Education *can* compensate for society – a bit

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**Keywords**

**Abstract**

In this paper I reflect on the findings of a number of loosely related research projects undertaken with colleagues over the last ten years. Their common theme is equity, in formal education and beyond, in wider family and social settings, and with inequity expressed as the stratification of a variety of educational outcomes. The projects are based on a standard mixture of pre-existing records, official documents, large-scale surveys, observations, interviews and focus groups. The numeric data was largely used to create biographical models of educational experiences, and the in-depth data was used to try and explain individual decisions and disparities at each stage of the model. Data has been collected for England and Wales, in five other countries of the European Union and for Japan. A meta-view of these various findings suggests that national school intakes tend to be at least moderately segregated by prior attainment and socio-economic factors, and that learning outcomes as assessed by formal means, such as examinations, are heavily stratified by these same factors. There is no convincing evidence that compulsory schooling does very much to overcome the initial disparity in the resources and attainment of school intakes. On the other hand, there are indications that the nature of a national school system and the social experiences of young people in schools can begin to equalise educational outcomes as more widely envisaged, including learning to trust and willingness to help others, aspirations, and attitudes to continuing in education and training. The cost-free implications of the argument in this paper, if accepted, are that everything possible should be done to make school intakes comprehensive, and that explicit consideration, by teachers and leaders, of the applied principles of equity could reduce potentially harmful misunderstandings in educational contexts.

**Introduction**

One of the chief purposes of universal, compulsory, free (at the point of delivery), and local education for children in the UK has been the equalisation of family resource (Harris and Gorard 2010). Similarly, one of the main reasons for post-compulsory educational initiatives, from 14-19 reforms to widening access to higher education and third-age provision, has been to increase equality of outcomes in the system, so reducing the link between origin and opportunity for all individuals. Schools - and increasingly pre-school settings, colleges and universities – are intended to widen

meaningful participation to, and to have a formative and transformative impact on the lives of, all young people regardless of their social, ethnic or economic origin. Where achieved, this would promote both social mobility and equality of outcome. Similar approaches and purposes for education have been adopted in other developed countries (EGREES 2005).

Unfortunately, it is not at all clear that these laudable aims have been achieved. In England, for example, children start school with different levels of resource and quickly display strong patterning by family origin in their revealed attainment (Gorard and See 2009). School attainment at every subsequent age and stage reveals these same patterns (Gorard 2000). In summary, aggregate scores and qualifications for students from less elevated social classes, those living in poverty, in some deprived areas, and for some ethnic minority groups, are considerably lower than average. This is despite a system set up purportedly to prevent this. The same patterns continue into immediate post-compulsory education (Gorard and See 2008), and thence into opportunities for higher education (Gorard et al. 2007). In fact, the same stratification of attainment and participation can be seen in education and training, of all kinds, lifelong (Selwyn et al. 2006).

The situation was summed up as early as 1970 in the now famous phrase 'Education cannot compensate for society' (the title of a piece by Bernstein 1970). Numerous studies over more than fifty years have foreshadowed, replicated and confirmed these findings in the UK and elsewhere (Glass 1954, Sargant 2000). Schools, and now the extended initial education system more generally, appear to be failing in this one important respect. The problem is clear, but we are little nearer finding an agreed explanation or a remedy (assuming, as I do, that a remedy is needed). Bernstein's explanation was both powerful, and readily criticised by some. In his explanation, different social classes used different 'codes' in their language, and one of the supposed effects of the class system was to limit access to the 'elaborated' codes which were the preserve of the elevated classes and of the education system they devised and ran.

Access to education has become increasingly open, since 1944 in the UK, but still remains more of a challenge to a child used to the language of the 'restricted' codes employed by their family and friends. Does this explain the continued patterning of attainment and opportunity? Do teachers tend to be middle-class professionals favouring, or simply finding it easier to relate to, the students most like them? Is there a kind of social or cultural 'capital' available to parents from more privileged backgrounds that they then invest in their children's education (Bourdieu 1977)? Maybe the gaps in attainment appear largely as a consequence of the nature of assessment as currently designed – inadvertently favouring a code, culture or sex (Gorard 2004)? Or is there an element of merit, reproduced over generations in the same family? Perhaps the outcomes we observe are partly a consequence of talent in Rawlsian terms, imagined as a combination of ability and application (Rawls 1971). Perhaps an important part of the explanation is the segregation of young people between institutions in terms of their social or ethnic background (Gorard 2009a). This could lead to a peer effect, in which clusters of students who are easier to educate make more progress than clusters of those who face greater challenges. Perhaps it is, because in countries like the USA, the extent of funding via local

taxation leads to students from richer families tending to live in richer areas with consequent superior investment and resources for schools (Chiu and Khoo 2005).

All of these ideas, and many like them, seem plausible and may indeed form part of the overall explanation for the stratification in the education systems of developed countries. But the answer is that we just do not know what the explanation is, partly because this is a complex issue, but also because research work in this area is too often inadequate, and makes the situation more confusing than it needs to be. The next section of this paper looks at some examples of influential work, and considers briefly why high impact but erroneous conclusions have been and are still being drawn from insufficient evidence. The paper then separates the overall issue of compensating for society into two broad and related themes. First, I consider what we know about the stratification of attainment, and the influence of schooling thereon. Next, I look at the potential influence of schooling on a wider set of outcomes such as aspiration, citizenship activity, participation, enjoyment and a sense of justice. The final section summarises the argument so far, and proposes a way forward.

The paper is based on existing evidence and prior work, assembled here to address these two themes. That prior work involves a range of lifelong education projects conducted over a decade, for a range of funders, and based on a model of equity derived from the views of learners themselves. In summary, the projects are based on a standard mixture of pre-existing records, official documents, large-scale surveys, observations, interviews and focus groups. The numeric data was largely used to create biographical models of educational experiences via logistic regression or similar, and the in-depth data was used to try and explain individual decisions and disparities at each stage of the model. Data has been collected for England and Wales, in five other countries of the European Union and for Japan. References, inevitably in a summary paper such as this, must lead readers to the primary and secondary datasets cited, and to the actual methods used in their analysis.

