

Preface

Recent policy interest by the current and previous UK Governments culminated in a ‘social mobility strategy’ in April 2011 (HM Government 2011). In 2009, a cross-national study of the intergenerational transmission of advantage under the auspices of the Russell Sage Foundation commenced. It involved a coordinated set of sixteen mobility studies across ten countries with different levels of inequality. Like the government strategy, it took a life cycle approach. It is a first step toward understanding how and why mobility is sustained at higher rates in some countries than in others. The life-course approach in a comparative perspective allows us to see where divergences in outcomes between high and low socio-economic status children occur in the life cycle, how they evolve and how those differences may be related to policies, processes and institutions operating at various life course stages. This report summarises the findings of the study.

Introduction and Background¹

The main motivation for the study arose from rising economic inequality in many developed countries. Associated with that trend is the concern that more inequality will have the long-run effect of reducing equality of opportunity and intergenerational mobility. The reasoning underlying this worry is straightforward. Families clearly have a strong interest in investing in the future social and economic well-being of their children. Although some of these investments may not require financial resources, many others obviously do – among them, paying for quality childcare and early childhood education, buying books and computers, living in higher-priced neighborhoods with access to good state schools, assisting with the costs of higher education, and providing support for young adults to help them get started in their independent economic lives once their education is completed. As financial resources have become more unequal in a number of countries over the last three decades, the difference in the capacities of rich and poor families to invest in their children also have become more unequal. This change is occurring in a period where relatively more educational investment is needed to meet ongoing labour market changes.

The concern that rising income inequality will have the long-run effect of reducing intergenerational mobility is further motivated by the tendency, observed for generations born before 1970, for more unequal countries to have

¹ This report draws heavily on the joint work of my co-editors Markus Jäntti, Timothy Smeeding and James A. Wilson, and of course on the authors of the individual chapters that constitute the study: see Table of Contents in Appendix 1.

lower mobility, as illustrated in Figure 1. It portrays the relationship between income inequality (measured by the Gini coefficient for the parents' generation) and the intergenerational income elasticity – a measure of the strength of the relationship between the incomes of parents and the incomes of their grown children; i.e. persistence in economic fortunes across generations. Mobility is measured as the inverse of the elasticity in Figure 1, hence the lower the elasticity the more the mobility.

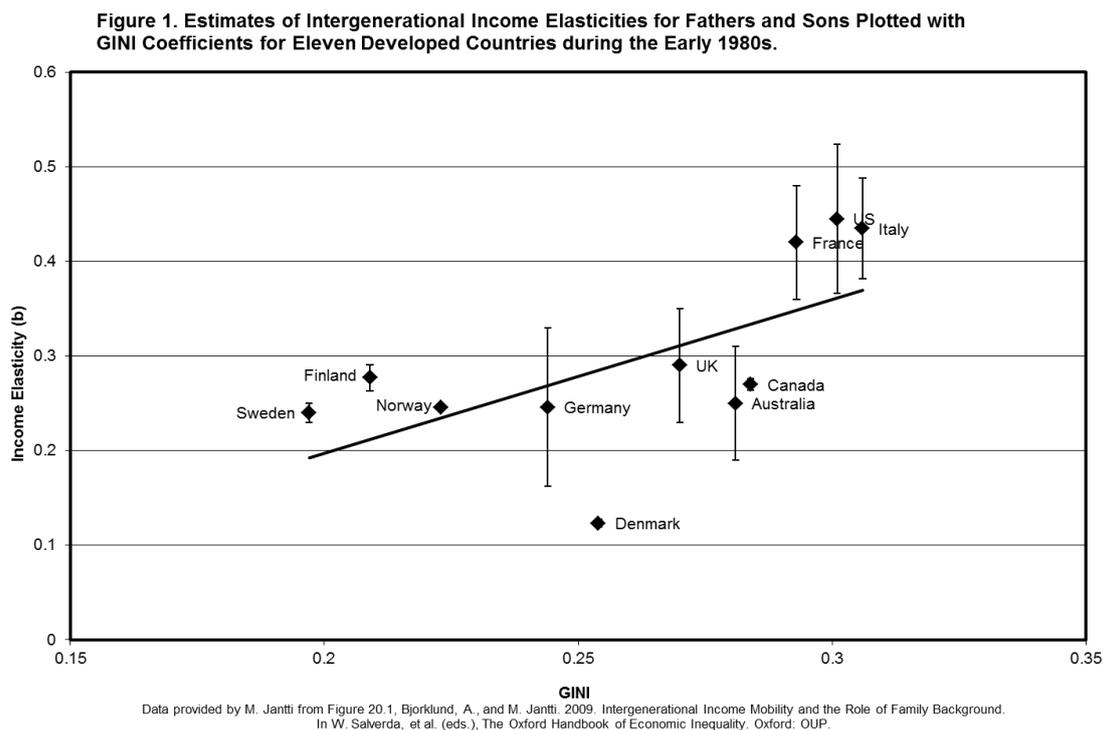
The plot includes eleven industrialized countries where both measures are now available and demonstrates wide variance across nations in intergenerational mobility (the vertical lines through each point show the 95% confidence interval of the estimate and the upward-sloping line is the 'least squares' regression line fitted through these points). As Figure 1 shows, the relationship between inequality and intergenerational elasticity is moderately positive across the eleven countries; that is, higher levels of inequality are associated with lower rates of mobility.² What is most interesting here is that these countries seem to vary a great deal in the degree to which they manage to attenuate the estimated relationship between inequality and intergenerational mobility. Some countries lie alongside the least squares regression line indicating levels of mobility close to what their levels of inequality might predict (for example, Norway, Germany, and the UK). Sweden and Finland are low inequality countries that lie slightly above the regression line, with slightly less mobility than their levels of inequality predict. Denmark shows intermediate levels of inequality but stands out with much higher rates of mobility than expected. Canada and Australia tend to fall between intermediate and high levels of inequality, but like Denmark, also show higher levels of mobility than expected. A final group of countries (Italy, the U.S., and France) generally have high levels of inequality and lower levels of intergenerational mobility than one would predict.

