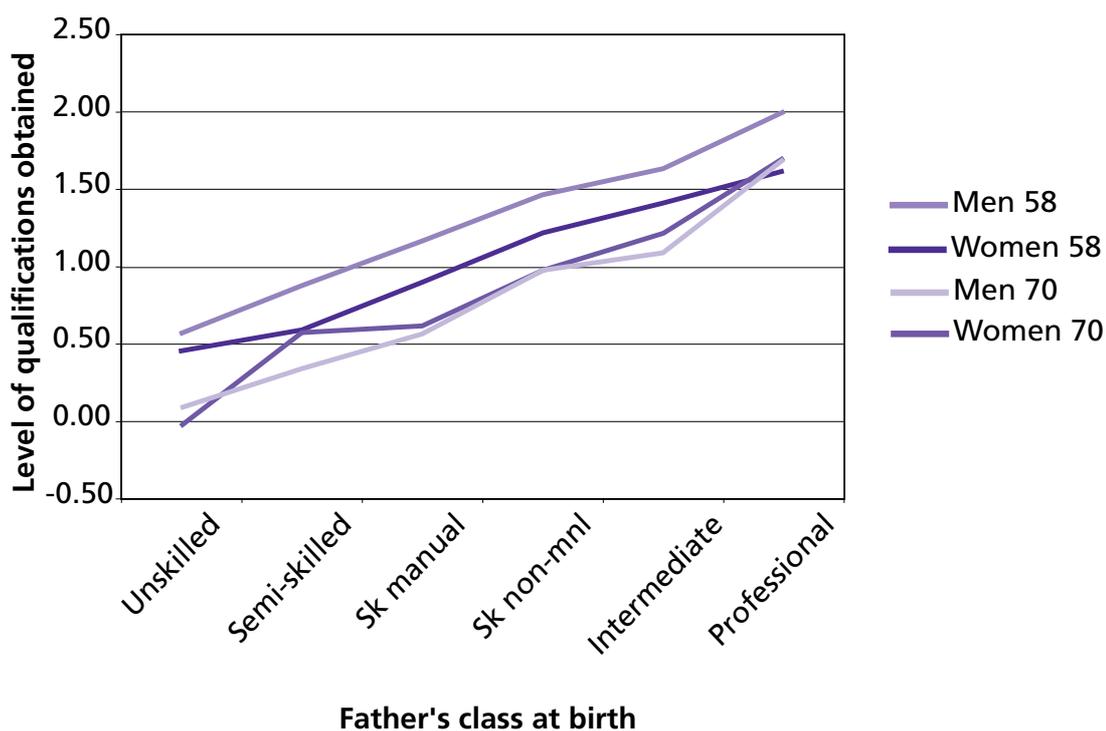


of work through unemployment or sickness doesn't make much sense. So here is another outcome, teenage motherhood. The further up the vertical scale you are, the more likely you are to have become a mother as a teenager. In the first cohort, the relative risk of becoming a teenage

mother is over five times as great for daughters of unskilled fathers as it is for daughters of professional fathers. It is just about nine times as great for the more recent cohort. So if you wanted to be adventurous about this rather small sample size, you could say that here is some evidence of the social class differentials becoming greater and more polarised.

Educational Attainment

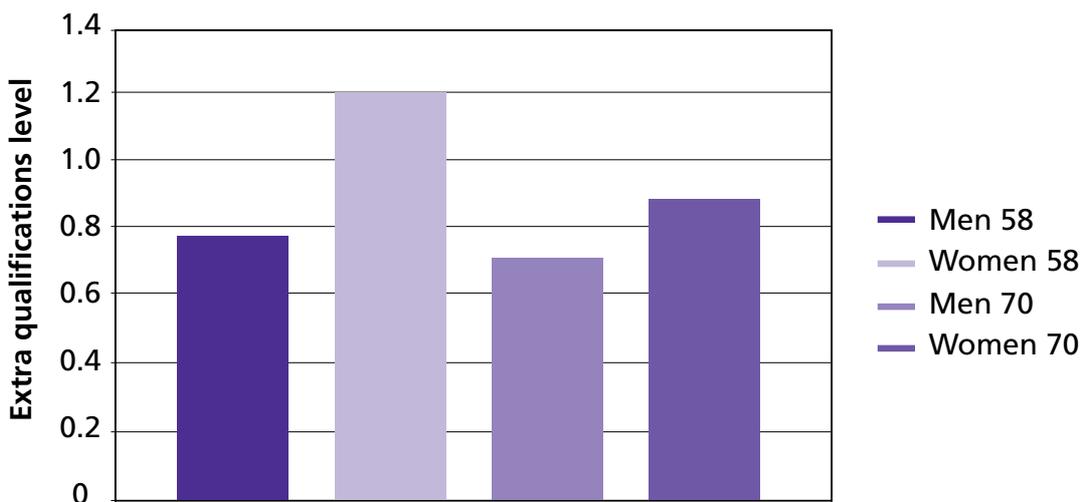
Qualifications by father's social class, controlling for parents' school leaving age



