



School Admissions in the United States

Policy, Research and Practice

JOSH HILLMAN

JANUARY 2006

© ippr 2006

Acknowledgements

With thanks to Cambridge Assessment and Select Education Plc who made this seminar possible through their ongoing support for the project A New Agenda for Schools.

A New Agenda for Schools aims to inject a wave of new thinking into school reform in England. The project provides a space to engage critically with the standards agenda, asking what has worked and what hasn't. It is drawing from international experience and research from a variety of disciplines to seek new ways to raise standards of school performance and equity of outcomes in the decade ahead. The project explores opportunities and alternatives on three key themes across 5-16 provision:

- School Admissions
- Assessment, Curriculum and Pedagogy
- Schools Workforce.



The Institute for Public Policy Research (ippr) is the UK's leading progressive think tank and was established in 1988. Its role is to bridge the political divide between the social democratic and liberal traditions, the intellectual divide between academia and the policy making establishment and the cultural divide between government and civil society. It is first and foremost a research institute, aiming to provide innovative and credible policy solutions. Its work, the questions its research poses, and the methods it uses are driven by the belief that the journey to a good society is one that places social justice, democratic participation, economic and environmental sustainability at its core.

This paper has been prepared by Josh Hillman for ippr.

This paper was first published January 2006. © ippr 2006

30-32 Southampton Street, London WC2E 7RA
Tel: 020 7470 6100 Fax: 020 7470 6111 www.ippr.org
Registered Charity No. 800065

Contents

Introduction	4
A. Admissions policy in the United States	5
Policy context: raising achievement and closing gaps	5
Admissions policy driver 1: neighbourhood schools	7
Admissions policy driver 2: intake balancing	8
Admissions policy driver 3: school choice and differentiation	10
Interactions between the policy drivers and their impact	12
B. Research in the United States into school composition, admissions policies and educational outcomes	13
What are the influences of family and social background on pupil outcomes?	13
To what extent can schools compensate for disadvantage, and how do their capacities to do so differ?	14
What are the effects of the socio-economic composition of a school?	15
How does socio-economic composition have an effect?	17
Is the impact of socio-economic composition a zero-sum game?	17
Does desegregation between schools lead to segregation within schools?	18
What effect does increased school choice have on intakes and achievement?	18
Research evidence and policy realities	20
C. Case studies	21
Wake County Public School System, North Carolina	21
Cambridge Public School District, Massachusetts	24
San Francisco Unified School District, California	28
D. Conclusions	34
Bibliography	37

Introduction

School admissions policy in the United States faces a set of challenges and complexities not dissimilar to those in Britain:

- pressure on all schools for rapid improvement in performance whatever their pupil intake
- socio-economic conditions outside the control of schools or education policy – including residential segregation - that affect intakes and achievement gaps
- difficulty in recruiting and retaining good teachers and leaders in schools facing difficult circumstances
- increasing expectations among many parents of school choice and diversity
- growing numbers of publicly funded schools conducting their own admissions
- a private sector creaming off significant numbers of advantaged families.

The decentralised nature of the American education system is such that sequential waves of reform in recent decades have resulted in substantial variation in state and district policies influencing which children go to which schools. Policy, practice and research offer up a rich and timely source of learning for the UK, and this paper reviews and distils a considerable body of evidence to inform the admissions policy debate.

Section A examines the policy framework for school admissions in the US by:

- summarising the federal focus on raising standards, narrowing achievement gaps and tightening accountability across states, districts and schools
- identifying three admissions policy drivers (neighbourhood schools, intake balancing, and school choice and differentiation)
- analysing the complex interaction between these drivers.

Section B examines the American research evidence covering:

- the extent to which educational outcomes can be explained by the influences of family background and school
- the extent to which the school's social composition – and admissions policies affecting it – influences the performance of its pupils, beyond their aggregate characteristics
- explanations for how school composition has an impact on educational outcomes, whether direct (e.g. peer-group effects) or indirect (e.g. through school effects).

Section C presents case studies of school districts that have developed innovative admissions systems, balancing the policy drivers as part of strategies for raising standards and narrowing achievement gaps.

Section D draws conclusions from the preceding policy analysis, research evidence and case studies.

A. Admissions policy in the United States

Policy context: raising achievement and closing gaps

The backdrop for admissions policy in the US has been heavily coloured in recent years by an increasing political focus on raising achievement and narrowing achievement gaps.

Underachievement

For a nation of such economic power and global influence, educational performance in the US is far from satisfactory, as bemoaned by politicians and policymakers for decades. Comparisons with international competitors are unflattering¹:

- The 2003 PISA (Programme for International Student Assessment) study, examining general skills among 15-year-olds, shows the US slipping to 24th out of 29 OECD nations in maths, falling below Poland, Hungary, and Spain in the three years since the previous assessment. Meanwhile, the US ranks fifteenth in reading, nineteenth in science, and 24th in problem-solving.
- The TIMSS (Trends in International Mathematics and Science Study) study, also from 2003, but placing a greater emphasis on specific curriculum-based knowledge, tells only a slightly less alarming story. At fourth grade (see note 1) the US ranked sixth out of 11 OECD countries for maths and fourth for science. At eighth grade the US ranked eleventh out of 13 for maths, and eighth for science.