If the pattern of variation in Figure 1 is real, and not just a matter of random variation around the plotted regression line, it suggests that there may be significant differences in the types and effectiveness of public and private investments and institutions that different countries deploy in their efforts to equalize opportunities across the income distribution. These differences may be due to institutional design. For example, some countries may intervene earlier in the lives of disadvantaged individuals, and early intervention may be particularly effective, as many believe (Knudsen, et al. 2006). Or, countries may differ in the sheer size of their social welfare expenditures or in the distribution of expenditures across various areas of social welfare, such as health or education. This could make a difference if expenditures in some areas are more effective than others in promoting mobility, one of the questions this

² The rank order correlation is 0.62. Although we can't lean too heavily on a regression based on only eleven data points, there are multiple estimates of both inequality and mobility rates in most of these nations, adding credence to the estimates shown in Figure 1 (Blanden, 2009).

book attempts to address. Finally, the effectiveness of institutions designed to promote mobility may depend in part on the amount of inequality they have to cope with. Figure 1 suggests that it might be especially revealing to consider comparisons between one or more of the high inequality-low mobility countries (the US, Italy and France) with similar inequality but higher mobility countries like Canada or Australia, or comparisons of estimates from Canada or Australia with those generated for Denmark.

These same countries have higher inequality now than at any time in the past (excepting France) and the rank order of countries by annual income inequality is about the same now as it was for older generations (Brandolini and Smeeding, 2009). This suggests that chances for mobility may have become worse for the current generation of children because of higher inequality. But whether or not this is the case is difficult to investigate because the offspring of the ‘inequality generations’ are still too young to observe them in their prime earning years. The study attempts to circumvent this problem by examining inequality in outcomes during childhood which are related to longer term income prospects in a number of countries.



The aim of the study is to examine the association between parents’ socio-economic status (SES) and outcomes during childhood that are salient for intergenerational income mobility among more recent generations, primarily those who have been affected by the rise in inequality. In an attempt to understand how and why mobility is sustained at higher rates in some countries than in others, the study examines countries with different levels of inequality and a number of intermediary outcomes between children’s birth and their adulthood. The conceptual framework is based on

a life-course approach in nationally comparative perspective, allowing us to see where divergences in outcomes between high and low SES children occur in the life cycle and how they evolve. Differences between countries in these patterns can suggest differences in how private and public institutions affect opportunities for individuals born into families at different points along the income distribution. Another advantage of the cross-national perspective is that genetic transmission in the outcome studied (e.g., cognitive ability) is likely to be the same across countries.³ In consequence, *cross-country differences* will reflect different *environments*, including those that are policy driven as well as those that occur due to other aspects of the country's environment for different SES groups, including aspects of population heterogeneity (e.g., ethnic diversity) and institutions (e.g., wage-setting practices).

This report summarizes the answers to four primary research questions, and considers the implications of the study's findings for policy. Policy responses to inequality in child outcomes in relation to family background need to confront what James Fishkin (1983) called the 'liberal trilemma'. He formulated three principles which command wide support:

- (1) *The principle of merit*: There should be widespread procedural fairness in the evaluation of qualifications for positions (p.22).
- (2) *Equality of life chances*: The prospects of children for eventual positions in society should not vary in any systematic and significant manner with their arbitrary native characteristics (p.32).
- (3) *Autonomy of the family*: Consensual relations within a given family governing the development of its children should not be coercively interfered with except to ensure for the children the essential prerequisites for adult participation in society (p.36).

These three liberal principles combine to form a trilemma – realization of any two can be expected to preclude realization of the third. And so they do not add up to a normative and coherent *ideal*. In practice however there is a great deal that might be done to increase equality of life chances without sacrificing either the principle of merit or of family autonomy. The cross-national comparative framework helps illuminate what might be done. If some countries are delivering more equal life chances, then we should find out how they are doing so, and draw policy lessons from these findings where possible.

³ The genetic-environment distinction is in fact, not so easy to make. Recent scientific papers have stressed the importance of genetic-environment interactions. Environment can trigger the expression of some genes, suppress gene expression in other cases or enhance gene expression (Caspi and Moffitt 2006; Shanahan and Hofer 2005; Thomas 2010).

The Research Questions

Overall the study addresses four big research questions:

- When do differences by parental SES emerge?
- Do the differences change over the life course?
- How do the childhood differences contribute to intergenerational mobility?
- How do answers to these questions vary among countries?

This section is organized around the study's answers to the first three questions with answers to the fourth being addressed within each sub-section.

When do differences by parental SES emerge?

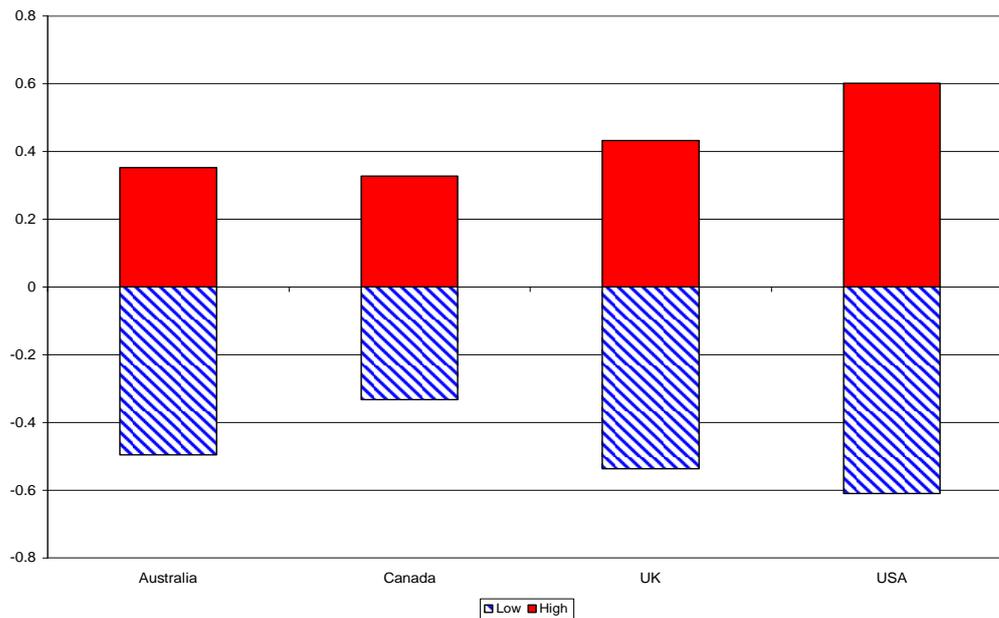
Gaps in outcomes by parental SES emerge early in childhood in all countries. They exist for both cognitive and socio-behavioral outcomes and are usually larger for the former. They result from a combination of the influences of parenting and heredity (environment, including *in utero* environments, and genes), and are apparent and well-measured by ages three to five in all the nations where we have data. There is direct evidence for the United States, Australia, Canada, United Kingdom and Germany (socio-behavioral only), and indirect evidence at slightly older ages for France (cognitive only), Finland and Sweden. In no country do we find that high and low SES children start out equally prepared for school in terms of cognitive abilities and social behavior.