The last outcome I would like to report on takes one step back from these adult outcomes to the level of qualifications that the people obtained. There is no problem now about whether you are observing

them at 26 or 33. This outcome is comparable across cohorts. Plotting men and women separately, all four lines show a very similar relationship to father's class of origin. If anything, the gender gap is bigger for the first cohort than the second, but this is the finding to which John Bynner has already referred, that says that the social class differential in obtaining educational qualifications remains a very strong dominant feature of this virtual map.

Qualifications by childhood poverty, controlling for parental background and childhood test scores



To help us step further back and ask how people get to have these patterned levels of educational success, we have looked at the test scores at the end of primary school. These are important in predicting how

well you do when you come out of the education system, but they are not the only predictors. The indicators of childhood poverty that John Bynner mentioned have an independent effect on the child's educational success, in terms of getting an extra qualification, and this is shown in the chart. Qualifications are measured on a scale from 0 to 5, where 0 is no qualifications at all and 5 is a degree - you move up one level, for example, if you move from GCSEs to A level. The impact of avoiding all three of the childhood poverty indicators is to raise your qualification score by a bit less than one point.

The tallest block should not distract you too much. It suggests that the extra handicaps of a poor background were worst for girls born in 1958. But the point that I really want to make about this is that in all cases poverty has an effect on educational outcomes over and above the test scores.

Some Main Conclusions

I haven't attempted to draw graphs of the complex and contradictory patterns of rural effects, but we will be reporting on them. I am just going to repeat my version of what the conclusions are. We find that the major route on the inequality map is the route through education, and that although education is a vital ingredient for success in the adult labour market, if not in life, it is also the major vehicle for transmitting inequality from one generation to the next. It provides the most important channel for selecting children for success or failure later on. Although many children from disadvantaged backgrounds gain advantage in the classroom, children from more advantaged backgrounds gain even more. A lower class of origin and childhood poverty

make educational attainment more difficult, even for children of similar test score. There is also a small legacy of class of origin and child poverty on labour market access, independent of their effect on education.

So this research records the persistence over the 1970s and the 1980s (when these two cohorts were growing up and leaving school) of underachievement by children in underprivileged families, on a significant but not necessarily very startling scale. It therefore adds to the evidence, which you all know from many other sources, that today's most disadvantaged children may repay remedial interventions.

Discussion

Is Education the Answer to Inequality?

Wilf Stevenson

There is obviously a huge amount of data available to us and a lot more that we could spend time on and do research in. I have to stand in for Yvette Cooper here, a completely impossible task because she is far more expert and indeed far more alert to the political and policy issues which would have come to her mind from listening to this presentation. But I will pass on a couple of things that she mentioned to me last night which she felt were important to bring out, and ask John and Heather for their thoughts. Then I shall open the discussion out for comments, questions and contributions, in the hope that we might get some further insights into what this leads to in terms of policy.

Clearly the headline material that we have just ended on leads to questions about remediation of children in poverty. Indeed, the Prime Minister alluded to that last month and it is part of the philosophy of the current government. The effects here are significant. We are talking about making sure that there is a minimum floor in terms of income, below which we would do everything we could to ensure people did not fall, because of the impact on subsequent educational achievement. I think the figures are very clear. How you do that is something we might get some thoughts on, but it is certainly a very key and important factor.

Secondly, the educational attainment measure, and the cultural and

urban/rural dimensions of this, raise the issue of how to persuade people to stay on at school and therefore benefit from that impetus to further educational attainment, but then also to use that additional qualification or additional time in school to go on to the vastly increased higher education opportunities that now exist. There is some evidence, I think, from elsewhere as well as in this survey, that people who could stay on, particularly girls, don't do so because of social and cultural pressures. There must be ways in which we can direct policy measures towards that.

