

## **Social Mobility and Equality of Opportunity Geary Lecture Spring 2010**

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### I INTRODUCTION

Ladies and gentlemen, director, colleagues and friends: it is a great honour and a pleasure to be asked to deliver this year's Geary lecture, coming, as it does, on the 50th anniversary of the founding of the Economic and Social Research Institute (ESRI). Over the years many eminent economists and sociologists have given the Geary lecture, but I believe that I am one of the few who knew Roy Geary personally because we were colleagues here during the last few years of his life.

Roy Geary was the most eminent Irish statistician of the 20th century. But during the short time in which I knew him he was less concerned with statistical problems and more with the social problems of contemporary Ireland. So I hope that the topic of my lecture is one that Roy would have found both intellectually interesting and of some practical relevance.

For a large part of my professional life I have worked on social mobility and so it will come as no surprise that this is the topic of my talk. Recently, governments and political parties have discovered, or rediscovered, social mobility and in some cases they have made its promotion a central theme in

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policy. For example, in January the British Prime Minister, Gordon Brown, gave a speech in which he said:

... social mobility will be our theme for the coming election and the coming parliamentary term. Social mobility will be our focus, not instead of social justice, but because social mobility is modern social justice.

The idea of social mobility is closely linked to the concept of equality of opportunity: it is widely held that if there were greater equality of opportunity there would be more social mobility and, conversely, that more social mobility indicates greater equality of opportunity. In my view this argument is false and so, in my lecture today I want to talk about what we know about social mobility, what we might mean by equality of opportunity and why, despite the claims made by politicians and sometimes by social scientists, social mobility is not a yardstick of equality of opportunity.

## II TWO KINDS OF INEQUALITY

In discussions of inequality by philosophers and social scientists, a distinction is commonly made between two kinds of equality: “equality of outcomes (or condition)” and “equality of opportunity”. The difference between them can be illustrated by a simple example. Imagine that I had \$1,000 and I divided it equally between everyone in this room: then we would have equality of outcomes. But if, instead, I gave everyone a lottery ticket and then drew a ticket at random and gave the holder of that ticket the whole \$1,000, we would certainly not have equality of outcomes but we would have equality of opportunity: since everyone had a lottery ticket, everyone had the same chance of success.

When we turn to the question of the distribution of rewards in society at large, we find that people in developed societies have a strong preference for equality of opportunity over equality of outcome. When they are asked, the great majority of people disagree with a statement like: “The fairest way of distributing wealth and income would be to give everyone equal shares”. But when given the statement: “It’s fair if people have more money or wealth, but only if there are equal opportunities” many more people agree than disagree. In Britain, the USA, and Germany, over 70 per cent more people agree than disagree with that statement (Marshall, Swift and Roberts, 1999, p. 246). In a recent US poll (Opinion Poll on Economic Mobility and the American Dream, Pew Charitable Trust, March 2009), when asked whether it was “... more important for this country to reduce inequality in America or to ensure everyone has a fair chance of improving their economic standing”, 71 per cent

favored ensuring everyone had a fair chance compared with 21 per cent who thought it was more important to reduce inequality.

In recent years the politics of inequality have come more into line with the views of the general public: political parties and governments in most western developed nations now give much less weight to policies seeking to equalise inequalities of income and wealth and more to policies that address inequalities of opportunity. One measure of the degree to which governments have relinquished the idea of equalising outcomes is the falling top rate of income tax: in the US in the 1970s the top rate was 70 per cent and today it is half of that. The redistribution of incomes or wealth is no longer a goal: instead the goal is meritocracy, in which rewards are indeed unequal, but are nevertheless legitimate, in part because individuals are given equal chances to acquire them.<sup>1</sup>

Although people in many countries believe that both equality of opportunity and meritocracy are desirable, there is a lot of variation between countries in the extent to which people believe that these goals have been attained. As we might expect, Americans are the strongest believers that their own society is meritocratic: on average, Americans consider individual effort a much stronger determinant of whether or not someone succeeds than the economic circumstances in which he or she grew up. In other countries, like Britain, there is much more scepticism: indeed, in Britain a majority believes that people do not have equal opportunities to get ahead.