Long-term trend data from the National Assessment of Educational Progress (NAEP) – the 'Nation's Report Card' – show that²:

- reading performance of 17-year-olds was the same in 2004 as in 1971, with only slight improvement for nine- and 13-year-olds
- maths performance has improved somewhat over this period for nine- and 13-year-olds, but hardly for 17-year-olds
- science performance of 17-year-olds was lower in 1999 than 30 years previously, with nine- and 13-year-olds not much better.

The main NAEP survey, a nationwide sample of 660,000 pupils, shows stagnant reading scores between 1992 and 2005 at both fourth and eighth grade, with only a two-point increase on a 500 point scale. More encouragingly, maths scores rose by 25 points for fourth grade and 16 points for eighth grade between 1990 and 2005³. Table 1 summarises achievement level data and shows that:

- less than a third of pupils are at least proficient in reading
- in maths, extensive gains have been made recently at fourth grade, but proficiency levels – particularly at eighth grade – are still extraordinarily low
- significant proportions of pupils still fail to acquire basic literacy and numeracy skills.

1. Elementary school usually runs from Kindergarten or K (age 5-6) to fifth grade (age 10-11). Middle school (sometimes called junior high school - especially if it covers seventh to ninth grade - usually runs from sixth grade (age 11-12) to eighth grade (age 13-14). High school usually covers ninth grade (age 14-15) to twelfth grade (age 17-18). International comparisons are from: PISA (2004), Gonzales et al (2004).

2. The two basic types of National Assessment of Educational Progress (NAEP) assessments are 'main' NAEP and 'long-term trend'. The long-term trend survey assesses pupils by age and at a national level only. It has been administered around every four years since the early 1970s, and is based on much smaller samples than the main NAEP survey; for example, the 2004 reading and maths surveys used a sample of around 28,000 pupils. See Perie et al (2005a), Campbell *et al* (2000).

3. Main NAEP only goes back to the early 90s and assesses students by grade, providing both national and state results. It currently assesses fourth and eighth grade maths every two years. See Perie et al (2005b), and Perie et al (2005c).

Subject and grade	Advanced	Proficient	Basic	Below basic
Reading fourth grade: 2005 (1992)	7.5 (6.4)	24.0 (22.2)	32.7 (33.7)	35.8 (37.9)
Reading eighth grade: 2005 (1992)	3.0 (2.9)	27.8 (26.3)	41.8 (40.3)	27.4 (30.5)
Maths fourth grade: 2005 (1990)	5.0 (1.2)	31.3 (11.6)	44.0 (37.2)	19.7 (50.1)
Maths eighth grade: 2005 (1990)	6.0 (2.0)	22.7 (13.3)	39.4 (36.6)	30.9 (48.2)

Achievement gaps

The educational performance of the US is dragged down by relatively large disparities across the school population, and strong associations of disadvantage and underachievement (OECD, 2005). Some inroads have been made with the black-white achievement gap, which narrowed significantly between the early 1970s and late 1980s and widened again in the 1990s, and have slightly narrowed again in the past few years (Perie et al, 2005a; Campbell et al, 2000)⁴. The white-Hispanic gap has had a similar pattern, although for 17-year-olds it is continuing to widen. However, these gaps remain vast, as do those for socio-economic and other forms of disadvantage. Table 2 sets out NAEP fourth grade reading achievement levels for 2005.

	Average scale score	At or above proficient (%)	Below basic (%)
<i>All pupils</i>	219	31	36
Eligible for subsidised lunch	203	16	54
Ineligible for subsidised lunch	230	42	23
White	229	41	23
Black	200	13	58
Hispanic	203	16	54
Non-English language learners	222	34	33
English language learners	187	7	73

The substantial achievement gaps shown are similar for maths and for eighth graders, and the socio-economic and language gaps have not changed since NAEP started to measure them in the late 1990s.⁵

The roles of federal and state governments

National data masks substantial state variations in achievement levels and gaps. The scope for central government policy has been far more limited than in Britain. The US Constitution does not mention education, hence it is a power entrusted to state constitutions and governments which, in turn, grant control of schools to over 15,000 districts. But the 1965 Elementary and Secondary Education Act (ESEA) put a foot in the door, and its largest programme 'Title 1' now provides £12 billion of compensatory funds for disadvantaged children and their schools: around half of federal government's eight per cent share of compulsory education expenditure (US Department of Education, 2005). ESEA remains the main federal law, having been reauthorised eight times, most recently as the No Child Left Behind (NCLB) Act, signed in 2002 with bipartisan support.

NCLB represents an unprecedented extension of federal authority in education, and the culmination of a growing accountability movement (Peterson and West, 2003; Meier and Wood, 2004). The seeds were sown in the 1983 Reagan-commissioned report 'A Nation at Risk', which warned of a 'rising tide of mediocrity', linked poor student performance to an uncompetitive economy, and recommended the establishment of

4. For detailed research and discussion of a wide range of issues around race achievement gaps see Jencks and Phillips (1998a).

5. See note 3 for sources of these figures.

common academic standards (National Commission on Excellence in Education, 1983). Successive Republican and Democrat administrations established national performance goals; and encouraged states to develop and implement assessment and standards-based reforms, and to monitor annual progress. But with no effective timetable or sanctions, state policies varied wildly from the sophisticated to the non-existent (Hayes, 2004).