These are important starting points and I would like your comments on them, but there is of course another question. If everybody stayed on at school and everybody went on to higher education, would you actually have changed anything? If we are all in the same boat, does it solve the problems? Yvette just wanted to make sure that we weren't carried away by some Panglossian approach to solving the problem simply by requiring everybody to be a university graduate, which didn't actually get at the real issue.

Response: John Bynner

One of the clearest findings is the added deficit that experiencing poverty in childhood puts on to the basic background into which people are born. A lot of the initiatives in Sure Start and the New Deal are very much in tune with this. The central question of income and poverty comes through very strongly in these results. Wherever poverty is concentrated, there is an accumulation of disadvantage which works against the achievements of children experiencing it. We know this, of course, but there is an awful lot of poverty outside the concentrated

areas where the new initiatives are taking place, and we see quite a lot of it in the rural areas. The educational disadvantage that young men, particularly, seem to suffer from is clearly significant if they live in sparsely populated areas. It may mesh with the employment currently available to them, but as that employment structure changes, they will be increasingly disadvantaged, and their opportunity for mobility is obviously reduced.

The last question you raised is something for the floor, I think. We have to look at this partly comparatively. The level of educational achievement, the staying on, the move from school to work, are very different here to many other countries, where an extended period of education or training, right into the middle twenties, is the norm rather than the exception. In these samples, we still have half the population leaving education at the minimum age. I think that says something about the kind of employment people assume they are going to have and about employers' expectations. The whole system is clearly operating at a lower level than in many other places. As employment itself changes, increasing numbers of people are left out of it. That is the nature of technology and the impact that has.

All I really want to say at this point is that we cannot have enough of education, to protect individuals, to build up the human capital on which the transformation to employment would work, and to enhance the competitive situation for all of us.

Response: Heather Joshi

We have another finding which we don't believe, which is that if

you measure the pay off for being educated in terms of occupational attainment, in the way that we measured it for this particular study, that appears to have gone down between the two cohorts. This is not a finding that I would wish to publish, because we really need to use comparable information on people's earnings taken at a similar age, or at least control for the fact that they have had different amounts of experience. So Yvette's nightmare that everyone's got degrees and nobody's gaining from them could be on its way, but we haven't really showed that yet.

I'd like to mention another mechanism for sorting people out in the social hierarchy once they are adults, which is the impact of employment insecurity. This probably has more effect on people further through the life course than we are looking at. It happens to people in their forties and fifties who get shaken out of privileged perches for which they might not be ideally qualified. We should be cautious about too much generalisation about the experience of inequalities throughout society from this snapshot of a couple of stretches of lifetimes from birth to 26 or 33.

Questions for Further Research

Baroness Blackstone

I don't think Yvette Cooper needs to have too many nightmares about having thousands of unemployed graduates, when we are looking at data that shows that something like half the population in both these cohorts left school at the earliest possible opportunity. What we need to

focus on is how we can keep larger numbers of these young people in some form of education or training. Without that, many of them are going to be unemployable in the kind of economy that we have. From a policy point of view, it does suggest that we have to do an enormous amount for those young people. But what I want to ask both Heather and John is where this research is going to go next.

There are two issues it could helpfully explore. It is, after all, longitudinal data, and I assume that they are continuing to follow through these two cohorts (I am not sure about this, but perhaps they can tell us). We ought to be able to find out quite a lot about the extent to which people can be supported and picked up later. If we are going to make something of lifelong learning, we have got to reach, not just those who have already had a lot of education, but those who have had very little. Finding out whether we are getting to any of these people would, I think, be enormously helpful.

The second thing we need is much more qualitative analysis of what it is about those young people who, in spite of childhood poverty, still manage to succeed. That then tells us quite a lot about the kinds of policy intervention it is worth pursuing. Is it that they have been influenced by, or supported by, excellent teaching? So is the quality of what goes on in schools, school standards, really important? Is it that somehow or other they had some sort of financial support that made it easier for them to stay on? That they were less influenced by peer pressure to go and get a job as early as possible? We need more understanding of that sort before we rush into any kind of policy conclusions from the data.