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**The crisis versions of stratification**

Studies looking at the numeric patterns of stratification in the UK and beyond have repeatedly confirmed the situation described above. There is very little doubt that school outcomes, in terms of attainment and qualification, are patterned by social class and everything that goes with that. Insofar as there are facts in social science, this is one of them. Some in-depth studies have then attempted to explain why the stratification exists, but often these just confirm the pattern at a smaller scale (in Gorard and See 2009). The situation is further confused by a number of erroneous crisis accounts of worsening stratification, especially perhaps for the UK. This means that some in-depth studies are not only trying to understand why we face stratification in education (which we usually do), but also why it is getting worse (when it is usually not).

These erroneous accounts are best exemplified by the huge national impact in the UK of a study reported by Blanden et al. (2005). This purported to show that social mobility in Britain was poor and worsening over time. The study was wrong on both counts (Gorard 2008a). The data presented by Blanden et al. (2005), used properly, actually shows a high level of income mobility in Britain, about the same for

equivalent years as in Norway and other Scandinavian countries. It did show that when considering the earned income of sons, and so ignoring all females and anyone on benefits, around nine people, or 0.004% of the total cohort of 17,000 neonates born in 1958, were more mobile than their peers born in 1970. If the 1958 and 1970 cohorts did not yield exactly the same results (and this is unlikely) then one of them would be slightly more 'mobile' than the other (with around a 50% chance of either year being the larger). This is what the authors found. But nine out of 17,000 cases is probably not even worth mentioning, and surely not enough to base national policy on. I can see no reason why anyone who actually looks at the evidence would be persuaded by Blanden et al. (2005). Yet all main political parties, and some uninformed commentators, now accept this poor worsening mobility as fact, and use that fact to justify expensive public policies. This is typical of the crisis approach to stratification research. It is, apparently, much more appealing to imagine that things are getting worse.

Similarly, there have been strong repeated claims that the socio-economic and ethnic segregation between the intakes to schools worsened in the 1980s in Scotland (Willms and Echols 1992), after 1988 in England (e.g. Tomlinson 2001), or after 1990 in New Zealand (Fiske and Ladd 2000). None of these claims can be substantiated, and some have now been withdrawn - even though they still being cited as evidence by others. How could an analysis by Willms and Echols (1992) of figures for one year only show '*increasing* between-school segregation' (p.399, emphasis added)? And how could anyone else read their paper as meaning this? Tomlinson (2001) does not appear to distinguish between absolute levels of segregation and increases in segregation. For her, a high level of segregation meant that the level must be increasing (see, for example, Tomlinson 2001, p.137). I have no idea why.

When Waslander and Thrupp (1995) claimed that socio-economic and ethnic segregation between schools had increased in New Zealand after 1990, they had simply misread their own figures. For example, their figures for socio-economic segregation using the dissimilarity index were 58.3 in 1990 before school choice was introduced, and 48.1 in 1991 when the contested chosen places were allocated by lottery. This they described as an *increase* in segregation, revealing in fact that they do not know what their selected index means. Like so much in education research they were just plain wrong. And most readers simply accepted them at their word. Fiske and Ladd (2000) did something very similar. Their key tables (such as tables 7-2 to 7-4) presented data for the years 1991, 1996 and 1997, and showed a slight increase in segregation in New Zealand from 1991 to 1996/97. However, 1990 was the last year before the choice reforms, whereas 1991 was the first year after the new policy, and the only year in which contested school places were allocated by lottery. As Fiske and Ladd admit in a footnote on page 194, 'the indexes fell substantially between 1990 and 1991'. Presumably the 1990 figures were not included in the main tables, because they would destroy the thesis of the book which was that things were getting worse. In fact, in New Zealand, just as in England, social segregation declined quite substantially with the introduction of greater school choice, and then rose slowly again towards its previous level as the elements of choice were removed or weakened. These are just a few examples (but see Gorard et al. 2003, and Gorard and Fitz 2006). I do not want to repeat the whole sorry story of the illusionary 'crisis' of segregation here. But it is important to realise that studies like these have had real impacts on

policy, and since they had their results topsy-turvy they have actually led to a worsening of the situation they were ostensibly concerned with.

There have been claims that the attainment gap between girls and boys, or between ethnic groups, has been widening every year (e.g. Speed 1998, Gillborn and Youdell 2000). It has not (Gorard et al. 2001). We have had accounts of schools running out of teachers, or running out of leaders (e.g. Smithers and Robinson 2000, Kyriacou et al. 2002). They did not (Gorard et al. 2006). And so on. Much of the work in these areas, which includes some of the most prominent work in the UK, is of a deficient kind that is so prevalent that it is usually un-remarked. The examples above include claims about changes over time using only a snapshot of data, other comparative claims made without appropriate comparators, simple mis-reading of data and mis-representation of proportions. And these invalid conclusions about trends then endanger explanatory work, and the policies and practices intended to help the situation. If we really care about justice in education that we must do better in our education research intended to diagnose problems or to identify plausible solutions.