No Child Left Behind

At the core of NCLB are mechanisms for holding states, districts and schools explicitly accountable for student progress and for closing achievement gaps⁶:

- annual 'high-stakes' tests in reading and arithmetic for all pupils grades three to eight
- obligations on states, districts and schools to furnish detailed annual report cards, including achievement data for subgroups (by race, income, gender, disability, English language proficiency and migrant status)
- targets for states and districts to bring all students up to 'proficient' level by 2013/14, with schools given 'adequate yearly progress' targets toward this, including for subgroups.

Some aspects of NCLB go beyond the scope of this paper, for example teacher qualifications, Reading First and improved targeting of Title 1 funds.⁷ But both pressure and support provisions in the Act are of direct relevance to admission policy:

- a school receiving Title 1 funds that fails to meet targets two consecutive years must be given assistance
- its pupils must be offered the choice to transfer, with free transport, to another school in the district not deemed low-performing, with particular priority given to pupils with low income and achievement
- pupils in schools failing to make adequate progress three years in a row must also be offered supplemental educational services, including private tutoring
- for continued failure, a school is subject to outside corrective measures, including possible governance changes and closure
- some federal support is provided for charter, magnet and public school choice programmes.

It is early days, but it is likely that these provisions will have a marginal but growing impact on school compositions. NCLB is the latest development affecting all three admissions policy drivers that might be identified:

- neighbourhood schools
- intake balancing
- school choice and differentiation.

Admissions policy driver 1: neighbourhood schools

The 'common school' has been a deeply cherished ideal for American educational reformers since the 1830s. The notion is that children of all social classes, religions – and, much later, races – should share a similar education under the same roof. This, it is argued, would act as a glue for community-building and social cohesion, and as a cornerstone of equal opportunity through entitling young people to compete fairly in the economy. While aspects of the broader concept have remained utopian, the neighbourhood school – to which pupils are assigned by attendance zones – has long been a reality, entrenched by an historic commitment from many parents, educators and administrators (Spring, 2004; Ravitch, 2001; Kahlenberg, 2001).

6. Public Law 107-110, 107th Congress, 8 January 2002. No Child Left Behind Act of 2001: an act to close the achievement gap with accountability, flexibility, and choice, so that no child is left behind.

7. By the end of the 2005/06 school year, every teacher in core content areas working in a public school must be certified and demonstrably proficient in all subjects they teach. Reading First is a new \$1 billion competitive-grant program to help states and districts set up reading programmes for children in grades K-3, with priority given to high-poverty areas. A smaller early-reading programme seeks to help states better prepare three- to five-year-olds in disadvantaged areas.

In the complex and politically charged debates around desegregation and choice, it is easy to overlook the fact that the majority of children still attend their local school. Distance is an issue: in large parts of the US pupils do not live close enough to more than one school for choice to be a reality, particularly if neither their parents nor the district are prepared to pay transport costs. Elsewhere, the attendance area remains a widespread and powerful tool of admissions policy. Table 3 shows that in 2003, 74 per cent of pupils attended their assigned school, although this was down from 80 per cent ten years previously (Wirt et al, 2004).

Type of school	1993	2003	% point change	% difference
Public, assigned	79.9	73.9	-6.0	-7.5
Public, chosen	11.0	15.4	4.4	40.0
Private, church-related	7.5	8.4	0.9	12.0
Private, not church-related	1.6	2.4	0.8	50.0

In most states, school admissions are heavily influenced by high levels of residential segregation, both across and within districts (Logan, 2002; Swanstrom et al, 2004; Rusk, 2002a). Economic segregation has increased continuously in the past few decades, particularly between cities and their suburbs. When children are assigned to their neighbourhood school, residential patterns are not only reflected in school intakes but are reinforced. American families are remarkably mobile, and more than willing to move to a neighbourhood so their children can attend a particular school. Recent figures show that parents of 24 per cent of students do so; those with assigned places being even higher at 28 per cent.⁸ There are significant variations in willingness and ability to move, with much higher rates for whites, graduates and better-off families. Research shows the huge impact of schools on housing prices, enabling these groups to pay indirectly for good schools via a capital investment, or as one writer has called it, a 'segregation tax' (Kane et al, 2005; Rusk, 2001).

With further residential segregation projected, catchment area effects will continue in coming decades. Counteracting them will require not just school admissions policies but also housing policies that support socio-economic integration of neighbourhoods, for example scattered site public housing projects, zoning changes, and mixed-use developments.⁹

Admissions policy driver 2: intake balancing

It is not possible to understand admissions policy in the US without at least a brief examination of issues around racial segregation and desegregation. Indeed, there are significant policy and research lessons from successful and unsuccessful attempts to balance school intakes.

Racial desegregation

Until the late 1960s the major exception to the neighbourhood school norm was the de jure segregation of schools by race in southern states. In 1954, in *Brown v. Board of Education*, the Supreme Court had declared this legal apartheid unconstitutional. But with a weak formulation calling for 'desegregation with all deliberate speed', initial implementation was slow. It took the stick of the 1964 Civil Rights Act and the carrot of substantial Great Society federal funding to overcome the recalcitrance of state officials and school boards. Impetus was given to the integration of neighbourhood schools, and to the instigation of more complex remedies in the form of mandatory reassignment plans, often involving involuntary busing. Desegregation was not confined to the South; many districts in northern states with high levels of de facto segregation were also subject to court orders (Orfield et al, 1996; Kluger, 2004; Ogletree, 2004).