The comparison across the four English-speaking countries at age five indicates that differences in the environment matter. For cognitive outcomes, the disparities by family background are largest in the USA, followed by the UK and Australia, with the smallest average differences being found in Canada. This pattern is illustrated in Figure 2, which compares average vocabulary scores at age five between children having parents with a middle level of education and those with high and low education, respectively.⁴ The gap between the least and most advantaged (the 'full bar' in Figure 2) is significantly larger (in a statistical sense) in the USA than that of each of the other three countries, and it is significantly smaller in Canada than in the UK. While there are large gaps between the most disadvantaged and the middle in all countries (the 'striped' portion of the bar), *differences among countries* in the overall cognitive gap mainly reflect variation in the degree to which the top of the SES distribution outperforms the middle (the 'solid' portion of the bar).

⁴ This report's illustrations focus on differences by parents' educational level, but many of the individual components of the overall study find similar differences by parental income level.

SES-gaps in social and behavioral development are markedly smaller than in cognitive outcomes, with Canada exhibiting the smallest gaps. The largest disparity in socio-behavioral outcomes by SES is in the UK, and it is the greater level of behavioral problems of low-SES children in the UK that is responsible for this finding, although some caution is in order because socio-behavioral outcomes are less comparable across countries than cognitive ones. In both Germany and the UK some of the socio-behavioral gap arises because lower SES mothers experience more partnership changes (e.g. divorce and remarriage) and family instability and these are associated with more behavioral problems.

Figure 2: Differences in Vocabulary Scores at age 5 by Parents' Education: Difference between Average Scores cf. Parents with 'Middle Education', Standard Deviation Units.



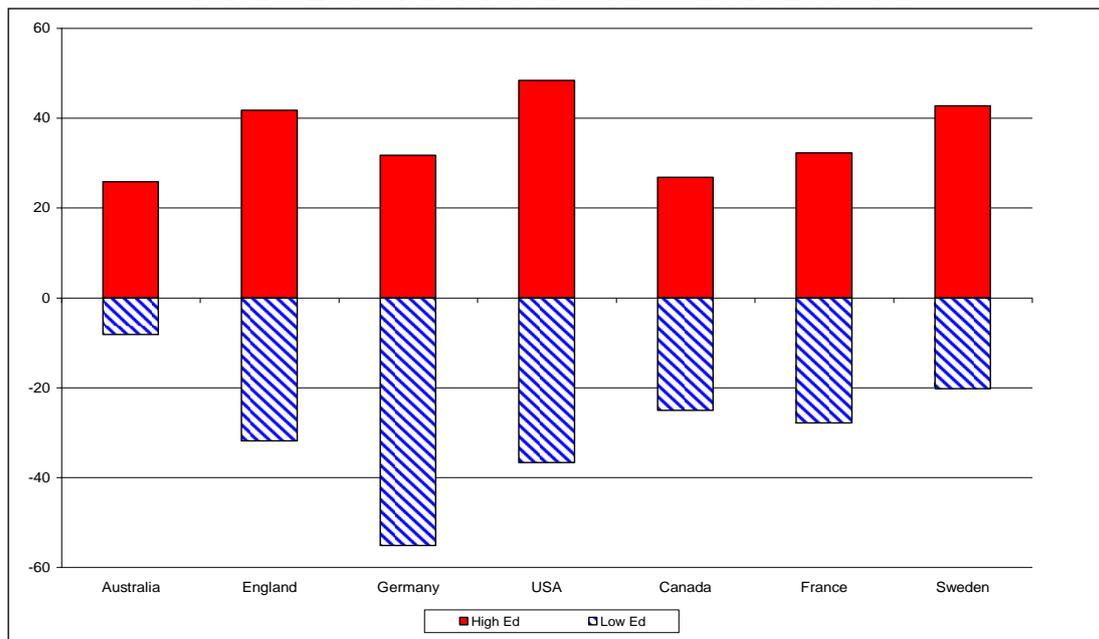
Source: Chapter 4

A relatively strong relationship between parental SES and either school achievement or cognitive test scores during adolescence exists for a large number of countries. It is evident in Sweden, the UK, Germany, Italy, Canada and the USA. Figure 3 illustrates the phenomenon by comparing the difference between the percentage of children in the top quartile of school or test score results and the percentage in the bottom quartile between children having parents with a 'middle level of education' (the standard level expected in a country) and those with 'High' (some tertiary education, a bachelor's degree or more) and 'Low' education, respectively.⁵ It shows that the achievement gaps by parental education in adolescence are smaller in Canada and Australia than in the other countries (the 'full' bar in Figure 3). The solid bars indicate that the child's advantage from having highly educated parents is largest in the

⁵ A note of caution is in order here because the comparability of test scores between countries is more questionable than that in Figure 2. Some are cognitive ability tests in surveys and some are school achievement results. Further, the ages of measurement vary among the countries. Also, the Swedish data comes from a much older cohort than the others (e.g. the 1973 cohort compared to the 1989-90 cohort in England).

USA, England and Sweden (the difference in the percentage in the top quartile and that in the bottom quartile is over 40 percent in each of these countries). The largest disadvantage of having low educated parents is in Germany, the USA and England. Canada and Australia perform best in both of these dimensions. In the parts of the study where direct, detailed comparisons can be made, similarities are more apparent than differences, but Canada generally stands out in having small achievement gaps and the USA in having large ones.

Figure 3: Differences in the Percentage in the Top and Bottom Quartiles of Test Scores at ages 11-17 by Parents' Education cf. Parents with 'Standard Education'



Source: Data supplied by authors; Australia and Canada: Child aged about 15; England: Child aged about 14; Germany: Child aged about 17; USA: Child aged 13-16 France: Child aged about 11. Weighted data with exception of France. See Chapter 12 for more details.

Do the differences change over the life course?

There is only limited evidence of “fanning out” (i.e. the gaps become larger) as a child ages. Examination of changes between the ages of three to seven (UK) and four to nine (Australia) indicates relatively constant average gaps in both cognitive and socio-behavioral outcomes over these ages. In the USA, it appears that SES gaps narrow or hold constant up to age six and then widen, but the extent of the widening and the ages over which it occurs depends on the achievement measure—raw or standardized scores.⁶ The raw scores show gaps widening over the ages 7 to 14. The evolution of SES gaps in the UK over the ages seven to eleven are also not clear: for example, the gaps in standardized math scores widen over these ages, but there is little change for standardized vocabulary scores.

⁶ The raw scores allow for the variance in scores to change as the child ages, while the standardized scores impose a constant variance. Neither is inherently superior to the other.