How would one measure the degree to which opportunities are equally or unequally distributed? The most common way has been to look at social mobility, and, in several countries, social mobility has now come to occupy a central place in political debate (Goldthorpe and Jackson, 2007). Rates of social mobility have come to be a yardstick by which government policies to further equality of opportunity are to be judged. In Britain a discussion paper written for the Cabinet Office in 2001 put this quite bluntly: “lack of social mobility”, the author wrote, “implies inequality of opportunity” (Aldridge, Stephen, 2001, “Social Mobility: a discussion paper”, UK Cabinet Office, available at [www.pm.gov.uk/files/pdf/socialmobility.pdf](http://www.pm.gov.uk/files/pdf/socialmobility.pdf)). Indeed, it may seem unproblematic to argue that if there is more social mobility there must be more equal opportunities. Social scientists themselves have said, or, at any rate, implied as much, by equating social mobility with equality of opportunity. For example, one of my Geary lecture predecessors, Gary Becker, wrote in his

<sup>1</sup> To take the example of Britain: immediately following the 1997 general election, Tony Blair said: “The Britain of the elite is over. The new Britain is a meritocracy.” Two years later he reiterated: “The old Establishment is being replaced by a new, larger, more meritocratic middle class.” (*The Sunday Times*, February 4, 2007).

famous work *A Treatise on the Family*: "Variation in the income and status of a given family in different generations has usually been known as inter-generational mobility ... or equality of opportunity". (Becker, 1981, p. 143).

In my talk today, I shall argue that the claim that social mobility measures equality of opportunity is insufficiently attentive to the causes of social mobility and to what equality of opportunity might mean. Once we pay close attention to these two things we will see that there is, in fact, no straightforward relationship between equality of opportunity and social mobility.

### III SOCIAL MOBILITY

When we talk about social mobility we usually mean intergenerational social mobility, comparing an individual's circumstances with the circumstances of the family in which he or she was raised. Social mobility is a topic of interest to economists as well as sociologists, but there are some differences in how they approach it. For sociologists, the relevant circumstances that we want to compare are measured in terms of occupation or social class and so the study of intergenerational mobility involves the comparison of a person's social class with that of the family in which he or she grew up. In this case we often speak of class destinations and class origins. Economists, on the other hand, measure circumstances in terms of income or earnings and so they focus on intergenerational income or earnings mobility. The information used almost always relates to men and typically involves comparing a man's average income over several years with a similar average of the income of his father. Ideally, the span of years across which the average is calculated is quite long, and covers the same age range for father and son. So, one might compare the average income of a man between the ages of 35 and 45 years with the average income of his father when he was between 35 and 45 years old.

The economists' approach yields single number measures of mobility – or, to be exact, of immobility. One of these is referred to as the intergenerational elasticity, and it tells us the percentage difference that we should expect in sons' incomes for a given percentage difference in their fathers' incomes. So if the elasticity is 0.4, a 10 per cent difference in fathers' incomes translates into a 4 per cent difference, on average, in sons' incomes. A high value of the elasticity means that there is little mobility, in the sense that a son's income is closely related to the income of his father. The intergenerational correlation is another measure that tells us, on a scale from zero to one, how strong the relationship is between a man's income and the income of his father, with higher values reflecting a stronger link.