Much of this data simply confirms what we have already known for a very long time. What is depressing about it is that the impact of the welfare state over a thirty year period has been very limited - with the one exception that the gender differences are so much less than they were (and I'm not sure that the welfare state can get the credit for this). Again, we need more thought and analysis of why it is that women are doing so much better. Incidentally, I think Wilf Stevenson suggested that social and cultural factors were more influential in terms of encouraging girls to give up their education and training early than they are for boys, but the reverse is true in fact. We are getting a bigger drop out from young men than from young women - and a much less successful performance, particularly in school leaving exams.

Response: John Bynner

On the need to monitor the effects of policy, particularly in relation to lifelong learning, I should have mentioned that we are planning surveys, to begin in September, in both these cohorts. One of the major sections is devoted to the lifelong learning issue, really to track the educational pathways and routes from the previous survey to the current one. We are dealing with 29 year olds in the later cohort and 41 year olds in the earlier one. We are very much influenced by the adult learning surveys carried out by Social and Community Planning Research for the Department for Education, drawing on that kind of question base.

In regard to qualitative variables, we drew today on rather hard data, from more of an economist's point of view I suppose. There are much more qualitative and subjective indicators in this data set (parental

interest, parental aspiration) which also show up independently as operating on these educational achievement levels. Doria Pilling's *Escape From Disadvantage* was a particularly fascinating study which actually used qualitative follow up. It spotted people in the 1958 cohort who should have done very badly, from all the indicators in their early lives (poor circumstances, poverty etc.), and then identified those doing much better than expected at the age of 23. Those up at the top end of the occupational scale and doing relatively well in terms of income were followed up with qualitative interviews. One of the key factors was found to be the maintenance of parental aspirations through periods of economic stress, reinforced by strong commitments of teachers to individual children. Not necessarily the quality of the curriculum - the quality of home-school relations came out of that more strongly than anything else. It is a striking piece of work, a very important finding, which we will go on pursuing through the studies we are doing later still in life.

On young men's problems, another study I am doing for the Social Exclusion Unit is really on the issue of young people not in education, training or employment. We look at similar variables. There it is very striking to see that young women's marginalisation is very often through early pregnancy, but in young men, it's just through dropping out - a kind of absence of activity and an absence of engagement in education or employment. It is an accentuation of a lot of the things we have found here, which are very strong and a growing problem in comparison with the problem young women face. And there is a stronger sense of marginalisation than we see with young women.

Ability and Class

Professor Julian Le Grand

Can I ask Heather Joshi, how do you reconcile your results with those produced by Peter Saunders (using again, I think, the NCDS)? He argues that ability, which I imagine is measured by these childhood test scores you were referring to, is actually a better predictor of adult outcomes than social class - that it effectively washes out the social class variable. Is that consistent with the kind of thing you are doing?

Secondly, I wouldn't be too quick to rubbish the finding that you seem to be getting of a slight weakening of the class effect across the cohorts. I am not sure about the exact timing of it, but it was probably round about the period of the comprehensive revolution, at least for the 26 year old cohort, and it may be that the shift to comprehensives actually did have some sort of impact, and that one shouldn't be too doom and gloom about the impact of the welfare state.

Response: Heather Joshi

You say that Saunders says that children's ability is what predicts their achievements, not who their dad was. If we include both sets of information in the same model, then who your dad was is quite a strong predictor of what scores you get at 10 or 11. But including information on what scores you got doesn't completely, in our models, supersede the information about who your dad was. There is still a smaller, but in most cases, significant additional association from the parental situation at birth, as we measure it.

There is also a question of interpretation, of why you think there is an association between parental circumstances and test scores. On one interpretation (which may be the one Peter Saunders has), the test scores are measuring some sort of innate ability. The less advantaged parents produce less able children, so there is nothing you can do about it. On another interpretation, the less advantaged homes, the less advantaged early childhood situations, handicap the cognitive development of young children. There is a lot of evidence that that is the case, both American and British, including from the young children of the '58 cohort, the second generation. Looking at these, we have also demonstrated something of relevance to today's debate, that child poverty handicaps the cognitive development of today's young children, or at least 1991's young children. Parental interest in child's education does a lot to compensate, or can do a lot to compensate, for adverse material circumstances. It has an independent effect.