There is, however, robust evidence from three different data sources that SES gaps in achievement for the UK become substantially bigger between the ages of eleven (the end of primary school) and sixteen (end of compulsory secondary school). Figure 4 illustrates the widening gaps in school achievements by parental education by examining Key Stage (KS) test results at KS2 (age eleven) and KS4 (age sixteen). It compares average overall KS scores between parents with a medium level of education (A-level, GCSE or 'level 1' qualifications in England; about one-half of parents), taking the higher of two parents education, and those with low education (no qualifications or below 'level 1' qualifications in England), 'medium-high' education (higher education below degree level) and high education (degree level or higher). The gaps are clearly bigger at sixteen (striped bars) than at eleven (solid bars).

Figure 4
Parents' Education Level and Key Stage 2 and 4 Results,
Standard Deviations Relative to Medium Parental Education Category

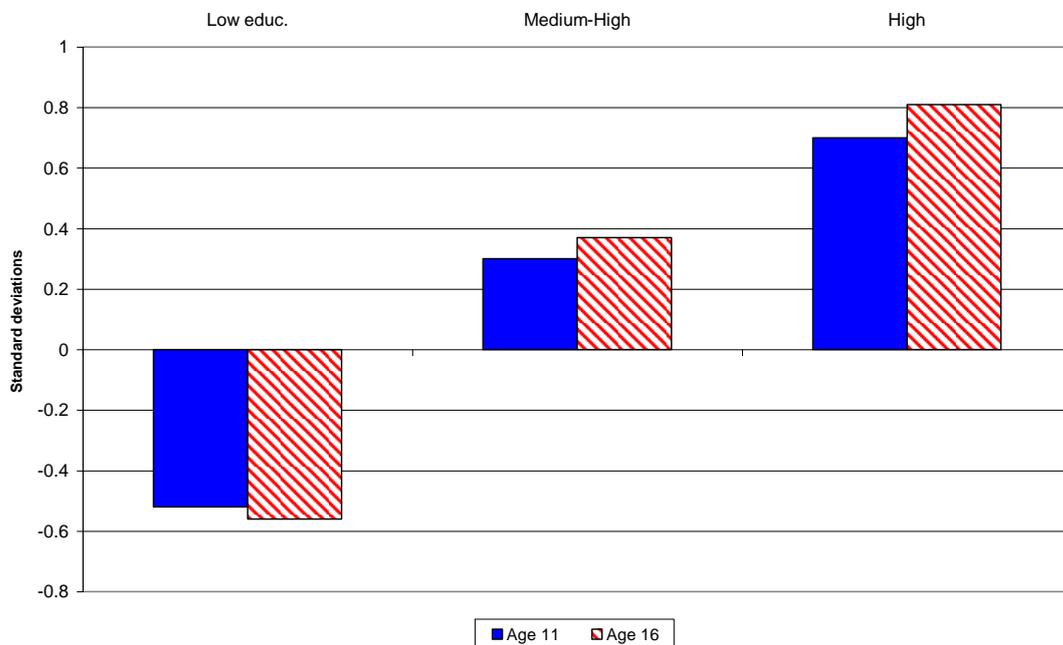
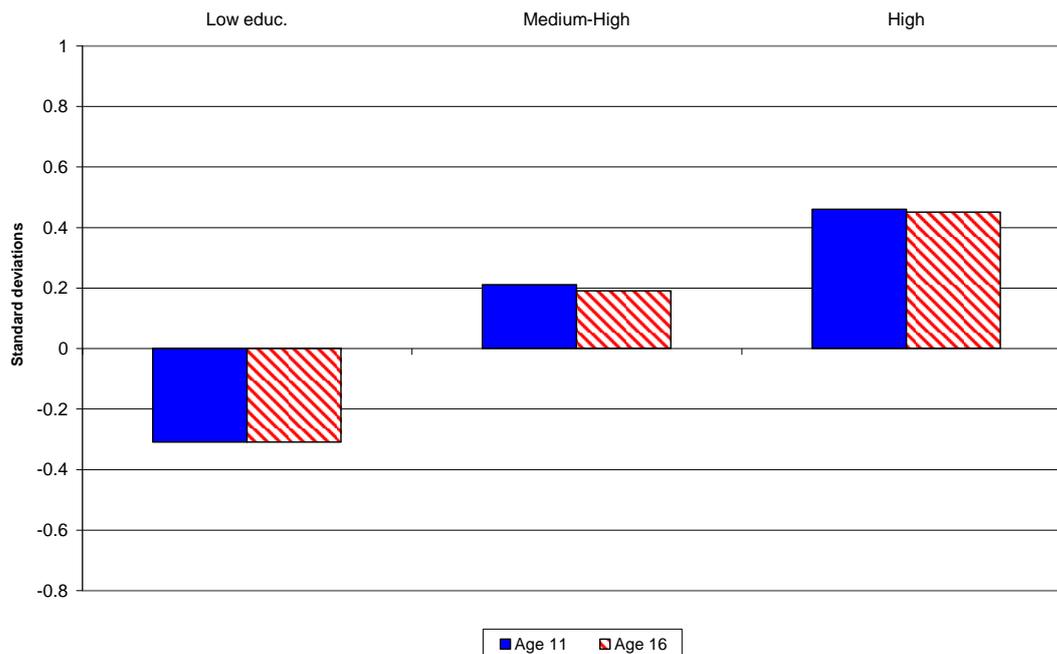


Figure 5
Parents' Education Level and Key Stage 2 and 4 Results, Within Schools
Standard Deviations Relative to Medium Parental Education Category



The widening gap after eleven is mainly related to the positive association between the quality of secondary school that children attend and their parents' SES, which is stronger than the association between primary school quality and parents' SES. To illustrate, Figure 5 shows the relationship between parents' education level and Key Stage results *within schools*; that is, after controlling for a fixed 'school effect'.⁷ It is clear that looking within schools the gaps are virtually constant between KS2 and KS4, and comparing with Figure 5 with Figure 4, the gaps are about one-half as large as when the comparison was also between schools.