The elasticity is a relative measure because it tells us how parental income predicts one's own relative position in the income distribution, rather than

one's absolute income. What we know of these measures is that they vary quite widely between different countries. The elasticity is particularly low – and so mobility is relatively high – in the Scandinavian countries, and it is high – and so mobility is low – in both Britain and the US. One question that interests economists and sociologists is whether there is a relationship between the degree of inequality in the distribution of income in a society – as measured by the Gini index, for example – and the extent of intergenerational mobility. One motivation for this interest is the US case. It has long been believed that although there is a good deal more inequality in the US than in most comparable societies, there is also more mobility and so everyone has a better chance of reaching the top (or falling to the bottom, though that is less often remarked on). Unfortunately, for those who believe in this particular aspect of the American Dream, it seems not to be the case: the US has indeed a great deal of inequality in the distribution of income, but it also has less mobility than most other countries. Comparing the US with Sweden, inequality in disposable income is about 50 per cent greater in the US (the US Gini is around 0.3, the Swedish Gini around 0.2) and immobility in the US is almost twice what it is in Sweden (the US elasticity is over 0.4, in Sweden it is a little over 0.2). So rather than high inequality in the US being offset by high mobility, these two things reinforce each other: inequality in the US is both higher and more persistent across generations than in most other developed countries.

In contrast to economists, sociologists usually look at mobility between social classes. Social classes are groups of occupations put together because they are thought to be similar in important ways. Sociologists use two kinds of measures of intergenerational mobility – absolute and relative. The relative measures, similar to the elasticity used by economists, tell us how strongly parental social class predicts the social class in which a child will be located when he or she is an adult. Sociologists sometimes call this social fluidity and a situation in which child's social class does not depend at all on parent's class is called perfect mobility. Although no society comes close to displaying perfect mobility, societies with high social fluidity are closer to it, having a weak relationship between the class position of parents and their children. Measures of absolute mobility, on the other hand, capture whether people are higher up or lower down in the class hierarchy than their parents. This involves a simple comparison between a person's social class and the one he or she was born into, whereas relative measures ask whether a person's position relative to other people, is better or worse than his/her parents position was relative to other families.

Suppose that my father was a clerk and that I am a manager: then, in absolute terms I have been upwardly mobile. But suppose that, in my father's

generation, being a clerk gave him a class position that was better than half of the population, whereas, in my generation, being a manager puts me in a position which is better than, say, 40 per cent of the population. Then, in relative terms I have been downwardly mobile because my rank is worse than my father's: half of the population were in a better position than him whereas 60 per cent are in a better class position than me, and this is so even though I have an objectively better class position than he had. This discrepancy between absolute and relative mobility might seem far-fetched, but it is actually quite the opposite. When there has been a large upward shift in the distribution of class positions such a discrepancy will be common.

We can make the same distinction when we look at income mobility. Recent US data show that two-thirds of Americans earn more, in real terms, than their parents did, and so they have been upwardly mobile in the absolute sense. But of these, only half of them, or one-third of all Americans, have been upwardly mobile in the relative sense – because they are higher up the income distribution than their parents were. The other half of the absolutely upwardly mobile have either been immobile or downwardly mobile in relative terms.

#### IV TRENDS IN SOCIAL FLUIDITY

Sociologists have found that relative class mobility varies quite a lot between countries, with Scandinavia once again showing the greatest relative mobility and countries like Germany, Italy, France and Ireland the least. So, happily, variations between countries in relative mobility chances seem fairly similar, irrespective of whether we focus on income or class position.<sup>2</sup> One advantage that sociologists enjoy over economists is that they can also examine long-term temporal trends in relative mobility chances, simply because it is easier to find out someone's parental class than to find out their parental income. The major trend is a quite widespread tendency towards more social fluidity in most European countries during the course of the 20th century. In other words, a person's class has gradually come to depend less on the class occupied by his or her parents.<sup>3</sup>

<sup>2</sup> Some analyses find that social fluidity in the US is high, on a par with that found in Sweden. This contrasts with the situation in respect of income mobility: proponents of the American dream might find some comfort in this. But other analyses (Erikson and Goldthorpe, 1985) put US fluidity on a par with that found in Britain, and thus at the lower end of the range.

<sup>3</sup> The United States has followed a different path. In the late 19th and early 20th century, relative mobility rates were much higher than they were in the mid-late 20th century (Ferrie, 2005).