Between 1968 and 1990, levels of racial segregation in schools declined dramatically, particularly in the

8. Figures are for 2003 in Wirt et al (2004).

9. For a helpful discussion of this see Rusk (2005). A good example of where these policies have been put into practice is Montgomery County, Maryland. The Washington Post ran an extended two-part account of this - see Schulte and Keating (2001a and 2001b).

South. Court-supervised plans were at the heart of this, although pre-emptive, autonomous and federally-supported desegregation was extensive in many districts without court orders. However, progress has halted and slightly reversed since 1990, particularly in metropolitan areas (Logan and Oakley, 2004). Again, residential factors have played a part:

- Concerted efforts since the 1960s to tackle the systematic and persistent effects of historic mortgage, tax and zoning policies led to two decades of substantial reductions in racial segregation, which stalled in the 1990s (Glaeser, 2001).
- Racial isolation in many of the largest cities in the US is now growing, boosted by black and Hispanic population growth (Frankenberg et al, 2003; Logan and Oakley, 2004; Logan, 2004).
- A quarter of metropolitan areas are still 'hyper-segregated'; another half partially segregated.¹⁰

The potential for admissions policies to counteract residential segregation has been weakened. A number of subsequent judicial decisions have diluted, halted and even reversed the impact of *Brown*, calling into question its precise original intentions (Orfield and Lee, 2004; Chemerinsky, 2005; Kluger, 2004; Ogletree, 2004; Orfield et al, 1996). First, *Milliken v. Bradley* (1974) limited desegregation to remedies *within* individual school districts, exempting many metropolitan areas from tackling the most severe form of segregation: that *between* cities and their suburbs. This decision effectively neutered *Brown's* influence in northern cities, whose inner and outer areas tend to be split across multiple districts, although state courts have occasionally found ways of mandating city-suburban desegregation.¹¹ In the South, single district metropolitan areas are more prevalent. *Milliken* effectively rubber-stamped the counterproductive 'white flight' effect by which white families, mainly middle-class, moved from desegregating inner cities to suburbs, leaving behind increasingly ghettoised urban schools¹².

Second, other court decisions have excused desegregation violations *within* districts on the grounds that they were not 'intentional', for example if they reflected segregated residential patterns. Districts have thus been exempted or released from judicial enforcement, with de facto segregation in schools interpreted as inevitable. Even districts remaining under court supervision have increasingly ineffective plans because of demographic and residential shifts in the years after school attendance boundaries were set.

Third, a series of decisions exemplified by *Missouri v. Jenkins* (1995) have released districts from desegregation obligations if they have, in a limited way, obeyed court orders for several years and achieved 'unitary' status. This legal term relates to 'good faith' and effort 'to the extent practicable', and not to success in desegregation, let alone in educational outcomes. In effect, court enforcement is treated as temporary punishment for historic discrimination, not as the basis for a long-term desegregation strategy; unitary status being granted as 'judicial absolution for the sins of segregation' (Orfield et al, 1996). Recent rulings in some regions have gone the next step and barred the use of race in pupil assignment.¹³

Socio-economic desegregation

As will be seen, racial achievement gaps can be largely explained by socio-economic factors. Much of the capacity of racial integration to equalise educational opportunity comes from the associated effects of more socially balanced school intakes. Conversely, educational effects of racial desegregation plans can be limited and even counterproductive, for example when they result in integration of poor white and poor black pupils (Kahlenberg, 2001). In metropolitan areas, the average black pupil attends a school where 64 per cent of classmates are poor, compared with 30 per cent for the average white pupil.¹⁴ More than half of this disparity is due to segregation between districts, the rest to segregation within districts. So even if racial desegregation is effectively implemented within a metropolitan district, substantial socio-economic inequalities between districts serve to maintain wide gaps of achievement and opportunity, with a

10. Hyper-segregated means with measures of dissimilarity greater than 0.6 (partially segregated is between 0.4 and 0.6), this measure being the proportion of a racial group that would need to move districts to achieve an even proportion across the metropolitan area. See Glaeser (2001).

11. For example Delaware and Indiana, cited in Kahlenberg (2001).

12. This effect, now extensively referred to in the literature, was first identified by Coleman et al (1975).

13. See notes for case studies for examples of this. Two exceptions in 2005 have been in Seattle and in Lynn, Massachusetts, where the use of race has been upheld. It may be that at some point such a case will reach the Supreme Court.

14. The definition of poor or low-income is eligibility for subsidised (free or reduced price) lunch, here and throughout the paper. Figures are from National Center for Educational Statistics for 1999-2000, analysed in Logan and Oakley (2004).

particularly adverse effect on black children.

In the past few years, a number of districts have opted to maintain policy objectives of balancing school intakes, but through use of socio-economic or achievement factors in pupil assignment, as will be seen in the case studies.¹⁵ NCLB has provided a national framework, and some pressure and support for raising test scores and narrowing racial achievement gaps. But scope for districts to contribute to this through gearing admissions in favour of disadvantaged pupils has been heavily circumscribed by¹⁶:

- an unfavourable political climate and legal uncertainty, shifting reform agendas of all persuasions towards other approaches for helping children confined to segregated city schools, such as under-performance sanctions and compensatory spending
- a sense of weakness in the face of residential and demographic forces, particularly in metropolitan areas
- diminished capacity to assign pupils to schools, when ever-growing priority is given to parental choice.