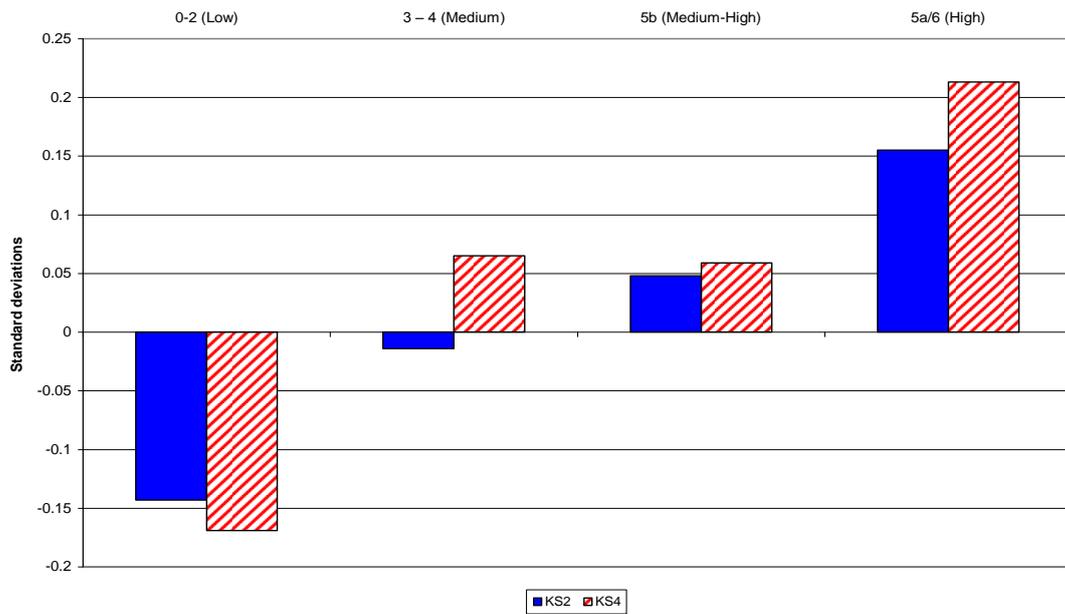
The estimated average 'school effect' on scores at KS2 and KS4 by parents' education level is shown in Figure 6.⁸ It shows that school effects are more strongly associated with parents' education at KS4 than KS2 and that parents educated at degree level or above have their children in secondary schools that add about one-fifth of a standard deviation to KS4 results on average. In contrast, children of poorly educated parents are at schools that are on average 0.15 standard deviations below average. The correlation coefficient between the school effects at KS2 and KS4 is 0.39, indicating some persistence in attending better (worse) schools. The association between parents' education and the school quality effect is driven by residential choices, which are constrained by incomes, house prices and local authority and housing association policies.

⁷ Estimation of the 'school effect' exploits the multi-stage random sampling procedure of the Longitudinal Study of Young People in England (LSYPE) in which the first stage sample was taken at the school level.

⁸ The estimates in Figure 6 are the estimate 'school fixed effects' from a regression with many family background variables, including parents' education

Figure 6

Average School Fixed Effects at Key Stages 2 and 4 by Parents' Education Level



What might high values of these ‘school effects’ represent? They could reflect having a good teacher, particularly for primary school, benefiting all children in the classroom, but they may also reflect a good head teacher, whose actions benefit all the pupils in a school. Another source of a good school effect might be an involved and committed group of parents, or even just some key ones, producing benefits for all pupils, and if such parents are more likely to have higher educational attainments, this may partly account for the pattern in Figure 5. On the negative side, a disruptive child could harm the learning experience for all children, particularly at primary school, where teaching is concentrated in a single classroom. School effects also reflect class sizes, the quality of interactions among pupils and between teachers and pupils.⁹

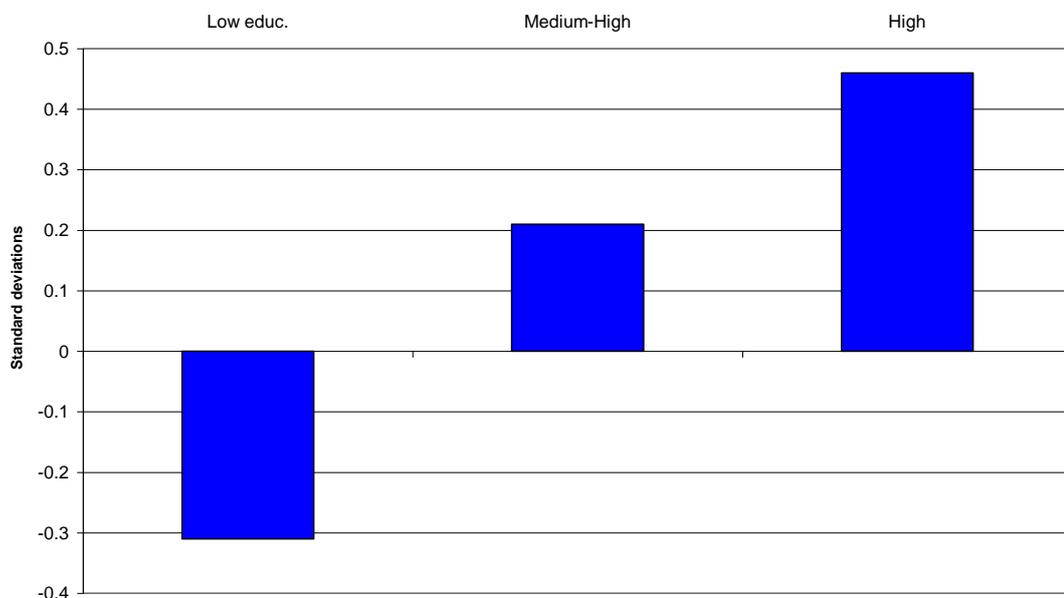
Across the countries we generally do not find convergence in SES gaps at older ages. Thus, average differences in measurable child outcomes encountered early on in life persist throughout children’s lives up to university ages and likely beyond. Even in countries like France and Denmark, where universal early childhood education is found to reduce the disadvantage experienced by children of low SES parents, it lessens but does not eliminate the association of parental SES with child outcomes.

⁹ For example, Lavy and Schlosser (2011) use variations in the proportion of female students across adjacent cohorts within the same school to identify ‘gender peer effects’, and find that a higher proportion of girls in the classroom improves the academic achievements of both girls and boys. An examination of the underlying mechanisms of these gender peer effects indicates that a higher proportion of girls reduces the level of classroom disruption and violence and improves between-student and teacher-student relationships.

Changes in average gaps by parents' SES as children age occur because, for example, initially low achieving children of high SES parents may be more likely to improve as they get older than children of low SES parents, or high achieving children of high SES parents may be more likely to maintain their achievements than those with low SES parents. Two parts of this cross-national study include a dynamic perspective and consider differences by parental SES in 'trajectories' as the child ages. Examining ages three to seven in the UK and four to nine in Australia, it is found that children of low educated parents with poor early outcomes are more likely to persist at poor achievement levels, more so in the UK than Australia. Even among British children who started with similar outcomes, those with better educated parents are doing better by age seven than those with poorer educated parents.