What explains this trend? Social scientists have not been as good at explaining as they have at documenting and describing, but there is general agreement that changes in educational attainment have played an important role. On the one hand, there is now good evidence that, in the advanced democracies, educational attainment depended less on class origins at the end of the 20th century than it had at the start. Average educational attainment increased and there was a narrowing of the gaps between people from different social class origins in their attainment. In turn, greater equality in education helped weaken the degree to which class destinations are linked to class origins.

But beyond this, it seems that among people who have higher levels of educational qualifications, their social class origins play a weaker role in shaping their eventual class destinations. This means that educational expansion alone, even in the absence of any decline in educational inequality, can make for more social fluidity. This is quite a mechanical process: if class origins are less important in shaping destinations among highly educated people then, as more people come to acquire higher levels of education, the overall association between origins and destinations will decline. In several countries, including the US, Sweden, France and Germany, this has been an important avenue towards greater social fluidity.

## V TRENDS IN ABSOLUTE MOBILITY

Although social scientists devote a lot of time to measuring relative mobility, absolute mobility is probably more salient in shaping an individual person's experience of intergenerational mobility. We are more likely to measure our own mobility by a comparison of our position with that of our parents, than by some complicated comparisons of where we are relative to others, relative to where our father was relative to others 30 or 40 years ago. Indeed, if we want to explain why patterns and rates of mobility differ across countries or over birth cohorts – that is, why the flows from class origins to destinations are different in Spain than in the Netherlands, for example, or why these flows were different for people born in 1900 than for those born in the 1950s – relative mobility is not the place to look. Certainly relative mobility differs over countries and cohorts, but it does not account for much of the variation we see in absolute mobility.

Throughout most of the 20th century and up to the present day, most people in the developed democracies have been socially mobile and the majority of them have been upwardly mobile. Of men in the labour force in Ireland in the 1990s, almost exactly two-thirds of them were in a different

class than the one occupied by their father when they were growing up. And of these, half had been upwardly mobile compared with less than one in six who were downwardly mobile. The Irish experience is typical: mobility was the norm and upward moves greatly exceeded downward ones.

What has caused such high rates of absolute mobility? The answer can be stated simply: economic change that led to the growth of some occupations and classes and the decline, and even demise, of others. The way in which this process has unfolded has been quite similar in most of the countries we have studied. It has been driven by two major historical transitions: the first from agricultural to industrial society; the second from industrial to post-industrial society. During the first transition the share of farmers and farm workers in the economy declined, while the share of manual workers, particularly in manufacturing industry, grew. Agricultural labourers and small farmers exchanged lives of hardship and in many cases poverty for the relative security of jobs in car plants, shipyards and textile factories. Then, in the post-industrial transition, the share of clerical, managerial, professional and service jobs expanded at the expense of both agricultural employment and manual labour.

These transitions did not happen at the same time in all countries. By the start of the 20th century Britain had long since made the transition from a farming to an industrial economy, whereas elsewhere – in Italy or Spain, for instance – this did not begin to occur until after World War Two. Furthermore, the phasing of the two transitions also differed, so that in some countries there was a prolonged phase of industrial society, while in others post-industrialisation came hard on the heels of the decline in agriculture. As an empirical generalisation it seems that the later a country embarked on the transition from agriculture to industrialism the more rapidly that transition happened and the more rapidly the country moved towards post-industrialism. Today in Europe, the decline in agriculture is either complete (as in Britain, Germany, Sweden and the Netherlands) or well under way, and between 1970 and the end of the century many countries saw a steady fall in the proportions employed in manual work and a consistent growth in the numbers of clerical, service, managerial and professional jobs. This was as true of women as it was of men: indeed, in several countries the female class structure is more post-industrial than the male.

## VI EQUALITY OF OPPORTUNITY

What we mean by equality of opportunity depends on which opportunities we are thinking about and what we understand by equality. As social



scientists the opportunities that most often concern us relate to income or earnings or occupational status or social class. But in any case, strictly equalising opportunities for these, or any other relevant outcome, is a stringent requirement because it seeks to enact the principle that "... inequalities resulting from responsible choices are just, while those due to factors beyond people's control are not" (Swift, 2005, p. 257).