The Rural Situation

Nick Way

I am particularly concerned with the rural area aspect of all this, and the implications for wider policy issues there. The results on education are very interesting. There has been some other work, but this seems more detailed. It tells us some of the story, but not the whole story. Why do boys do worse in rural areas than in urban areas, and what happens to them after that? And what happens to girls, who do better in rural areas than in urban areas? It has been suggested that girls do go on to higher education more. The picture I get is that school leaving age in

rural areas is quite a crunch point. This may be not only a matter of social class, although the importance of that has clearly come out, but opportunities thereafter in rural areas. I suspect that there are other reasons for low income levels in these areas in addition to what we have heard so far. Some of the lowest income levels in the country are found there.

So I think the debate will have to go further, to look at some of the other difficulties that school leavers and others face in rural areas. To take the New Deal as just one example, there has been quite a lot of effort to get it up and running in rural areas, and a will for it to succeed, but people have run into problems with transport in particular, and the mobility that people on the New Deal need to get out to the training days and so on. It raises the whole issue of economic opportunities, and the importance of factors such as the general level of economic activity, the variety of jobs and the availability of housing in improving opportunities and chances all the way through people's lives in rural areas. And, indeed, improving that childhood poverty aspect which seems to be a brake on progress so early on.

Response: John Bynner

I totally agree. We can address some of the questions through more precise mapping of area information onto these individuals, because they are spread uniformly throughout the country. (It is a complete random sample of the population, very unusual in surveys of this kind, with no clustering involved.) We can link area data more precisely to levels of unemployment and levels of provision, which we shall be doing in later studies. In terms of these results, one can say that clearly

the absence of transport, the absence of provision, is going to add to the burden people face in reaching levels of educational achievement. It is going to reduce their mobility in jobs, but also in and out of the area. So I think there is a very strong finding here, which we have got to pursue much further. Precisely what is the nature of the penalty that young men particularly seem to be finding in remote rural areas?

Paul Marsden MP

I was a bit concerned by the sort of headline statement about higher employment in the rural areas. I think you have gone on to explore that and to reassure me that obviously there are real concerns there, but it could be used to reinforce the stereotype of the quality of life in rural areas - higher employment generally, lower crime, higher privately owned houses, etc. It masks the real deprivation that is there, in particular with young men growing up in those areas. I would like to see a focusing of your research onto that narrow band of people, who tend to be disadvantaged by background, through lack of opportunities in jobs. It is difficult for the welfare state to be able to reach out to them, and again transport is a big issue. I would have thought that, out of the 20% who don't own a car in the rural areas, a lot of them are young men who have grown up with lack of opportunity. Very often they can be forced out of those areas. So I would hope that you can focus down onto that, to highlight it, because it is hidden, it's real, there's higher crime levels, there's higher social deprivation.

I remember speaking to one young man, at a sixth form college in Shrewsbury, who said to me that he had had no hope whatsoever of ever really being able to make much of his life until the college subsidised

some of the transport opportunity. A new rural bus subsidy came in which allowed him to get to the college, which was some ten miles away from where he lived. I would hope, as I say, that you continue to focus on that area, because that is where there are real problems in rural areas. We can see the disintegration of rural communities, with commuters coming in who have greater opportunities for themselves and their children, and those who grow up in rural areas facing the greatest difficulties.

Response: John Bynner

We mustn't leave the rural issue behind. The fact that you can be protected from unemployment, maybe, in a rural area doesn't say anything about the nature of the employment. We too often tend to overlook the fact that jobs come in all kinds of variety, and many are very poor, very casual. Being engaged with those is no real security, when you can be switched in and out of them quite easily. It is interesting that the occupational achievement measures, as opposed to the protection from unemployment measures, didn't show up at all in relation to living in rural areas. So I think the points made about that are very strong. We need to explore that issue in much greater detail, which our data enables us to do.

Numeracy, and a Part-Time Option

Professor Richard Layard

I think what has been said about education is absolutely right - the policy issue is what kind of education and what strategy. I would like to

mention two findings which seem very relevant. The first, which I learnt from John Bynner through the work of the Moser Committee, is that numeracy has a far bigger impact on a person's lifetime success than literacy. The people who do really badly are the people who are innumerate, even if they are quite literate. They do much worse than the people who are illiterate but numerate. We need a real refocusing of our educational system towards an attack on numeracy. People talk so commonly about literacy as the problem, but actually numeracy is at least as big a problem. We will never deal with this, in my opinion, unless we deal with the sixth form curriculum, produce numerate primary school teachers, and all the rest of it. There is a lot of evidence that numeracy is the feature of the educational system which has most impact on national productivity as well.