One possible reason for these widespread misunderstandings is a lack of awareness of the volatility of small numbers, stemming perhaps from an emphasis in research methods training on the flawed panoply of sampling-theory statistics (Gorard 2010a) and on measuring the unmeasurable (Gorard 2010b) rather than on the importance of sound judgement (Gorard 2006a). For any finite number of observations, dividing them into two or more categories will inevitably lead to some measures that are unequal between the categories (see above). The average height of people in west Birmingham is unlikely to be the same (exactly) as the average height in east Birmingham. I have no idea which would be the taller, and the figure by itself means nothing *post hoc*. Perhaps if the direction and approximate scale of the difference in average height had been predicted at the outset, and a tentative prior explanation like a difference in diet or ethnic composition had been advanced, then the difference in height would be worth further investigation. In isolation though, any difference could be due to the volatility of numbers, including measurement and recording error. To be of interest the difference has to be proportionately large or sustained over time (or both) and potentially meaningful. But some of the 'crisis' writers cited above have mistaken small meaningless volatility for a real pattern.

What I have shown (Gorard and Fitz 1998, Gorard 2009a), as has now been replicated and so rather grudgingly accepted by others (e.g. Allen and Vignoles 2006), is that there is considerable segregation between schools in England and Wales. This leads to higher than expected (by chance, volatility, or residential segregation) clustering of pupils from poorer families, some ethnic origins, first language, and additional learning needs, in particular schools. Around 30% of pupils living in poverty would have to exchange their schools if they were to be evenly spread, for example. This is a substantial level of clustering of poor pupils in schools. The highest recorded level of segregation in England was in 1989/90. It declined slightly but annually until 1995, plateaued and then started rising repeatedly again until 2004/05. Socio-economic segregation in England is now back near the highest ever recorded, partly because when it *was* decreasing academics were repeatedly telling policy-makers it was going up, so they changed their policies on the basis of this false 'evidence'. As outlined above, a similar picture has appeared in other countries.

Nevertheless, if we take a wider and longer-term view of most educational datasets, the slow and patchy trend in the UK, and other developed countries, is towards equity over time (Gorard 2006b). This is more likely to be a consequence of wider social and economic changes in the population than a result of changes in education itself. There are, generally, no sudden sustained changes due to policy or practice, of the kind we would expect if investment, legislative changes, new curricula and so on actually made a difference (but see Gorard et al. 2006 for an example relating to teacher vacancies, and Gorard et al. 2007 for an example relating to entry to higher education). Education mostly appears to reflect society (see below). It is more an epiphenomenon than a determinant.

The type of analyses discussed so far consider only one 'dimension' of time, that of successive cohorts passing through the school system (Gorard et al. 1999). My focus in what follows in this paper is more on the other dimension, the biographical impact for individuals of experiencing such a segregated school system. What, for example, is the influence of segregation on patterns of attainment?


**Attainment**

The stratification of attainment among young people in assessments leading to formal qualifications has been a major concern of governments, media and academics for decades. Attainment has almost come to mean the same as schooling, and to be the main way in which the effectiveness of schools, teachers and students is judged (Barber and Moursched 2007). However, it is timely to re-consider the relationship between the stratification of schools and the stratification of attainment.

There is no doubt that academic outcomes from schools are heavily stratified by social and economic background, at least as much as the school intakes are. And these linked patterns of stratification are repeated in every developed country studied, and for every new cohort of students. This is well-established and well-known. But what role do schools play in this? Do schools make these patterns better or worse? Despite some rather glib answers in the media, from policy-makers and even the Department for Children, Schools and Families in England, these are not easy questions to answer.

For example, it is not possible to compare raw differences in attainment over phases of education. If 80% of children attain the expected level at Key Stage 1 and only 70% attain the expected level at Key Stage 2 this does not necessarily mean that children are doing worse at KS2 than KS1, or that the gap between the majority and the 'underachievers' has widened. Neither the expected levels at each Key Stage nor the actual levels of attainment achieved by pupils are moderated in relation to the other Key Stages. By Key Stage 4 and beyond there are no expected levels anyway. And it remains the case that the percentage of young people attaining five GCSEs, for example, is not comparable to the percentage leaving higher education with a first class degree, or the percentage of the population using a home computer to access learning opportunities on-line. It is, therefore, difficult to establish whether the stratification of attainment that appears before Key Stage 1 increases or improves over the lifetime of individuals. We know that attainment is strongly related, in aggregate form, to social background in early years, KS1 and thereafter. This suggests that the stratification we observe in education systems pre-dates schooling and is not produced

by it. However, the difficulty we face in calibrating differences in attainment over the life course means that we can have no solid evidence of this kind about whether schools improve, worsen or simply have no impact on this stratification.

Instead of looking at changes within cohorts, we can try to look directly at snapshots of the impact of schools on the patterning of qualification outcomes. We have some evidence that attendance at school, as opposed to not attending school at all, leads to an increase in attainment for individuals, as measured by standard tests of literacy for example. This is why we have schools after all (and a discussion of whether they are the most cost effective way of producing that general level of attainment would have to be the subject of another paper). We do not have, and cannot ethically create, equivalent bodies of children attending and not attending schools. Therefore, we can only gauge the impact of each year of schooling by looking at the attainment of those born on and just before the key date of 1st September in any year (which is the cut-off point for school entry in any year in England). Using this discontinuity design, we discover that pupils who are one day older but have experienced an entire extra year of schooling score better on tests than those only one day younger (Luyten 2006, Gorard 2008b). But perhaps not by as much nor as clearly as policy-makers, teachers and parents may imagine. Nevertheless, attendance at any school makes a difference to individual learning. The money spent, and the efforts of teachers, are rewarded. The school system in England is compulsory, state-funded on a per-pupil basis, and universal. It has national standards for qualified teacher status, a national curriculum of Key Stages, universal SATs, a national inspection system – the office for standards in education or OFSTED - and so on. All of this is intended to make schools interchangeable as far as possible. Presumably we all hope that this inter-changeability of schools has been achieved to a great extent since 1944.

A very different question, therefore, is how much difference can we expect it to make which specific school someone attends? Hopefully, not very much in a democratic, developed country with an education system like that in England designed to promote equality of opportunity. The system in England is, or was until about 10 years ago, more like the systems in Finland and South Korea in terms of equality of funding and treatment, and quite unlike systems such as the USA with local taxation funding schools, or Belgium with a majority of state-sponsored private and faith-based schools.