There are two things that are important in this definition. First, equalising opportunities requires us to draw a distinction between the factors that are beyond people's control and those that are not. As John Roemer (2009, p. 31) has pointed out, "... conceivably nobody is responsible for anything and in this case the theory would reduce to equality of condition". Thus, a crucial question is how and where we draw the line. Secondly, such a strong programme is likely to be unattractive to many people because it means that any advantages that accrue from various accidents of birth, including genetic endowments and many of the things that parents do for their children, would be regarded as contributing to inequality of opportunity and thus as standing in need of modification or, where this is not possible, as things which the unlucky ones should be indemnified against.

This immediately leads to a conflict between two moral principles: equality of opportunity on the one hand and, on the other, the belief that parents are justified, indeed obligated, to further the interests of their children. But this is just a specific case of a more general issue: equality of opportunity is only one of a set of values that individuals or societies might hold. These include not only the value attached to children but also the value attached to the family as an institution, individual freedom, economic efficiency and so on. Insofar as these are not independent of each other, any practical philosophy concerning one must be attentive to what its consequences would be for the others.

Are there factors for which individuals cannot be held responsible but which may, nevertheless, properly lead to unequal outcomes? Certainly, among social scientists there is widespread agreement that equality of opportunity would not mean perfect mobility, if only because, under any even minimally acceptable definition of equality of opportunity, there would be legitimate mechanisms by which families could influence the fortunes of their children and so generate unequal mobility chances (see, for example, Jencks and Tach, 2005).

But although this argument might be more congenial to those who favour the idea that parents should be able to pass on some of their advantages to their children, it still leaves open the question of where we draw the line – in this case between those advantages and disadvantages we possess and for which we are not responsible but which are nevertheless legitimately

rewarded, and those fortuitous advantages and disadvantages which give rise to illegitimate inequalities of opportunity. One ingenious attempt to draw the line has been made by Adam Swift (2005). “(E)quality of opportunity” Swift (2005, p. 263) writes, “does not require us to compensate for differential luck of the kind that is constitutive of who people are. It requires only the removal of the social barriers and silver spoons that prevent people from competing on level terms with those constituted like them”. He continues: “The distinction that matters ... is between those mechanisms that, although a matter of differential luck, are constitutive of the individual and those that are not”.

What might be considered constitutive? Swift mentions genetic inheritance and the development of certain personality traits, such as being hard working and being able to delay gratification. To the extent that these things are rewarded in the labour market – and we know that they are – some degree of intergenerational persistence will occur and will, on this account, be legitimate.

One can think of cases in which consideration of other valued goals will lead to legitimate departures from strict equality of opportunity. Many people subscribe to the idea that society should operate on meritocratic principles. The original conception of meritocracy, as set out in Michael Young’s 1958 book, *The Rise of the Meritocracy*, is that merit equals IQ plus effort. IQ, according to Young, is determined by the genetic lottery, effort is not, but both deserve to be rewarded. This stands in contrast to the direct inheritance of wealth and social position, both of which are considered illegitimate in Young’s meritocracy. But this means that meritocracy, because it permits the inheritance of IQ, is incompatible with strict equality of opportunity – something which seems not to have occurred to politicians who espouse both.<sup>4</sup>

Let me summarise what I have to say about arguments concerning equality of opportunity. Some moral philosophers espouse a radical version of equality of opportunity which says that individuals should only benefit from, or be punished for, things for which they can be held responsible. Such a view is incompatible with other values that we commonly hold. Others adopt a less

<sup>4</sup> Michael Young himself was more than a little dismayed by the way in which the term he coined has become used in popular political debate. In 2001 he wrote:

I have been sadly disappointed by my 1958 book, *The Rise of the Meritocracy*. I coined a word which has gone into general circulation, especially in the United States, and most recently found a prominent place in the speeches of Mr Blair... The book was a satire meant to be a warning (which needless to say has not been heeded) against what might happen to Britain between 1958 and the imagined final revolt against the meritocracy in 2033. ... Much that was predicted has already come about. It is highly unlikely the prime minister has read the book, but he has caught on to the word without realising the dangers of what he is advocating. (*The Guardian*, Friday 29 June, 2001).

radical approach, acknowledging that individuals may legitimately benefit from the possession of traits that they themselves acquired through the accident of which family they were born in to. But in either case, distinctions need to be drawn. In the radical version the distinction that counts is between what we are and what we are not responsible for. In the less radical versions, such as that proposed by Adam Swift, the important distinction requires us also to identify those things that we are not responsible for but which are nevertheless legitimately rewarded.

Deciding where to draw these distinctions, however, is a normative, not an empirical matter: what is to count as equality of opportunity is a value judgement. For sure, once we were given a definition of equality of opportunity, social scientists might try to assess the extent to which it had been met. But it would be helpful, to say the least, to know which definition of equality of opportunity politicians who espouse the principle have in mind. But what is more important is that, once we move away from the very strict definition of equality of opportunity which says that all transmission of valuable traits from parents to children is illegitimate, perfect mobility can no longer function as a yardstick of equality of opportunity.

## VII SOCIAL MOBILITY AS A MEASURE OF EQUALITY OF OPPORTUNITY

Now we come to the central point of my talk today: is social mobility a good yardstick of equality of opportunity? To which my answer is going to be no: even if we had a clear definition of equality of opportunity, it is not obvious that studying social mobility would be the correct way to determine the degree to which it had been realised. This follows from what I said earlier: social mobility, in the sense of absolute mobility, is driven mainly by changes in occupational structures. Increasing equality of opportunity, in as much as it influences social mobility, will do so through greater social fluidity, yet social fluidity and changes therein have, historically, been of rather minor importance in shaping observed mobility flows, and are of similarly little importance in determining inter-country differences in mobility.<sup>5</sup> Politicians

<sup>5</sup> Some time ago I carried out an exercise in which I asked how much of the observed difference in absolute mobility flows between one of the most socially fluid societies in Europe – Israel – and one of the least fluid – Italy – was actually attributable to the differences between them in social fluidity. The answer is 6 per cent. In other words, if Italy had the same degree and pattern of social fluidity as Israel, 60,000 out of every million people in the Italian labour market would be in a different social class to the one they currently occupy. A similar argument could be made in relation to income mobility. Estimates by Jantti *et al.* (2006) show that (log of) (*continued over*)

and others who seek to use social mobility as a yardstick for assessing progress towards greater equality of opportunity, even supposing they have a clear idea of what equality of opportunity might entail, are likely to be disappointed.

This might suggest that we should look to social fluidity or relative mobility rather than absolute mobility, for our measure of the extent to which equality of opportunity had been secured. This seems plausible but, as I shall show, it proves to be scarcely less problematic than using absolute mobility.

One difficulty in employing social mobility as a yardstick of equality of opportunity is that we are using measures based on unequal outcomes (in this case the mobility that actually occurred) as indexes of inequality in the opportunities to secure those outcomes. To return to the example with which I began: if we only observed that one person had received \$1,000 and everyone else had received nothing would we be justified in saying that opportunities must have been unequally distributed? Clearly we would not, because in this case everyone had the same chance to win the money.

But suppose we observed the outcomes of the lottery repeated many times and imagine that all the winners came from the front row of the audience. Then we would have better grounds for suspecting that opportunities were not, after all, distributed equally: in fact we could calculate the probability of this happening by chance and this might lead us to conclude that it was more than simply a matter of luck. Then we would want to know how this result had come about and whether there was a legitimate reason for it.

This is closer to the situation we face when we look at mobility outcomes and observe, for example, that the lowest incomes and the worst jobs accrue most often to people whose parents also had low incomes and bad jobs. It is in seeking to understand how this comes to be so that the empirical and the normative meet – the empirical investigation into the various mechanisms that bring about such an intergenerational correlation and the normative question of which of these mechanisms are compatible with equality of opportunity.