It is also found that English children of parents' with higher education are more likely to improve their position in the distribution of Key Stage tests between the beginning and end of secondary school. This is illustrated in Figure 7, which shows the change in results between KS2 and KS4 measure in terms of standard deviations, relative to medium educated parents.¹⁰ Better chances of improvement in test results for adolescents with better educated parents make an important contribution to the steeper parents' education profile at age sixteen compared to age eleven in England, and indicate that the influence of family background does not play itself out in the early years and in initial ability.

Figure 7
Parents' Education Level and Change in Key Stage Results
between KS2 and KS4
Standard Deviations Relative to Medium Parental Education Category



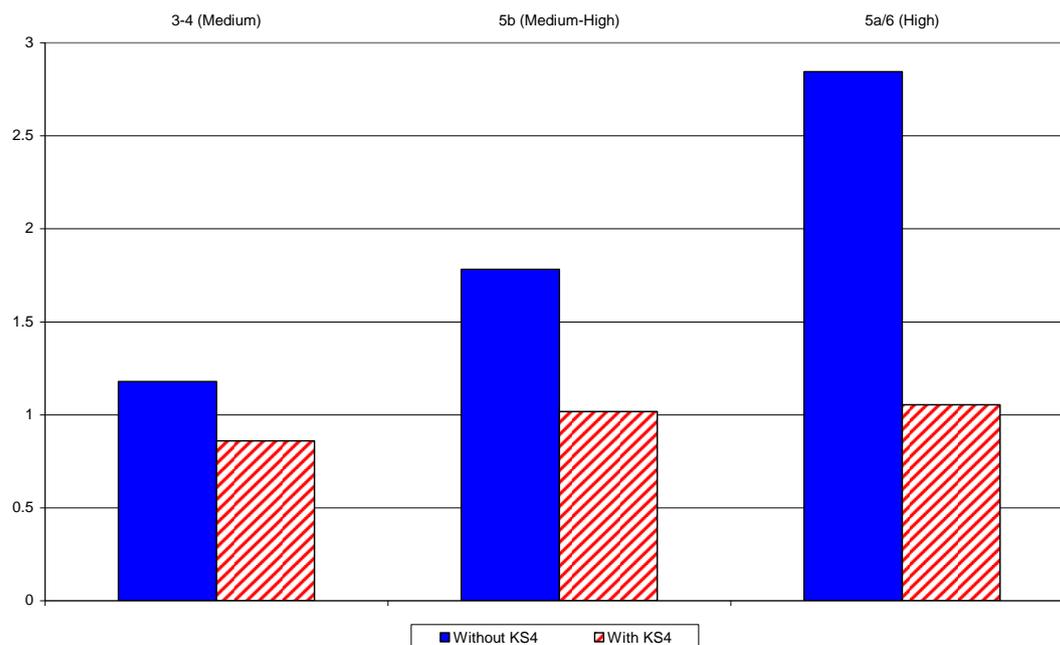
¹⁰ The estimates in Figure 7 come from a regression of KS4 results on KS2 results and parent's education.

How do the childhood differences contribute to intergenerational mobility?

The evidence suggests that childhood gaps contribute importantly to intergenerational correlations in education and income in all nations. In Sweden the correlation between father's and son's mid-life income is mediated by both cognitive ability and personality traits (measured when the son was 18). While cognitive ability influences both sons' educational attainment and his earnings, attributes such as social maturity, emotional stability and leadership capacity payoff directly in the labour market rather than through education. About two-fifths of the father-son income correlation can be accounted for by cognitive and personality attributes. For a number of countries, including the UK, it was also found that the correlation between father's and son's educational attainment is mainly mediated by cognitive ability, accounting for around two-fifths of the intergenerational education correlation in a number of countries. The other side of the coin is that over one-half of the intergenerational correlations in income and education remain unaccounted for by cognitive skills and personality traits acquired at birth or in childhood, pointing to important influences of aspects of the environment correlated with parents' SES. While it is unclear exactly what these other factors are that encourage intergenerational persistence, we can conclude from this finding that such intergenerational persistence in SES is not mainly driven by differences in cognitive abilities by parental education or income group. Even those that exist overstate the impact of genetic transmission of cognitive ability, because in the Swedish study it is measured at 18, meaning that there have been 18 years of environmental influences on the measure.

In the UK, the strong correlation between parental SES and attending university is well known. It is illustrated in Figure 6 by the solid bars, which show the odds of a nineteen-year-old attending university by parents' education relative to the lowest education group. For instance, children of parents with a degree are 2.8 times more likely to go to university than those with parents with low education. But Figure 6 also indicates that the correlation disappears (i.e. odds are near one) when we control for the child's Key Stage results at the age of sixteen (striped bars), indicating that parents' socio-economic status association with university enrolment works solely through its association with the child's performance in secondary school.

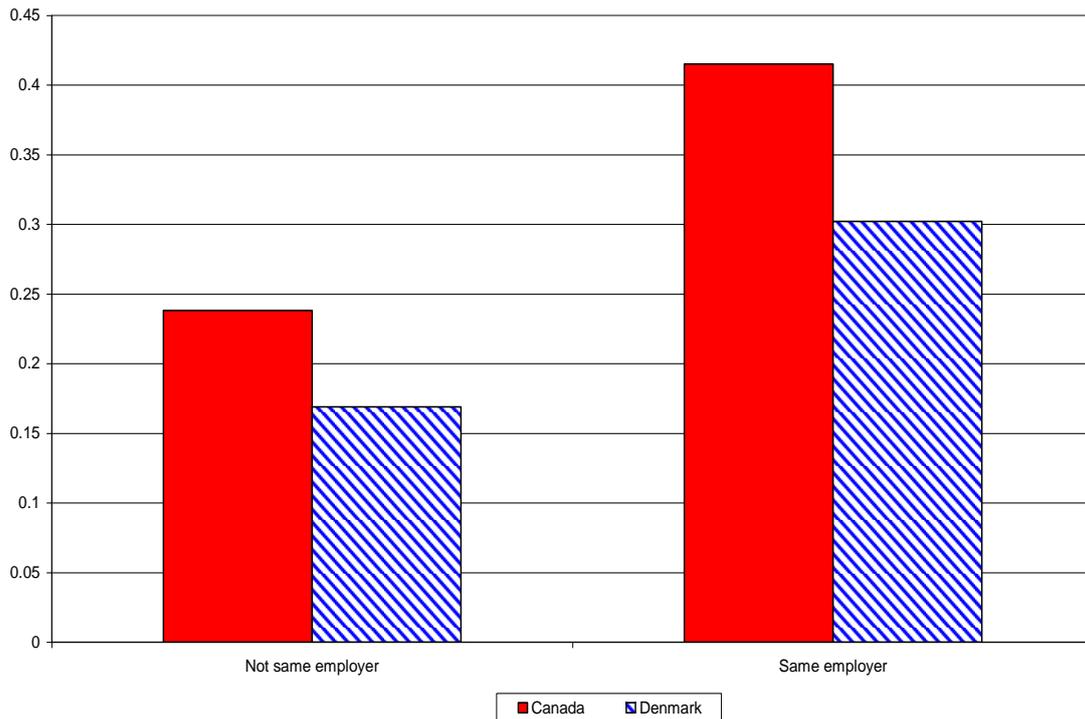
Figure 6
Odds of Attending University at Nineteen by Parental Education
Relative to Low Education Group, Without and With Controlling for KS4 Results