Secondly, at the level of post compulsory education, if you take people with given GCSEs and see what education they pursue afterwards, and you look at the class gradient, you find that the lower the parental occupation, the more likely it is the person will go down the part time route if they go on to study. There are two conclusions you could draw from this. One is that you simply must get more of them to stay on full time, and that surely has its faults. The other is that you should take the part time route very seriously, because it obviously has some attractive force for the kind of people who otherwise, as John Bynner says, are left out altogether. So I think it is very important we pursue a two pronged attack on the post compulsory period, rather than think the only answer is the full time route.

Response: John Bynner

On numeracy, it is worth saying that one of our most striking findings is that girls are particularly disadvantaged if they are very poor at numeracy. This may reflect the nature of modern employment. It is not numeracy so much as operating mainly in a numeracy related environment - office work, new technology, etc.. There seems to be a penalty in being very poor in that skill area.

As to engaging young people in education through part time routes, I totally agree. Another project I have been involved in has been examining open college credits in London. There it has been remarkable how certain kinds of provision can involve people who traditionally have not been active in education. There is a strong tradition in London obviously through open colleges, but these are the means of short term, part time routes back into education. It is quite extraordinary, when you look at the figures, the proportion of people from backgrounds who wouldn't normally be involved - many unemployed and many young people, who by other criteria would not normally be seen in an educational setting.

Male Motivation and Family Programmes

Barbara Follett MP

I represent Stevenage, which is one of the new towns, the oldest new town. It is mainly skilled and unskilled manual workers. One of our biggest problems is educational achievement and educational aspiration. I am particularly interested in the policy implications of

parental interest, because the people of Stevenage are not as badly off. Poverty doesn't play the role, it is lack of aspiration, and particularly lack of the father's aspiration. There are quite a lot of single parent families, but most of the families have hung together. But the fathers have given up. So I have a lot of young men who have given up. With literacy programmes, the only way we have managed to shift children's lack of aspiration is to involve the parents in them, to bring the parents into the school and to teach them almost by stealth. We are telling them that we are helping them to help their children to read. What we are finding is that we are helping them to read. We are now starting on a numeracy programme, and I think that if we are going to break this cycle of deprivation, we have got to intervene at the parent level and do it very quickly indeed.

Response: John Bynner

On the problem of male lack of motivation, there is a kind of identity issue in all this which this country is still struggling with. An awful lot of men clearly still see their world in terms of a past that really no longer exists - in terms of male manual employment and what that means. Leaving school at 16 is absolutely essential, you don't hang around, you get a job. Although there has been an increase in staying-on rates, it is nothing like the levels on the Continent, where the expectation would be that you are involved in education at least until 18. In the USA, after all, you are a drop-out if you leave before 18. In this country, the minimum age is when you really think seriously about leaving in a wide area of traditional working class populations.

We heard an example of where you leave at a minimum age and you

haven't been persuaded or motivated to do anything else. The family literacy programme was a very interesting example of how, for most people, whatever they think about their own futures and what they are really about, they do care greatly about their children. They seem to have acknowledged that there is a greater need for educational qualifications in the next generation. Therefore, involving parents in helping their children with reading, as I hope family literacy and numeracy programmes do, has a remarkable effect not only on the children but on the parents. They themselves start actually improving their own skills through helping their children. That is one of the best motivations I think you can find.

Gender, Class and Teenage Motherhood

Rt Hon Harriet Harman MP

You mentioned the transmission of inequality by education, the parents' education. Do you have it broken down in terms of the differential impact of the mother's education or the father's education? Or is it exactly the same?

Secondly, you talked about the class differential in relation to teenage motherhood, which brings the focus on to three other variables. Is the class differential to do with girls from working class homes having sex at an earlier age, or having sex with less contraception, or having less abortions? I just wondered whether there is any British data about this - I know some work is being done in America. I understand the information from the States is that although there is some differential

about age of sex with girls from a lower social class, parents having sex at an earlier age is not much different, nor is the use of contraception. The really big variable, the class variable, is about abortion.

Finally, John mentioned that gender itself is becoming less of an obstacle to achievement. That is very clear in education, but in terms of the labour market and income, gender is an issue when it comes to having and looking after children. Since the women are having and looking after the children, their income divides and opens up as wide as it ever was. So, although the girls are getting more equal to the men from birth up to having children, their labour market participation and their earnings and their absolute advance seems to me to revert back to the 50's.