Admissions policy driver 3: school choice and differentiation

Attendance zones and mandatory assignments have increasingly been giving way to an emphasis on school choice and diversified provision. The original motivation arose from desegregation plans, with districts looking for methods of encouraging voluntary movement away from segregated neighbourhood schools, such as the establishment of magnet schools from the 1970s onwards, and early choice programmes in the 1980s. More recently, other motivations for choice and differentiation have been emphasised, in particular the use or simulation of market mechanisms and behaviours and the involvement of private schools.¹⁷ Most states now have a burgeoning patchwork of options. As Table 3 showed, in 2003, 15 per cent of young people were in public schools to which they had not been assigned – a growth of 40 per cent in the exercise of choice from a decade earlier. Charter schools and NCLB provisions are reinforcing this trend.¹⁸ Principal policies can be mapped out as follows.

Differentiation of supply

Magnet schools aim to create demand for voluntary transfers so that their intake meets desegregation standards, through offering distinctive curricular programmes, emphases or pedagogical approaches. Mainly located in inner-city areas, but open to all pupils in the district, many have been successful in attracting white children into schools that had been predominantly minority. In some cases, magnet programmes are offered in schools that otherwise draw enrolment from an attendance zone. Magnets have enjoyed several policy-driven bursts of growth and federal support, and there are currently between two and three thousand serving around two million pupils.¹⁹

Charter schools are public, funded by states, but independent. They are free of many regulations, and enjoy financial and operational autonomy under a performance contract with a state, district, or higher education institution.²⁰ Some have a curricular emphasis, and a small but growing number are run by

15. Other districts with controlled choice system that aim to reduce concentrations of socio-economic disadvantage include: Charlotte-Mecklenburg, North Carolina; St Lucie County, Florida; San Jose, California; Rochester, New York; and La Crosse, Wisconsin.

16. A number of recent books have suggested that policymakers of all persuasions, for the reasons outlined, are to varying extents giving up on using pupil assignment to improve opportunities and outcomes for the disadvantaged, and that they are attempting, successfully or otherwise, to improve de facto racially and economically segregated schools, for example: Rothstein (2004), Kahlenberg (2001), Kozol (2005), Cashin (2004). For a viewpoint that supports this trend: Thernstrom and Thernstrom (2003).

17. In some school districts there have been long-standing exceptions to the neighbourhood school at high school level in the form of specialised vocational schools and selective exam schools. School choice had its origins in the work of Friedman (1962). But it was not until the late 1980s that it was put into practice in any substantive way in the US. Note that in the US 'school choice' is now increasingly associated with vouchers. For the purposes of this paper the term encompasses the broader range of policies described in this section.

18. NCLB encourages the growth of charter schools but brings them under more rigorous common scrutiny and accountability. It also encourages and financially supports intra- and inter-district open enrolment programmes.

19. National figures are hard to find. Analysis of data from membership of the Magnet Schools Association of America suggests that there are around 3,100 and that the figure is growing. See Rossell (2005). The most recent government figures are for 2001/02, when 1,736 were reported, but not every state reported their numbers. See Hoffman (2003). Magnet schools on average spend 10-12 per cent more per pupil than other schools: cited in Kahlenberg (2001).

20. There are also eight 'charter districts' in three states, in which a district obtains a charter to change its relationship with the state, currently a very bureaucratic exercise without clear advantages. See Lockwood (2004).

private companies. The first charter law was passed in Minnesota in 1991, and there are now as many as 3,400 charter schools in 41 states, serving close to a million children.²¹ State charter laws vary widely but all require schools to be open to all pupils in the district or a wider area. Some states encourage greater representation of 'at risk', low achieving, poor or minority groups through their charter-granting priorities or admissions policy stipulations.²² But most laws give schools great autonomy over whom they target for recruitment and how they select. Two-thirds of charter schools are over-subscribed, and two-thirds of these at some point use a lottery (US Department of Education, 2004). Often, schools also prioritise siblings, children of founding parents or school employees, and those who live nearby. Many meet or interview parents and pupils, and there is evidence that some have been able to exercise considerable discretion in admissions practice (Carnoy et al, 2005).²³

Alternative schools. There are currently around 11,000, some established by districts and others by community organisations contracted by the district (Kleiner et al, 2002). On average smaller than other schools, they offer more individualised learning environments and programmes. They are aimed particularly at youngsters not faring well in traditional settings, who either actively choose the school, or are assigned following suspension or expulsion.

Public support for private schools. Since the early 1990s, programmes have been developed in five states where vouchers funded by public tax dollars can be used to pay for a low-income child's education expenses at private or parochial schools.²⁴ And in seven states, tax credits and deductions allow parents to redirect their tax dollars partially to offset expenses of private education.²⁵

Home-schooling. The number of families using this option is rapidly increasing, helped by the increasing availability of digital learning materials. Over a million children were home-schooled in 2003, representing 2.2 per cent of the school-age population, up from 1.7 per cent in 1999 (Princiotta et al, 2004).

Choice programmes

Intra-district choice. No districts have unconstrained open enrolment, but a growing number have adopted systems by which parents can apply for any public school within the district on a space-available basis. Currently all but five states enable districts to do so.²⁶ There are significant state and district variations in:

- whether state policies are mandatory or voluntary for districts
- procedures for over-subscribed schools, including magnets
- whether and how transport costs are subsidised
- how choice is informed and encouraged for different groups
- the extent to which districts retain authority to override choice.