In fact, we have no good evidence at all that different types of schools or individual schools within the national system make more difference to pupil attainment than any other (Gorard 2010c). Teachers and schools can make a difference to pupils' lives, as contrasted with pupils not going to schools (see above). But aggregated to the school level, there is no sustained overall difference in the effectiveness of different schools. At the level below schools (such as in teacher effectiveness studies) the numbers involved are usually so small that volatility returns. In fact, the whole system in England, termed contextualised value-added analysis (or CVA), has now been engineered to make it difficult to look at the impact of schools on stratified outcomes. The context, or consequence of stratified intakes to schools, is taken into account in CVA, meaning that we cannot use CVA scores to judge the progress of different kinds of students at school.

Even without the complication of adding context, all value-added analyses require (near) perfect information about prior and subsequent attainment, and that attainment has to be measured perfectly. But these ideal conditions never occur. Even in England with a centrally-collected annual school census and attainment dataset for all pupils that is probably unsurpassed in quality in Europe (Gorard and Smith 2010), at least 30% of cases are missing, unmatched across linked datasets, or erroneous (Gorard 2010c). This level of error in the data is hugely magnified when the value-added analyses focus on the inevitably small differences between predicted and subsequent attainment for each individual. The relative error in the figures propagates from something of the order of 30% to 1000% or more, making the eventual results completely meaningless. School effectiveness work is, therefore, largely as misleading as the crisis of stratification studies discussed above, and in the same way as them leads to misleading, wasteful and therefore unethical ideas for school improvement.

Again, an entirely contrary picture has been painted by other researchers, starting perhaps with Reynolds et al. (1976). Mortimore (1997, p.484), for example, is confused between the role of state education in general, as illustrated in the transformation of Singapore that he uses as an example of how schools can impact on society, and the differences in the effectiveness *between* schools within a country like Singapore. It is the same mistake people make when faced with the claim that there is little or no school effect, as defined by school effectiveness studies. They switch definitions and enquire whether this means then that schools, in general, make no difference. So let me, at least, be very clear on what I have said so far. Although it is disputable, it is very likely that schools and teachers, in general, make a difference to the learning outcomes of young people. In fact, such dispute as there is on this would be largely about whether this is the best and most economic way to achieve this level of improvement in learning outcomes. So, for example, although the rapid economic and social development of Singapore might be the main cause of its rapid improvement in education (through investment), it is likely that education itself was also part of the reason for the wider developments. This is a completely different proposition to saying, as Mortimore, Reynolds and many others do, that we have any evidence that specific schools or types of schools within a country are more effective than others in the same system.

Neither author considers the propagation of errors as discussed above. They rely on the *post hoc* identification of purportedly successful schools, even though Meehl's hypothesis (see above) warns us against interpreting all such variation as meaningful. Mortimore (1997) and many others also make the clear mistake of basing their claims for the differential effects of schools on significance tests designed for random samples, even though they are not using random samples (or indeed any kind of samples). This alone ought to be enough to generate serious doubts about so-called school effects. If these school 'effects' were robust in scale and largely invariant over time, and could be predicted in advance, then they might be worth taking seriously. In fact, none of these three things are true (see, for example, Reynolds 1992). And the value-added scores on which their school effectiveness studies rest are defined to have a mean effect of zero. They are literally zero-sum calculations, and this fact has several dangerous implications. It means we have no way of judging whether schools are getting better or worse, since even if all improved half would still have negative scores, and *vice versa*. And because 'success' is now redefined, perhaps inadvertently,

only to mean success relative to the 'failure' of others, schools are made to compete systematically rather than co-operate, while policy-makers are encouraged to discriminate *between* schools rather than think about the development of the system as a whole.

Although this is not his intention, Mortimore (1997. p.479) clarifies that the clear majority of variation in examination outcomes between pupils cannot be explained even by the best data and the most complex of school effectiveness analyses. Of the 30 to 40% that can be explained, the vast majority of this (75 to 90% of it) is attributable to the prior and individual characteristics of the pupils. This leaves such a tiny fraction of variation that could be attributed to school differences that it is easily dwarfed by the model mis-specification, the huge level of error in the variables that are used, the bias caused by the variables missing and so not used (such as motivation), and the consequences of mistakenly using sampling theory techniques with census data.

Another common error, especially among political and media commentators but also some academic writers, is to focus on the intervention or item of interest for school improvement, without a suitable comparator. So, for example, the claim that selective grammar schools are more effective in enhancing attainment or encouraging social mobility is usually made without reference to the secondary-modern schools that must co-exist with grammar schools. The political claim about the superiority of grammar schools does not stand up to close scrutiny even on its own (Gorard 2000, Gorard 2008a), but when considered in relation to the possibly lower level of secondary modern school outcomes it is hard to see selection as being anything more than zero-sum. Similar claims have been made about Specialist schools and Academies in England – that their attainment results have increased faster than other schools or their predecessors. This is not so (Gorard 2009b). But even if it were true this would only mean anything if the schools that did not get the extra money given to Specialist schools or Academies had stayed the same or also improved (otherwise the system as a whole would yield no gain). In fact, the successful Academies have generally used their extra money and re-badging as an opportunity to change their relatively deprived intakes, leading to higher raw attainment scores in the Academies and somewhat less improvement of scores in the schools nearby. Again it is difficult to see this as being any more than zero-sum. It is hard to decide whether the commentators who point to the improvement in raw scores for only type of school are simply unconcerned with the truth, or not astute enough to see this really basic problem with their 'analysis'. Either interpretation is quite alarming because of the power or influence these people often hold.