Response: Heather Joshi

Which parent is transmitting the benefits of education? In this exercise, it seems to be both. It is not very different. We are also putting in what kind of job the father has got, which also contains information about his qualifications, so if anything it is the father. But in these generations, there weren't many highly educated mothers.

On teenage motherhood, I don't know the answer to your question. I read something yesterday which was extremely interesting and also relevant. Colleagues at the Institute of Education who work in the Thomas Coram Research Institute (Peter Aggleton and his colleagues) have done a qualitative study of the sexual health and sexual behaviour of young people. They point out a completely polarised attitude of young men and young women to whatever it is that brings them to have sex with each other. The girls want love and the boys want the

experience. Because they are teenagers, they are in a higher band for taking risks as well. Probably the offspring of middle class parents are less abandoned about risk, though I am not sure about this, and probably they are better organised at getting access to abortion if they need it.

And the gender obstacle from having children: the economic achievement, as we are measuring it, takes it that if the cohort member has not got a job when we observe her at age 33 or age 26, we look back to when she last had a job, and not at how good a job that was. We are not attempting to quantify the current or eventual impact of entering motherhood. Most of the 26 year olds hadn't yet had children. That is another reason, I would say to Julian Le Grand, for being cautious about the comparison, rather than rubbishing it. By age 26, as we have measured it, there may be a lot of things yet to happen, which the new data will reveal.

Tackling Disadvantage

Professor Anne Power

You talk about the bottom social classes, showing this consistent pattern over the two cohorts, that if you are in this lower social class, all the predictors work against you. But you don't talk about people moving in and out of social classes, or changes in the class structure. The numbers of people in a particular class, or the percentage of the overall population, does seem to be changing, and that must be progress. That is a question, really.

I wanted to pick up on Heather Joshi's conclusion, which was very interesting. You said something like, most disadvantaged children may repay remedial intervention. I totally agree, but you need a much higher investment of energy and effort for possibly a smaller return; you need some amazing level of skill in teachers; and you need the extra time and effort it takes to involve the parents, because all the evidence shows that unless you involve the parents, what you do at school is very likely to be undone extremely quickly.

There is a big cost attached to doing that. Because the payback is so risky, it is always easier to try to drag up the poorer school, which will help the more able children who most likely would have succeeded anyway. Whereas the investment in the less able children within the less well performing schools is always reduced, because those schools are under the greatest pressure to improve their test scores. Unless we change our whole attitude to the educational gains that can be made among the lowest achieving children and the most disadvantaged children, and unless we change completely the status of those who help those children in the educational profession, we are just talking in the air.

All the evidence from the qualitative study that you mentioned would bear out that investment by special teachers in children with great difficulties has an immediate payback. It is a huge leap for those children. But in terms of the overall gains for society, it is quite small. So do we want to haul up that bottom? If we are as genuinely worried about that consistent pattern at the bottom as we seem to be, we do have to make a completely different attack on that problem.

A second point is about adult learning. I am involved in a very small experiment in adult learning which seems to be opening a completely new dimension to the issue, which is that if you take people away from their community, they seem to be more willing to attack basic skills problems. We have organised an experimental programme in basic skills on a residential basis. It has shown two things. First, that with very short notice, but offered free, vast numbers of the target people actually try to get on to basic skills courses - but away from their community. In their community it is hard work, because you have to admit to some sort of deficiency. The second thing that is incredibly interesting is that one of the programmes is targeted at families, and parents are very keen to take their children away to do the same thing. On one of the two family programmes, the majority of parents were fathers, so I think there is the possibility for experimentation on this adult learning track that could actually haul children up, as other people have been saying, in a pretty rapid way alongside their parents, and particularly the fathers. So I just hope some of those lessons may percolate through too.

Staying On or Dropping Out

John Wilson

Even the 1970 cohort reached 16 in 1986, and since then there has been a substantial rise in the number staying on beyond 16. I was wondering if there is any evidence as to how this change featured, whether there was a third cohort coming through to track what's happening now. A second question is this. The simple answer to getting people to

stay on beyond 16 would be to raise the leaving age. It may be simple minded, but is there a good reason why this can't be done? If it can be raised from 15 to 16, why can't it be raised from 16 to 17?