But *differences between countries* in intergenerational income mobility are not necessarily driven mainly by cross-country variation in the relationship between parental SES and childhood achievements, such as grades during adolescence or final education attainment. For instance, an analysis comparing Sweden and the UK strongly suggests that the weaker relationship between a child's earnings as an adult and parental education in Sweden than in the UK mainly arises because there are lower labour market returns to education in Sweden than in the UK (reflecting lower earnings inequality in Sweden). Relationships between parents' education and child achievements earlier in life are similar in the two countries. Hence the structure of rewards for any given level of educational attainment or skills must also be taken into account when making cross-national comparisons of income mobility.

Parental influence continues into adulthood in terms of getting good jobs: in both Canada and Denmark about five percent of sons have their main jobs with the same employer as their father, and the incidence of this phenomenon is much stronger at the top end of the father's earnings distribution. Figure 7 shows the association between father's earnings and son's median earnings, distinguishing between sons whose main job is in the same firm as their father and those who work in different firms. In both cases, there is more mobility in earnings between generations in Denmark than in Canada. When the son works in the same firm as his father, the association of his earnings with his father's is larger (mobility is smaller) than when he does not. Preservation of high income status across generations in both countries is strongly related to the greater tendency of sons to have the same main employer among higher income fathers, apparently reflecting the importance of networks in finding good jobs.

Figure 7: Elasticity of Median Son’s Earnings with respect to his Father’s Earnings, Canada and Denmark



Source: Table 2, Chapter 18.

Policy effects

Four individual studies deal more directly with the influence of policies on intergenerational mobility. In France and Denmark there is causal evidence that universal pre-school programs partially close the SES gap in school achievement and subsequent wages, more so in France than Denmark. Thus, pre-school education improves intergenerational mobility.

Another analysis focuses on a feature of some secondary school systems—‘early tracking’ into different types of secondary schools with specific educational curricula, typically characterized by either academic or vocational orientation. In both Italy and Germany there is a strong association between parents’ education and children’ achievements before tracking takes place—similar to that in other countries in the study. There is also inequality by parental education in entry to tracks, and this does not weaken during school (e.g. it exists for repeating grades *and* for changing tracks). Even after controlling for prior academic performance and school track, an association between university enrollment and parental SES exists for both countries, as it does for two countries without tracking—the USA and Canada. Overall the influence of family background after initial tracking is stronger in the Italian system

than the German one, and this appears to be related to more parental discretion in Italy (particularly absence of teachers' recommendations for tracking) and the absence of post-secondary vocational training in Italy.

While we learn little about college graduation from the overall study, there is evidence that an Italian reform led to a greater enrollment in tertiary education, thereby widening access, but also smaller rewards for those who chose the 'attractive' shorter track three year program as compared to the longer five year degree. As children of higher SES parents were more likely to complete the longer degree, the average returns from a university degree were larger among students from a higher SES background. This example points to the importance of considering all aspects of reforms in evaluating their impact.

Summary

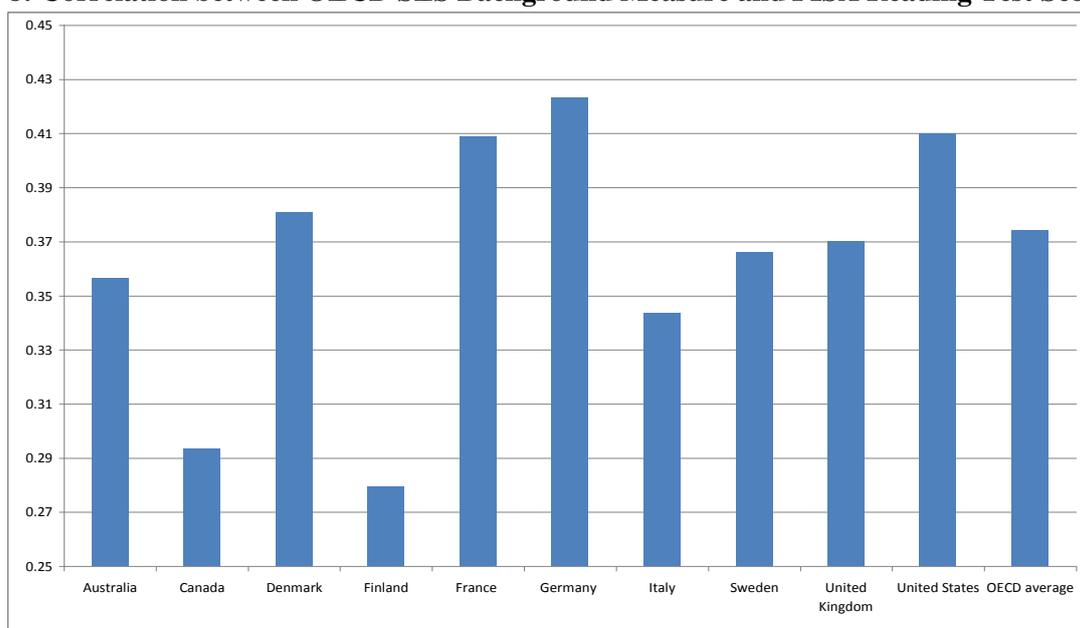
The answers to the first three research questions are that differences in child outcomes by parental SES emerge early; they do not narrow over the life course and actually widen in England; and childhood differences contribute an importantly to intergenerational mobility, but probably no more than half of the association between parents' SES and children's SES. We find that parental background is important early in life, in school and related neighborhood choices, including secondary school systems with tracking. Evidence from France suggests that high quality preschool experience has an effect of reducing the disadvantage of children from SES backgrounds and improving social mobility. Education systems also matter, but the evidence indicates that their net effect is not to reduce the relationship between parental SES and child achievement as the child moves through the education system. Parental influence through networks continues into the labor market in early adulthood, but the size of earnings returns to ability and education may operate to reduce the mid-life parent-child income correlation in some countries (e.g. Sweden) and enhance it in others (e.g. the UK and USA). With respect to variation across countries, the USA stands out in having the largest SES gaps and Canada some of the smallest, despite their similarity of heritage, but there are many similarities across these and other countries. The UK is closer to the USA in terms of inequality of child outcomes. All of these cross-national differences point to important influences of the environment, policy and otherwise, on inequality in child outcomes and intergenerational mobility; in other words, gaps in child outcomes by parents' SES are far from reflecting only genetic transmission.