For the remainder of my talk I shall put the normative question to one side and focus on the way in which social scientists try to measure the impact of different mechanisms believed to underlie intergenerational mobility. What I want to show, in the end, is that neither the measures of social fluidity used

<sup>5</sup> *contd.* father's income explains about 13 per cent of the variance in (logged) son's income in the US (the intergenerational correlation is estimated as 0.36), 6 per cent in the UK and 2 per cent in Sweden. As a rough approximation, assume that if the inter-generational elasticity were zero the variance of logged sons' incomes would be equal to its observed variance multiplied by the proportion of the residual variance ( $1 - r^2$  or about 0.87 in the US case). Then, if father's income had no impact on son's income, overall inequality would be roughly 87 per cent of its observed value in the US, 96 per cent in the UK and 98 per cent in Sweden.

by sociologists, nor the elasticity and correlation coefficients used by economists, are good measures of equality of opportunity, no matter what definition of equality of opportunity we prefer.

The incomes or earnings or class position of parents and their children are related because factors that are correlated with income or class position in both generations, are also correlated among parents and their children.<sup>6</sup> Intelligence provides a good example. People with higher IQs tend to have higher incomes and so parent's IQ is correlated with parent's income and child's IQ is correlated with child's income: estimates for the US suggests that the correlation between IQ and earnings is around 0.27 (this may sound high but it means that only about 7 per cent of the variation among people in their earnings is due to differences in IQ).<sup>7</sup> Furthermore, parents' and children's IQs are correlated: parents, genetically and in other ways, "pass on" their IQ to their children. In the US the correlation between father's and son's IQ is estimated at anywhere between 0.4 and 0.75, meaning that up to half of the variation in sons' IQ is determined by their father's IQ. Using some simple math to put these things together, we find that the intergenerational father-son correlation in IQ contributes between .03 and .05 to the overall father-son correlation in earnings. In the US, the actual correlation between father's and son's earnings is over 0.4, so this means that if IQ were the only thing that parents passed to their children, the intergenerational income correlation in the US would be about one-eighth of what it actually is. This is not a large amount and, indeed, it is now widely agreed that the intergenerational transmission of IQ does not account for much of the intergenerational correlation in earnings. Furthermore, since not all of this transmission is due to genes, the genetic component is even smaller (though genes have effects in other ways too and the economists Sam Bowles and Herb Gintis (2002) estimate that the total genetic component of inheritance accounts for about 30 per cent of the intergenerational correlation in earnings and about 22 per cent of the correlation in incomes).

<sup>6</sup> Let A label the distribution of the factor in the parent's generation and B in the child's and use X and Y to be the distribution of log income in the two generations. Then the intergenerational correlation of log income decomposes to  $r(X,A)r(A,B)r(Y,B)$ . The intergenerational elasticity,  $b_{YX}$ , decomposes as follows:

$$b_{YX} = b_{YB}b_{XA} \frac{s_{AB}}{s_P^2}$$

where  $b$  denotes a regression coefficient and  $s$  denotes covariances and standard deviations.

<sup>7</sup> The estimate comes from Bowles and Gintis (2002). The consensus estimate of the impact of IQ on years of schooling is around 0.5. Bowles, Gintis and Osborne's (2002) meta-analysis of 24 US studies yields an estimate of 0.22 for the partial effect of education on earnings and 0.15 for the partial effect of IQ on earnings. The total effect of IQ is thus  $0.15 + 0.53 * 0.22 = 0.266$ .

The same approach is applied to establish the contribution of other factors to intergenerational mobility: these factors include wealth, personality traits, such as shyness and impulsiveness, and physical characteristics such as health, beauty, obesity, height and race.<sup>8</sup> That is to say, any single factor that helps to form the intergenerational correlation in incomes does this in two ways – through its correlation with incomes in the parental and child generations and through its intergenerational correlation between parents and their children. In principle if any of these weakened, the correlation in incomes between parents and children would decline. But not all of these possible changes could be called increased equality of opportunity. Let me give a few examples.