In summary, we have no reason to believe that the stratification of school attainment outcomes is especially influenced by the stratification of school intakes, as described in the previous section. It is hard enough to pin down any kind of differential school effect, let alone a school mix effect, on attainment. Grammar schools have better results than comprehensive schools, for example, largely because they contain only those pupils selected to do well in examinations. But comprehensives do as well as grammar and secondary modern schools when their results are combined. Does this mean then that it does not really matter what kind of school system we have?

**Educational institutions as mini-societies**

My answer would be that the kind of school system we have *does* matter. In fact, the foregoing argument, if accepted, releases us from the predominant focus on attainment, and so allows consideration of a wider range of desirable school outcomes. Governments in the UK and elsewhere have recently begun to look at a more imaginative range of school outcomes. Both the 14-19 Reforms in England and the new Foundation Phase in Wales have proposed enjoyment of learning as an important objective, for example. However, the same reforms also suggest that a key reason to enhance enjoyment is so that attainment (and perhaps participation) is increased. Enjoyment is apparently not, yet, enough for its own sake. But whether we want to consider enjoyment of learning, occupational aspiration, citizenship activities, or further participation in education, these and other future behaviours appear to be influenced by the type of school attended, and the experiences of pupils therein. For examples, see Gorard and Smith (2008) or Gorard et al. (2009).

These softer school outcomes, and others like them, are loosely related to individual pupil backgrounds, in just the same way that attainment is. But after these family, geographic, social and economic factors have been accounted for in a multi-stage analysis, much of the variation in outcomes remains to be explained (Gorard and See 2010). This is very different to attainment wherein the pupil background (and/or the prior attainment to which it is related) accounts for almost all of the variation that can be explained (Gorard 2010c, and see above). Put another way, attainment at school is more stratified than these other wider outcomes are. Partly, this is because concepts like enjoyment and aspirations are even harder to measure or moderate than attainment scores. The measurement error involved means that no model could expect to be anywhere near 100% successful in explaining outcome variation. And reported levels of subjective experiences like enjoyment could anyway be deemed illusionary where the young person is in objectively disadvantaged circumstances. This is so, even though the individual is the best source of information, and it is clear overall that the enjoyment and satisfaction with their treatment is even higher among those clearly challenged pupils taught in separate settings like special schools (Gorard and Smith 2010). Despite these methodological reservations, two groups of potential explanatory variables recur robustly in different datasets, over different time periods, and even in different countries, to explain a substantial amount of the remaining variation in these soft outcomes.

In a series of case studies, surveys and interviews with young people aged 14 to 19 across six EU countries and Japan, and the re-use of data from PISA 2000 and 2003, it has been shown that a mixed intake to schools and colleges should be preferred. Young peoples' sense of belonging, experience of bullying, sense of a fair society, hopes for the future, enjoyment of school, a willingness to help the disadvantaged, learning to trust others, and plans to continue in education or training, are all better in systems with mixed school intakes. A mixed school in this context refers to systems which are not selective, not faith-based, not clustering recent migrants in certain institutions, and with little diversity in the type of school available (Haahr et al. 2005). The beneficial effect, if that is what it is, of having a comprehensive and socially mixed intake to schools is relatively small (of the order of 6% to 10% of the variation otherwise unexplained by individual background). But this is at least as large as the purported school effect on attainment (see above), and it appears to offer the

possibility of an improvement in school outcomes at no direct cost. Tracking, selecting, and segregating children in different kinds of schools has no discernible benefit in terms of attainment (see above). Not doing so has a small but discernible benefit for the cohesion of schools as mini-societies and the experiences of those within them. It may have a longer term benefit for society more widely.

The second pattern common to this series of studies concerns young peoples' reported experiences in interacting with other students and with their teachers. Taken together, these experiences at school explain around 20% to 30% of the variation in soft outcomes that is otherwise unexplained by differences in individual background and school-level factors. And experience of justice or injustice at school forms part of the basis for a long term learner identity (Gorard and Rees 2002, Gorard 2010d). The clear pattern is that outcomes are better where pupils' experience of 'equity' is better.

A simple summary will have to suffice as an explanation of what I mean by equity here. If we consider various different principles of justice, such as equality of treatment, respect for individual autonomy, merited reward, and equality of outcomes, it is clear that each principle would lead to different judgements of what is fair in any given set of circumstances - equality of outcomes might require inequality of treatment, for example. The circumstances in which each principle was applied could be the setting such as the classroom, playground, family, or wider society. The variables would also include the actors, with different principles applying, perhaps, to adult:child interactions in schools than to child:child interactions. Of course, there are more factors than these (Gorard and Sundaram 2008, Gorard and Smith 2010), but these three are sufficient to make the point. What is noticeable from fieldwork involving the views of children themselves is how widespread is the agreement of what is fair in any combination of circumstances (EGREES 2005, EGREES 2008). For example, it is considered fair that all children receive education sufficient to achieve a threshold of literacy (equality of outcome). It is fair that teachers award marks for effort and attainment, or punish those who behave badly (merited reward, but inequality of outcome). It is fair that every child is treated with respect by their teachers, regardless of sex, ethnicity, class, or talent (equality of treatment). And so on.

The next noticeable result is that if we put aside those actions and interactions that are never considered fair by the majority, such as theft and bullying, then the common factor underlying all reported unfairness is the misapplication of a principle in the 'wrong' circumstances. Teachers can discriminate between pupils fairly, and can even have children whose company they are known to prefer to others. Usually, it is the hard-working and talented pupils who are preferred in this way. This is considered normal by other children. However, when teachers discriminate on other grounds, this is deemed unfair. One common example is when teachers do not respect the opinions of pupils who are not talented or hard-working. This, for children, is a clear misuse of a discriminatory principle of fairness in a domain that demands a (near) universal principle of justice.