What are the Implications for Policy?

An important policy lesson from the research is that it is possible to provide more equal life chances than is the case in the USA and UK without violation of family autonomy or the principle of merit. The experience of Canada is an example, and Australia may be another case in point. Recall from Figure 1 that both of these countries have high intergenerational income mobility, similar to Sweden, Norway and Finland, while at the same time having high income inequality compared to these Scandinavian countries.

The educational system is likely to be the most widely used and most acceptable policy tool for equalizing life chances. We have seen that in Canada there are weaker relationships between parental SES and performance in cognitive tests before entering school and during adolescence. These findings are echoed in the latest (2009) internationally comparative investigation of reading skills of 15-year olds (OECD 2010). As Figure 8 illustrates, Canada has one of the weakest associations between the OECD measure of student's socio-economic background and PISA test results. Canadian policies and institutions appear to be operating to make children's life chances more equal. Again, the USA has one of the strongest correlations between PISA test results and parents' SES, along with France and Germany.¹¹ We have also seen that there are policies, such as universal pre-school education, that reduce the influence of family background on children's life chances in a country with relatively low intergenerational mobility and above average inequality—France. Hence features of the education system can make a difference to reduce the disadvantages from having low SES parents.

Figure 8: Correlation between OECD SES Background Measure and PISA Reading Test Score, 2009



¹¹ Interestingly the correlation among countries between the correlation coefficient shown in Figure 4 and average student performance on the PISA reading test is -0.74 , and this is mainly driven by the conjunction of the high student performance of Canada and Finland and their low correlation of test results with SES background.

While the inequalities emerge early, reform of education systems can help to reduce them. But there are limits to what policies might achieve. For instance, there is direct evidence for England that higher SES parents place their children in higher quality secondary schools (mainly by moving to areas with better schools), and it is indeed this sorting that produces the steeper gradient between pupil achievement and parents' education during secondary school compared to the end of primary school. One would be expected to face the same types of sorting if early childhood education became a part of the national state school system. More equal access to good secondary schools (e.g. through lottery allocation) could make a contribution, but as long as there is large variation in school quality such a policy would be resisted by better off parents because some would be forced to send their children to inferior schools (violating parental autonomy). A reduction in the variance of school quality through a "levelling up" would make a larger contribution. Finding the resources and ways to accomplish this however, is a considerable challenge. *Inter alia* it requires that we know what makes a "good quality" school or pre-school; for instance, what role do pupils' peers or teacher qualifications play? role do parents themselves play in shaping a good school? These are research questions the answers to which are important for formulating education policy and improving intergenerational mobility.

Reform of secondary school access is just one example of the constraint that family autonomy places on policies. We have seen that the SES gradient is observable at every childhood stage, explicitly or implicitly, even when getting a job. In short, parents will do everything they can to give their children better outcomes—but not everyone is born to equally talented, equally educated, or equally well off and behaviorally cogent parents. It is in the personal interest of high SES parents to maintain the status quo, or even enhance their children's opportunities, making the gradient steeper. But while it might be efficient from an economic investment point of view and while hard to change politically and socially, it is important to find the policy levers which might reduce the inequalities that exist by the time children enter primary school. We have already mentioned pre-school education, but some governments (e.g., that of the UK and the United States) are also discussing support for parents to improve their parenting skills in the general context of intervening early in a child's life (before age 5).¹²

¹² See Field (2010). The report's two overarching recommendations are: (1) to establish a set of Life Chances Indicators that measure how successful we are as a country in making more equal life's outcomes for all children; (2) establish the 'Foundation Years' covering the period from the womb to five. The Foundation Years should become the first pillar of a new tripartite education system: the Foundation Years leading to school years leading to further, higher and continuing education.

Another review commissioned by the current UK government focussed on early intervention (led by Graham Allen MP); see *Early intervention: the next steps* and *Early intervention: smart investment, massive savings*.

Given the similarity of the association between parental background and achievements in many countries, we may be tempted to say that we cannot do much about it, with attendant implications for equality of life chances. But policy changes should be monitored for their impact. For instance, England has legislated to raise university tuition fees by up to 200% from October 2012, thereby shifting support for university education from the taxpayer to the student. At the same time, loans to cover tuition fees are available and need not be paid back until the graduate is earnings £21,000 or more. Universities must also demonstrate that they have policies to widen access, including scholarship support for students with low income parents, in order to charge the highest fees. The net effect on equality of access to university education is controversial. The new fees regime *could* reduce access of qualified lower income students because they or their parents are less willing to assume the debt that needs to be incurred while studying than students with higher income parents. On the other hand the fact that no loans need be repaid until the graduate is established in the labor market could improve access for students from a poorer background. But we have seen that the correlation between attending university and parental education can in large part be traced back to the different educational outcomes by age sixteen in secondary schools (Figure 6), strongly suggesting that widening access requires intervention much earlier than around the time of university entry.

We might also think of labor market policies that limit the scope for the operation of networks that give children of higher income parents' advantages in getting better paid jobs, evidence for which we encountered for Canada and Denmark. For example, the UK government's social mobility strategy encourages wider access to internships (HM Government 2011). Such policies may move us closer to the 'principle of merit' in assigning jobs as well as making life chances more equal, but they would clearly violate 'family autonomy'. Here we see a clear conflict of our three principles in practice.

In the end we will never be able to eradicate SES differences in child outcomes, especially in highly unequal societies, and we will never be able to, or wish to, override parental autonomy. However, there is evidence from this cross-national study that there is scope for policy to help reduce barriers to intergenerational mobility, increase equality of opportunity and not violate parental autonomy to any large degree.

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(<http://www.cabinetoffice.gov.uk/news/graham-allen-launches-second-report-early-intervention>). The first report underlined that many of the costly and damaging social problems for individuals can be eliminated or reduced by giving children and parents the right type of evidence based programmes 0-18 and especially in their earliest years. The second report sets out how we can pay for those programmes within existing resources and by attracting new non-government money.

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Appendix 1
Inequality from Childhood to Adulthood
A Cross-National Perspective on the Transmission of Advantage
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