Inter-district choice. A similar, and again growing, number of states have enacted policies enabling enrolment in public schools in neighbouring districts, subject to capacity, in some cases obliging districts to offer this. This permits transfers between urban and suburban neighbourhoods in metropolitan areas with

21. The most recent government figures: Hoffman (2003) show 2,348 in 2001/02. The more recent figures are for April 2005 and are from the Center for Education Reform website.

22. Many state laws give preferences to applications for charter schools that increase educational opportunities for 'at risk' children (eg New York, Illinois, Missouri, Colorado, North Carolina, Virginia, Wisconsin and Rhode Island); for those serving areas of low achievement (eg California, Massachusetts, Arkansas and Tennessee); or for those in districts with high proportions of poor (Arkansas) or minority ethnic (Connecticut) children. State laws also often require schools to give preference to, or adequately represent pupils by: at-risk status (eg Florida, Louisiana and Delaware); socio-economic status (California); and race (North and South Carolina, Ohio, Missouri, Nevada and Oklahoma). See Ziebarth (2004).

23. Other examples from research cited in West et al (forthcoming).

24. Milwaukee, Wisconsin, Ohio, Colorado and District of Columbia.

25. Arizona, Florida, Illinois, Iowa, Minnesota, Pennsylvania and Puerto Rico.

26. State figures are from: Education Commission of the States (2005). Unfortunately, the most recent figures for districts are for 1999-2000 and there has been significant change since then. In that year, 24.7 per cent of a district's students could enrol in another school within the district (up from 13.8 per cent in 1993/94). Source: US Department of Education, National Center for Education Statistics, Schools and Staffing Survey.

large numbers of districts.²⁷ As well as similar policy variations to those listed for intra-district choice, states also differ in whether 'sending' and/or 'receiving' districts receive pupil funding.²⁸

Controlled choice. Many districts have developed assignment processes with such labels as 'managed' or 'controlled' choice. These carefully honour parental preferences in such a way that other ends can be served, for example racial balance if they have court-ordered or voluntary desegregation plans, or access for low-income pupils to schools outside their neighbourhoods. Mechanisms of control vary widely and include:

- encouragement of multiple ranked preferences
- sophisticated software programs that input these preferences into matrices of other factors such as school capacities, siblings, intake balances, and home-school time and distance
- weighted funding formulae such that disadvantaged children carry a 'bounty'
- use of preference and survey data to inform future planning, including potential 'franchising' of provision from over-subscribed schools.

Interactions between the policy drivers and their impact

Most districts are concerned with at least two of the three admissions principles. Policy has been buffeted by various political waves across recent decades: desegregation from the 1960s into the 1980s; growing interest in choice and markets from the 1980s; charter schools from the 1990s; and currently, accountability and high-stakes testing. In this dynamic context, synergies and tensions between the three policy drivers have played out in complex ways.

- Desegregation, at least initially, asserted the right of children to attend integrated *neighbourhood* schools. But, in practice, achieving racially balanced intakes across a district often required significant numbers of pupils to be bussed and to *bypass* neighbourhood schools.²⁹
- Desegregation remedies use different combinations of voluntary and involuntary mechanisms, ranging from mandatory assignments to choice-based magnets and optional inter-district transfer.
- Choice and diversity reforms have increased options for parents and pupils, within and beyond their district and even outside the public sector. However, for many it has simply enabled active choice of the neighbourhood school. And proximity has been the most commonly used factor for over-subscribed schools.

The policy analysis so far raises four broad questions:

1. How have admissions policy drivers affected actual school intakes?
2. What other influences have they contended with?
3. What impact have admissions policies, and associated school intakes, had on educational outcomes and achievement gaps for pupils and schools, and across wider areas?
4. How much have these effects been due to admissions policies themselves, and how much to family, neighbourhood and school factors?

It is to these research questions that we now turn.

27. Boston, for example, has 70 school districts within a 30-minute commute of its centre, and many more in the wider metropolitan area; whereas Miami has only one district for the entire metropolitan area. Most cities lie somewhere between these extremes. See Hoxby (2001).

28. 1999-2000 figures from Schools and Staffing Survey (see note 26) show that in 42.4 per cent of districts, students could enrol in another school in another district at no cost (up from 28.5 per cent in 1993/94), and that in 45.8 per cent of districts, students from other districts could enrol in this district at no cost (up from 25.6 per cent).

29. There have been significant regional differences here, notably the fact that in southern states, pre-Brown, integrated neighbourhood schools were a de jure impossibility.

B. Research in the United States into school composition, admissions policies and educational outcomes

What can research in the US tell us about the size and nature of the impact of school composition and admissions policies? This is a statistical minefield, hindered by limited nationally representative data and consistent measures over time. Educational attainment is influenced by complex and multi-level matrices of factors. Some relate to characteristics of individuals, their families or their communities, most notably social or ethnic background. Some are school-level effects, for example overall academic performance, teaching quality and pupil intake. Untangling the interplay between these has been too complex for any sort of consensual methodology to have emerged. But from an extensive literature, a number of significant insights can be drawn that are highly relevant and timely for British admissions policy. The fundamental starting point is the relative influence of family background and school factors.

What are the influences of family and social background on pupil outcomes?