The kind of research design I have so far used when looking at 'pupil voice' is unable to provide any kind of definitive test of a causal model (but see, for example, Khan and Gorard 2010 for a discussion of what that would entail). However, logistic regression models created in biographical order do suggest that an experience of

injustice at school has a depressing impact on the 'soft' outcomes like aspiration and citizenship activity. Once individual background and school-level variables are accounted for by regression models, then the variation in outcomes is largely explicable by pupil reports of interactions at school. The always unjust interactions like theft and violent bullying are associated with a lower likelihood of 'positive' outcomes. These events are largely reported as child:child interactions, and the only blame attributed to teachers and schools is where they knew about it and did not stamp it out. Reported injustice at the hands of teachers, even though ostensibly of a less serious nature, is also associated with less positive outcomes. Of course, injustice at the hands of teachers and other children could be more often reported by those with depressed ambitions, but the reverse seems more plausible. And, as with the school mix, dealing with it seems to have little cost, is something we probably want to do anyway, and it could have a significant beneficial impact on the life chances of the most disadvantaged and currently marginalised in education. It could provide all children with a decade or more of experience exemplifying how we might want society to be.

**Discussion**

There are clearly limits to what schools and education systems can do to encourage the level and equality of the outcomes associated with them. As Bernstein (1970) said 'Education cannot compensate for society'. Pring (2009) illustrates this point with a list of example challenges that include extended adolescence, changing family patterns, an increase in families in which no member has been employed, and the mental health problems and reported unhappiness of many young people in the UK. What all of these examples have in common is that they are not directly the results of schooling, nor are they directly addressable via education or schooling. But they may well influence behaviour and outcomes in schools. To a very large extent then, schools simply reflect the local population in their intakes, while being relatively ineffective in addressing the stratification of attainment that results.

Overall, the conclusion is that, somewhere along the way from 1944, state-funded education has somewhat lost sight of a major equitable purpose. Instead of addressing the stratification of outcomes, in recent decades the UK system has been largely engineered to try and enhance the general level of attainment – and international studies such as TIMSS, PIRLS and PISA may have, inadvertently, encouraged this focus in many other countries as well. In pursuit of this increase in attainment, schooling has been considerably extended since 1944. Children now start formal school at a much earlier age in England and Wales, and the legal age for being allowed to cease initial education has been successively raised. The school day is longer; there is more homework. There are breakfast clubs and holiday sessions. This is still, apparently, not good enough and so schools have burst their walls, and concern has been passed to parents and their wider involvement, and to social services via the Every Child Matters agenda. So, one might argue that schools should lose their special status if they cannot do what we want either in terms of improving or equalising attainment.

Nevertheless, what this paper has shown via a summary of several linked projects is that schools *can* compensate for society – a bit. As mini-societies in themselves,

schools and colleges can be shaped as the kind of wider society we would like, rather than left to represent only the society we have. There are serious inequalities and some difficult social problems in the population at large. But schools can be designed to minimise the experience and impact of both of these, affording children and young people a decade or more of a mixed peer group and mutually respectful relationships with adults. To some extent this is what schools and colleges already do. But if they were engineered for that purpose more explicitly, once policy-makers and other commentators had realised that the *differential* attainment issue was largely a red herring, at least as currently conceived, then this benign influence of schools could be even greater. And ironically the only likely impact on attainment, if there were any, would be to improve the overall level. Quality and equality are very far from being in conflict here. This is because of the diminishing returns on any 'investment' in the already advantaged learners, and the inefficiency produced by enhancing rather than counteracting 'privileged student bias' (Chiu amd Khoo 2005, p.576).

Given this freedom from needless concerns about having to foster stratification of school intakes in order to enhance attainment (by selection, for example), the school system could be designed to be equitable both in structure and process. In a sense, the move towards comprehensive schooling in the 1960s, the use of banding to de-stratify the intakes in the 1970s, the National Curriculum of the 1980s, and the trend away from catchment schools in the 1990s, all represented important moves towards such a system. Some may not have worked as intended and some may not have been intended, *prime facie*, to increase equity. Anyway these phases have all largely passed away. Schools are becoming more and more diverse, recreating and threatening to surpass the diversity of grammar, technical and secondary modern schools created in 1944. The National Curriculum is being weakened, and alternative tracks offered for vocationally-oriented students. Most authorities run a near-catchment system for community schools, co-existing with a free-for-all in the intakes to the other schools – the very worst of both approaches. Selection by faith, 'aptitude' and ability to pay is increasing. The result may be reflected in the rising socio-economic segregation between schools since 1997 (Gorard 2009a).

The solutions to the structural problems are simple. State-funded schools need to be as similar in character, intake and process as possible. It should make very little difference where a child lives to the kind of school they attend. The population is not known to be clustered by its aptitude for business, art, drama or sport. So there is no reason to have specialist local schools. Clustering students in school by differences in the professed faiths of their parents leads, inevitably, to ethnic segregation, and to the kind of conflicts seen in Northern Ireland and Central Europe (Smith 2003, Print and Coleman 2003). Again, there is no need for this, and no gain ensues. Preferential funding for those children deemed more expensive to teach should follow the child, rather than be allocated to areas or schools. What has happened with Academies is that the funding has rightly changed the balance of their intakes, but they still receive the funding even when they are no longer (if they ever were) the most disadvantaged school in their area. This is inefficient, and creates a new kind of school to threaten the school mix for no good reason. It is also quite wrong to have some secondary schools in an area finishing at age 16 and some at age 18. Inevitably, the continuation rates are higher for the students not faced with an explicit choice, and so the 11-18 schools get a reputation for being better, and the needless cycle of apparent differentiation continues.