Christina Shewell

Following on from that, we know that more and more students are entering further education. Do we have figures to relate this to social class? And secondly, we also know that many more young people stay on after 16 in Europe and in the States. What is the motivation? Why do they, and how can we do it?

Anthony Bosanquet

I want to pick up particularly on the points that Professor Bynner was making concerning the young men. I did teach in a comprehensive school back in the late 1970s, so my evidence is probably seriously out of date, but I certainly noticed among the young men that they couldn't wait to get out of school because they thought it was irrelevant, and the word that kept on coming out was 'boring'. There is a serious problem here, because of their culture perhaps, but I think even more because they can't see that it's actually going to lead them anywhere. It is this lack of the feeling that education is going to be a door opener for them.

In South Wales, where I come from, there has been a massive restructuring of the coalmining and steel industries. The sort of jobs that these young men would naturally have gone to in previous generations just simply don't exist. The sort that do exist are for those who have got higher educational achievements than they feel, rightly or

wrongly, that they could ever aspire to. Therefore, in a sense, they give up. I know that in those areas, and it applies in rural areas as well. In the farming industry and elsewhere, there is such a gap between what these young men see that they can aspire to and what is actually available to them, that they give up.

Added to that is the natural feeling of rebelliousness that you get in the teenage years, that critical time. You are probably never more rebellious than you are at the age of 16, and what society as a whole, or your parents, suggest is desirable is something you instinctively rebel against. By the time you have gone through that stage and come out the other end, the means of achieving and gearing yourself back into the system are not there, particularly in rural areas - once again because of lack of accessibility, lack of mobility, and things like that. I think it is very serious.

Response: John Bynner

The two questions are connected. Yes, the staying on rate has gone up, but not really that much. The fascinating thing is that when youth employment collapsed at the end of the 70s, you didn't really get a massive rise in the staying on rate. It wasn't that massive until the late 80s, in fact. There was a very big lag, and even then it levelled off at about 70% staying on post 16. It hasn't gone up that much, and in fact it wobbled around that figure. The youth cohort studies, of course, which are carried out every two years, following up cohorts of 16 year olds, do monitor that change, and you have to ask the question why?

I think in policy terms there has to be a cultural shift. The reason why other countries have achieved much higher staying on rates is because

of the assumption that there is a long period of life, leading right up into the 20s, where you can benefit from some form of training or education, and that education, vocational and general, will certainly extend to 18. There is no expectation, really, of not going on to a vocation or a general school in, say, Sweden, or continuing via the apprenticeship route in the case of Germany. But even there, there is a legislation question, because in Germany you can't not be engaged with education in some form or another until 18, either part time, through the apprenticeship route, or full time. You can't be out of the system. So there is a question there for policy.

In relation to the question on expectations in the rural areas, I think that's absolutely correct. There is this feeling among young men that their opportunities are limited for what's available, and they just don't see the reason why they should stay on, or work, or try to achieve qualifications. There is also this very strongly held tradition that you simply have to work. There isn't this period of transition in preparation for work, by training or vocational courses and all the rest of it. Somehow, they haven't signed up for that, and their families haven't either. I think that is the biggest challenge for educational policy in this country.

Response: Heather Joshi

I would like to say a bit more about the geography of where these problems we have identified are taking place. The fact that not every outcome is worse in every rural area doesn't mean that the problems of coming from a disadvantaged home are not equally great, wherever you are. It is just that the solutions may be rather different. The solution for

some of the deprived children in urban areas will almost certainly involve action in deprived localities, where a whole combination of services need to be and can be delivered, because it is a localised cluster. But this doesn't solve all of the problems, because where people are sparsely scattered in pockets, whether in rural reaches of Wiltshire or in the outer Hebrides, the policies which will improve the parents' or the children's life chances are almost certainly going to involve something to do with transport, which is perhaps the one thing that people in some inner city areas don't need. So even if the problems, from the point of view that we have identified, are similar, it is necessary to consider whether the solutions are different.

Wilf Stevenson

I am conscious that we haven't answered all the questions, but I think you will understand that with such a big range of potential issues, we are going to have to spend more time going back to see how this work should play out. I would like to thank the speakers very much on your behalf for dealing with such complex and difficult social science statistical issues, in a very accessible way. I also thank you for giving us your thoughts, and, I think, giving us some new lines of enquiry.