The 1966 Coleman Report, commissioned by government and based on a study of 600,000 pupils in 4,000 schools across the US, remains one of the largest and most significant pieces of social science research conducted in any country. From this report onwards, an extensive body of evidence suggests that as much as half the variation in pupil achievement can be explained by individual socio-economic factors, in particular parental income, employment status and education, and family structure. The effects start at birth and continue from kindergarten level throughout the school years, particularly in after-school hours and during the long summer break (Coleman et al, 1966; Lee and Burkam, 2002; PISA, 2004; Rothstein, 2004; Jencks and Phillips, 1998a; Puma et al, 1997; Kozol, 1991).

Material and social disadvantage translates into lower attainment, both by limiting access to educational opportunities and by reducing the ability of children to benefit from their schooling. Being raised in a low-income family, for example, is more likely to mean housing problems and instability, fewer educational resources at home, family disruption and stress, poorer nutrition, health and healthcare, and child-rearing approaches less conducive to development. Of course these are neither consistent nor universal associations but rather represent *average* characteristics of families of different social classes. Individually, these and other characteristics have only minor effects, but they are highly correlated and interact so that they have a massive cumulative negative impact on academic performance. Seen in this light, the socio-economic gap is unsurprising and intimidating, and impressionable to policy well outside the education sphere.

As touched on earlier, the race achievement gap is strongly related to socio-economic disadvantage. Thirty-four per cent of black and 29 per cent of Hispanic children live below the poverty level, compared with 11 per cent of white children.³⁰ But family background factors explain only part of the race gap – perhaps between half and two-thirds.³¹ Black children lag behind white children from families with similar incomes, whether they are poor or part of the black middle-class that has grown dramatically since the 1960s. One explanation for this is that simple measures of current family income do not fully control for the socio-economic disadvantage faced by minority groups, for example:

- white families with low current income are more likely than their black or Hispanic equivalents to be episodically, rather than permanently, poor
- minority families in higher socio-economic groups tend to have entered them more recently, so have yet to benefit fully from such advantages as the equity and other assets accrued from previous generations that can support children's achievement
- minority middle-class families are more likely to live, and use schools, in poorer communities than their white equivalents.

(Rothstein, 2004; Patillo-McCoy, 1999)

30. Children refers to those under 18 (DeNavas-Walt *et al*, 2004). These figures are almost identical to those from the US Department of Education's Early Childhood Longitudinal Study: see Lee and Burkam (2002).

31. One study found that family background factors explained 54 per cent of the decrease in the black-white achievement gap: see Berends *et al* (2005). Phillips *et al* in Jencks and Phillips (1998a) suggest that a third of the gap is explained by simple income differentials, but this rises to a half if broader social background measures are factored in, and two-thirds if mothers' cognitive skills are included.

There is also a substantial literature on psychological and cultural dynamics underlying the black-white gap, with a number of further purported explanations for race exercising an independent influence on achievement. Some still have socio-economic roots, for example a persistent perception among some blacks that the labour market does not reward their achievement equally (Jencks and Phillips, 1998b)³². Others point to issues of low expectations and self-esteem, peer-group effects, social identity in an 'oppositional' culture, equating academic success with 'acting white', and avoidance of situations where negative stereotypes can be exercised (Ogbu, 2003; Jencks and Phillips, 1998a). For Hispanic children, language barriers are an additional factor (PISA, 2004).

To what extent can schools compensate for disadvantage, and how do their capacities to do so differ?

The empirical finding that socio-economic and race factors can, on average, predict achievement is often misunderstood as making a claim that schooling cannot, or does not, make a difference to achievement gaps. This is of course far from the truth. While it is hard to see how schools on their own could eliminate the gaps without radical shifts in social policies such as health, housing and childcare, there is plenty of evidence of:

- the impact of schools in offsetting pupil disadvantage
- substantial variations in their success in doing so
- failing schools exacerbating achievement gaps
- a set of common features in effective schools, such as good quality teaching and leadership, high expectations and disciplined classroom environments.

(Teddlie and Reynolds, 2000; Sammons et al, 1995; Levine and Lezotte, 1990)

In the past couple of years studies from both conservative and liberal standpoints have identified high performing schools in poor areas that 'buck the trends' and enable pupils from disadvantaged backgrounds to 'succeed against the odds' (Carter, 2000; Thernstrom and Thernstrom, 2003; Jerald, 2001). They suggest that encouraging dissemination of these exceptional schools' practices could close national achievement gaps. Critics have pointed out that many of these schools are selective (whether overtly, or covertly through practices such as parental contracts), have teachers and leaders with heroic and possibly unreplicable work-life balances or succeed as a one-off in a particular year. They argue that while the performance of these schools might be admirable, they do not provide a universal recipe for raising or equalising standards in the context of the sheer numbers of 'failing' or struggling schools (Harris, 2005; Rothstein, 2002; 2004). In 2004/05 more than 11,000 schools were identified for improvement and hence subject to NCLB sanctions (Olson, 2004).

Under-performance is concentrated in poor areas so that schools with fewer than half of pupils on subsidised lunches are 24 times more likely to be high performing than schools with more than half.³³ The uneven distribution of effective and ineffective schooling from kindergarten level onwards exacerbates the existing inequalities of both opportunity and outcome and reinforces the link between family background and life chances (Lee and Burkam, 2002; Rathbun and West, 2004).