Consider first a situation in which the intergenerational correlation in the factor is constant but its impact on incomes declines. Race, or skin colour, is a case in point. The correlation between parents and children in race is very high and, in many countries, race continues to determine how someone fares in life. But if its impact on income weakens over successive generations, race will contribute less to the intergenerational correlation of incomes than it used to (think of South Africa for example) and so, all else equal, that correlation will decline. In this case, we should want to say that opportunities were more equally distributed because race had declined in importance as a determinant of income.

But now consider education. Suppose that the parent-child correlation in education remained unchanged but the income returns to education declined. Then the parent-child correlation of incomes would also fall, but it is hard to say that declining returns to educational attainment represent greater equality of opportunity (at least under any reasonable definition).

The opposite may also happen. The correlation of parent's and child's education has, in fact, declined in many countries over the 20th century, but at some periods the returns, in terms of income or earnings, to education have increased, at other times they have fallen. A reduction in the parent-child correlation in education might well be attributed to greater equality of opportunity but this could be entirely offset in its impact on the intergenerational correlation of income by increasing returns to education. This would be an example in which, even focusing on the elasticity, or its sociological equivalent, social fluidity, we would not register a change in equality of opportunity even though there had been such a change.

Finally, consider an example I mentioned earlier. We know that in some countries origins and destinations are less strongly related among people with

<sup>8</sup> Some of these factors have a genetic component (race for example) but the way in which genes affect the outcome is via the environment, as the example of race demonstrates.

higher levels of education. So, as education expands and average educational attainment increases, the correlation between origins and destinations will decline because a greater share of the population has higher levels of education. None of this has anything to do with changing equality of opportunity: everyone has more opportunities but they are no less unequally distributed.<sup>9</sup>

## VIII CONCLUSIONS

In what I have said I hope that I have not given the impression that I think equality of opportunity is not important. My point is the opposite: because it is so important it is crucial that, when governments talk of their commitment to it, we know exactly what they have in mind in order that we can then measure its degree of attainment appropriately. But knowing exactly what it is involves difficult normative questions for which social scientists have no particular expertise.

However, social mobility is not a good way to measure equality of opportunity under any definition of the term. The reason for this is that social mobility is a highly aggregated phenomenon: underlying it are many complicated social and economic processes. In the case of absolute mobility we have seen that it has been almost entirely driven by change in the occupational structure. When we turned to measures of relative social mobility, we found that, although they abstract from change in the occupational structure, they may nevertheless vary for a variety of reasons, some of which have nothing to do with equality of opportunity. So, even if we could agree how much social fluidity would be compatible with equality of opportunity, there would be no guarantee that, if a society reached this value, it was because opportunities were more equally distributed than they had been.

There are many good reasons to study social mobility even if it is not directly informative about equality of opportunity and there may be reasons, distinct from equality of opportunity, why governments should promote social mobility. But if we do want to know about equality of opportunity, we need to focus directly on the causal impact of those things that affect it and which can be changed by policy. Understanding the various mechanisms that underlie

<sup>9</sup> Solon (2004, p. 43), drawing on his model of inequality and intergenerational mobility, argues that "If country A displays less intergenerational mobility than country B, this could be because country A has stronger heritability, more productive human capital investment, higher returns to human capital, or less progressive public investments in human capital". Clearly, not all of these reflect the degree of equality of opportunity.

social mobility is likely to shed much more light on how far we have advanced towards equality of opportunity than simply focusing on social mobility itself.

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Abstract I study social mobility, equality of opportunity and income inequality in a model where parental background matters in education and the labor market. My framework allows for the evaluation of policies on social segregation, early intervention programs and the power of unions among others. Results show the relationship between social mobility, income inequality, overeducation and equality of opportunity under each scenario. I calibrate the model to the US economy and perform counter-factual exercises. Keywords: Social mobility; Equality of opportunities; Inequality; Inter-generation