If lack of diversity is not enough to bring about mixed intakes, or at least to undo the damage to school intakes of the last ten years, perhaps a freer choice of schools should be encouraged. It is not, despite some absurd claims in the crisis accounts above, that families living in rich areas want to send children to schools in poorer areas, but the other way around. Indeed breaking the link between a school and its immediate locale eliminates the residential bonus of living near a 'desirable' school, and so tends to reduce residential segregation anyway (Gorard et al. 2003). Other imaginative solutions could be used, if made politically possible, such as banding by attainment or by background, bussing (also an advantage to road users and the environment), and the allocation of school places by lottery (at least temporarily, but for all schools in an area). League tables could be abolished in England, as they were in Wales during my time as non-political adviser to the Minister for Education and Lifelong Learning. And the qualification regulatory bodies OFQAL and QCDA could be encouraged to strengthen their welcome stance (at least until the recent move of several high profile employees to Cambridge Assessment) on making public the genuine difficulties in moderating the standards of assessments. All of these would help citizens see beyond the misleading issues of both raw scores and of value-added analyses of attainment.

The proposed solutions to problems in schools as mini-societies are largely cost-free, and politically convenient, but perhaps not as simple to implement in practice as changes to structures. It is quite clear that pupils' willingness to help others, their trust in people both at school and more widely, their experience of school as fair, and their views on violence and the integration of recent immigrants, among others, are all influenced by their experiences of schooling. Insofar as we are able to prefer one of the outcomes in any of these areas (such as that pupils express a willingness to help others, rather than not help), then the more 'positive' outcomes are mostly encouraged by:

- appropriate teacher respect for all pupils and their opinions
- teachers allowing pupils the autonomy to work at their own speed
- teachers using discrimination only in its proper domains
- and lack of abuse at the hands of other pupils

The term 'equity' appears in the curriculum and some professional development resources used in initial teacher education in England and elsewhere. But the conception of equity used within them is often very limited – confined to the boy/girl attainment gap in one example (Gorard and Smith 2010). I propose that the apparently conflicting principles of justice (see above), and their appropriate domains, should be a larger part of the development of all teachers. This would help emerging teachers to distinguish between, and operationalise, the universal principles (i.e. those applicable to all participants in the setting), such as autonomy and respect, and the principles that legitimately require discrimination.

By denying some pupils justice at school, whether inadvertently or not by our current over-emphasis on the importance of attainment, we are in danger of prolonging and exacerbating some injustices in society. Fairness for individuals, a sense of justice, and social cohesion are as much a product of experiences in schools, as lived in, as they are of the formal educational process. Social, ethnic and economic segregation

matters, but not primarily for the sake of test results. In conclusion, schools and teachers may want to concern themselves a little less with the efficiency and effectiveness of their approach to instruction, and a little more with the kind of people they want their charges to be. Schools, in their structure and organisation, can do more than simply reflect the society we have; they can try to be the precursor of the kind of society that we wish to have.

## References

Allen, R. and Vignoles, A. (2006) *What should an index of school segregation measure?,* London: Centre for Economics of Education, http://cee.lse.ac.uk/pubs/default.asp, accessed 17th August 2007

Barber, M. and Moursched, M. (2007) *How the world's best-performing school systems come out on top*, McKinsey & Co.

Bernstein B. (1970) Education cannot compensate for society, *New Society,* 15, 387, 344-347

Blanden, J., Gregg, P. and Machin, S. (2005) *Intergenerational mobility in Europe and North America: Report for the Sutton Trust*, London: Centre for Economic Performance

Bourdieu, P. Cultural reproduction and social reproduction, pp 487-511 in Karabel, J. and Halsey, A. (Eds.) *Power and ideology in education*, Oxford: Oxford University Press

Chiu, M. and Khoo, L. (2005) Effects of resources, inequality, and privilege bias on achievement: country, school and student level analyses, *American Educational Research Journal*, 42, 4, 575-603

EGREES (2005) Equity in European Educational Systems: a set of indicators, *European Educational Research Journal*, 4, 2, 1-151

EGREES (2008) *Developing a sense of justice among disadvantaged students: the role of schools*, Birmingham: European Group for Research on Equity in Education Systems, 141 pages

Fisk, E. and Ladd, H. (2000) *When schools compete: a cautionary tale*, Washington DC: Brookings Institution Press

Gillborn, D. and Youdell, D. (2000) *Rationing education: policy, practice, reform and equality*, Buckingham: Open University Press

Glass, D. (1954) *Social mobility in Britain*, London: Routledge

Gorard, S. (2000) *Education and Social Justice*, Cardiff: University of Wales Press

Gorard, S. (2004) The international dimension: what can we learn from the PISA study?, pp.26-32 in Claire, H. (Ed.) *Gender in education 3-19: A fresh approach*, London: Association of Teachers and Lecturers

Gorard, S. (2006a) Towards a judgement-based statistical analysis, *British Journal of Sociology of Education*, 27, 1, 67-80

Gorard, S. (2006b) Does policy matter in education?, *International Journal of Research and Method in Education*, 29, 1, 5-21

Gorard, S. (2008a) Research impact is not always a good thing: a re-consideration of rates of 'social mobility' in Britain, *British Journal of Sociology of Education*, 29, 3, 317-324

Gorard, S. (2008b) *Quantitative research in education*, London: Sage

Gorard, S. (2009a) Does the index of segregation matter? The composition of secondary schools in England since 1996, *British Educational Research Journal*, 35, 4, 639-652

Gorard, S. (2009b) What are Academies the answer to?, *Journal of Education Policy*, 24, 1, 1-13

Gorard, S. (2010a) All evidence is equal: the flaw in statistical reasoning, *Oxford Review of Education*, (forthcoming)

Gorard, S. (2010b) Measuring is more than assigning numbers, pp.389-408 in Walford, G., Tucker, E. and Viswanathan, M. (Eds.) *Sage Handbook of Measurement*, Los Angeles: Sage

Gorard, S. (2010c) Serious doubts about school effectiveness, *British Educational Research Journal*, (forthcoming), pp.1-22

Gorard, S. (2010d) School experience as a potential determinant of post-compulsory participation, *Evaluation and Research in Education,* (submitted)

Gorard, S. and Fitz, J. (1998) The more things change.... the missing impact of marketisation, *British Journal of Sociology of Education*, 19, 3, 365-376

Gorard, S. and Fitz, J. (2006) What counts as evidence in the school choice debate?, *British Educational Research Journal*, 32, 6, 797-816

Gorard, S. and Rees, G. (2002) *Creating a learning society?*, Bristol: Policy Press

Gorard, S. and See, BH (2010) How can we enhance enjoyment of secondary school?: the student view, *British Educational Research Journal,* (submitted)

Gorard, S. and See, BH. (2008) Is science a middle-class phenomenon? The SES determinants of 16-19 participation, *Research in Post-Compulsory Education*, 13, 2, 217-226

Gorard, S. and See, BH. (2009) The impact of SES on participation and attainment in science, *Studies in Science Education*, 45, 1, 93-129

Gorard, S. and Smith, E. (2008) The impact of school experiences on students' sense of justice: an international study of student voice, *Orbis Scholae*, 2, 2, 87-105

Gorard, S. and Smith, E. (2010) *Equity in Education: an international comparison of pupil perspectives*, London: Palgrave

Gorard, S. and Sundaram, V. (2008) Equity and its relationship to citizenship education, pp.71-79, in Arthur, J., Davies, I. and Hahn, C. (Eds.) *The Sage Handbook of Education for Citizenship and Democracy*, London: Sage

Gorard, S., Rees, G. and Fevre, R. (1999) Two dimensions of time: the changing social context of lifelong learning, *Studies in the Education of Adults*, 31, 1, 35-48

Gorard, S., Rees, G. and Salisbury, J. (2001) The differential attainment of boys and girls at school: investigating the patterns and their determinants, *British Educational Research Journal*, 27, 2, 125-139

Gorard, S., See, BH. and Shaheen, R. (2009) Educating for citizenship: some lessons from England 2008, *Citizenship Teaching and Learning*, 5, 1, 35-45

Gorard, S., See, BH., Smith, E. and White, P. (2006) *Teacher supply: the key issues*, London: Continuum

Gorard, S., Taylor, C. and Fitz, J. (2003) *Schools, Markets and Choice Policies,* London: RoutledgeFalmer

Gorard, S., with Adnett, N., May, H., Slack, K., Smith, E. and Thomas, L. (2007) *Overcoming barriers to HE*, Stoke-on-Trent: Trentham Books

Haahr, J., with Nielsen, T, Hansen, E. and Jakobsen, S. (2005) *Explaining pupil performance: evidence from the international PISA, TIMSS and PIRLS surveys*,

Danish Technological Institute, www.danishtechnology.dk, accessed August 2005

Harris, N. and Gorard, S. (2010) The Education System of the United Kingdom, in Döbert, Hans/Hörner, Wolfgang/von Kopp, Botho/Reuter, Lutz (Hrsg.) *Die Bildungssysteme Europas*, Baltmannsweiler: Schneider Verlag Hohengehren

Khan, M. and Gorard, S. (2010) A randomised controlled trial of the use of commercial software for the acquisition of reading skills, *School Effectiveness and School Improvement*, (submitted)

Kyriacou, C. Benmansour, N. Coulthard, M. Hultgren, A. and Stephens, P. (2002) In Ross, A. (Ed.) *Emerging Issues in Teacher Supply and Retention: proceedings of the second conference of the Teacher Supply and Retention Project*, held at the University of North London. London: Institute for Policy Studies in Education

Luyten, H. (2006) An empirical assessment of the absolute effect of schooling: regression-discontinuity applied to TIMSS-95, *Oxford Review of Education*, 32, 3, 397-429

Mortimore, P. (1997) Can effective schools compensate for society?, pp.476-487 in Halsey, A., Lauder, H., Brown, P. and Stuart Wells, A. (Eds.) *Education, culture, economy, society*, Oxford: Oxford University Press

Pring, R. (2009) Education cannot compensate for society: reflections on the Nuffield Review of 14-19 Education and Training, *Forum*, 51, 2, 197-204

Print, M. and Coleman, D. (2003) Towards understanding of social capital and citizenship education, *Cambridge Journal of Education,* 33, 1, 123-149

Rawls, J. (1971) *A Theory of Justice*, Oxford University Press, Oxford, UK

Reynolds, D. (1992) School effectiveness and school improvement: an updated review of the British literature, pp.1-24 in Reynolds, D. and Cuttance, P. (Eds.) *School Effectiveness*, London: Cassell

Reynolds, D., Jones, D. and St Leger, S. (1976) Schools do make a difference, *New Society*, 37, 223-225

Sargant, N. (2000) *The learning divide revisited*, Leicester: NIACE

Selwyn, N., Gorard, S. and Furlong, J. (2006) *Adult learning in the digital age*, London: RoutledgeFalmer

Smith, A. (2003) Citizenship education in Northern Ireland: beyond national identity, *Cambridge Journal of Education*, 33, 1, 15-31

Smithers, A. and Robinson, P. (2000) *Coping with teacher shortages*, Liverpool: University of Liverpool, Centre for Education and Employment Research

Speed, E. (1998) *Gender issues and differential achievement in education and vocational training: a research review*, Manchester: Equal Opportunities Commission

Tomlinson, S. (2001) *Education in a post welfare society*, Buckingham: Open University Press

Waslander, S and Thrupp, M. (1995) Choice, competition, and segregation: An empirical analysis of a New Zealand secondary school market, *Journal of Education Policy*, 10, 1, 1-26

Willms, D. and Echols, F. (1992). Alert and inert clients: The Scottish experience of parental choice of schools, *Economics of Education Review*, 11, 4, 339-350