As with pupil achievement, explaining variations in school performance is complex and contested. While there has been some equalisation in recent years, disadvantaged schools remain under-resourced. In 2001/02, per-pupil funding in high-poverty districts was \$868 lower than in low-poverty districts, with gaps of more than \$2,000 in some states (Carey, 2004). These figures understate the problem, because they do not reflect the extensive added costs of educating disadvantaged children. High-poverty schools also, on average, have:

- more limited curricula and fewer opportunities for advanced studies
- teachers with fewer qualifications, less experience, lower pay and morale, less adequate working conditions and higher turnover

32. In Jencks and Phillips (1998a) see chapters 1, 8, 10 and 11.

33. High performing is defined as being in the top third in the state in two subjects, in two grades, and over a two-year period. See Harris (2005).

- poorer quality teaching with lower expectations
- poorer discipline
- weaker parental involvement.

(National Commission on Teaching and America's Future, 1996; Ingersoll, 2003; Young and Smith, 1997)³⁴

The starkest inequality, however, relates to the pupil intake itself. The recent PISA study showed that the variance in school performance explained by pupils' socio-economic background is particularly high in the US (PISA, 2004).

What are the effects of the socio-economic composition of a school?

As discussed, the socio-economic background of individual pupils contributes substantially to their educational performance. But there is also a significant body of US-based research which shows that a school's socio-economic mix of pupils, as an independent variable, has a contextual impact beyond the aggregate of individual background effects. This is critical for this paper in at least two respects: first, to understand the implications of transferring disadvantaged pupils into high performing schools; and second, to examine the impact of admissions approaches on levels and distributions of educational outcomes. Four broad types of evidence are reviewed.

1. National and international surveys and research

- The Coleman Report found that a child's achievement was 'strongly related to the educational backgrounds and aspirations of the other students in the school', far more than any other school factor, and that socio-economic factors were much more unevenly distributed across schools than resources (Coleman *et al*, 1966). The findings of the first, largest and most important study have been confirmed in the intervening four decades, both nationally and internationally.
- A 1986 national study of Title 1 showed that 59 per cent of low-income children in high-poverty schools were in the bottom quartile of achievement, compared with 28 per cent of those in low-poverty schools. Interestingly, the chances for this latter group were better than those for middle-class children in high-poverty schools, 37 per cent of whom were in the bottom quartile.³⁵
- Department of Education analysis of 2005 NAEP data shows that the proportion of pupils in a school on subsidised lunches has a substantial effect on fourth grade maths performance both for middle-class and low-income pupils. Low-income children in mainly middle-class schools scored significantly higher than middle-class children in mainly low-income schools.³⁶
- The PISA report found that 'regardless of their own socio-economic background, students attending schools in which the average socio-economic background is high tend to perform better than when they are enrolled in a school with a below-average socio-economic intake'. In the US, as with most other countries, the average economic, social and cultural status of children in a school has an impact on pupil performance variation that far outweighs that of the individual's own background (PISA, 2004).

2. Area-based studies

Since Coleman, there have been many detailed but smaller-scale studies, often examining individual states or districts, and a number of meta-analyses and reviews.³⁷ These have tended to confirm the national findings above, for example:

- a 2002 study of reading in grades three to five in Denver, Colorado found that low-income children in

34. On teacher experience, see NAEP data, note 36.

35. Title 1 was then called Chapter 1. 'Middle-class' is used in this paper as a statistical shorthand for ineligibility for subsidised lunches. High-poverty school = at least three-quarters eligible for subsidised lunches. Low-poverty school = less than a quarter eligible for subsidised lunches. See Kennedy *et al* (1986).

36. 2005 data was obtained from the Department of Education but is not yet published. It shows a similar pattern to 2000, as analysed in National Center for Education Statistics (2003).

37. Schofield (1995), Entwisle and Alexander (1992), Lee and Bryk (1989), Eitle (2006), Gamoran (1987), Alexander *et al* (1978), Alwin and Otto (1977), Wells and Crain (1994).

schools in which they were in a minority outperformed middle-class children in majority low-income schools (Gottlieb, 2002a)

- a 2002 study of fourth graders in Wisconsin found that each 10 per cent increase in the proportion of middle-class classmates improved the performance of low-income students by 6.4 per cent in reading and 7.2 per cent in maths (Rusk, 2002b).³⁸

3. Longitudinal studies

Most of the studies above are cross-sectional. On the whole, they adequately control for family background characteristics, but not for prior academic achievement of students at enrolment, or for 'selection bias'.³⁹ 'Snapshot in time' research can overstate short-term effects of school composition on achievement. Longitudinal studies do not suffer these conceptual and empirical difficulties since they control for prior achievement and look at progress over a period. Recent meta-reviews conclude that the effects of social composition are still substantial.⁴⁰ For example:

- A 1997 study of 40,000 pupils authorised by Congress for the review of Title 1 concluded that schools with at least half low-income intakes 'depressed', and those with at least three-quarters 'seriously depressed', achievement of all pupils over and above individual social background, a combined effect described as 'double jeopardy'.
- Studies using data from national longitudinal surveys such as *High School and Beyond* (1980), which tracked 25,000 pupils for the two years leading up to twelfth grade, and the National Education Longitudinal Study of 1988 (NELS), which followed a sample of 25,000 pupils through high school, generally found strong effects of school socio-economic composition, after controlling for prior achievement and resources.

4. Studies of racial desegregation

Because of previous policy imperatives, and greater availability of data, there is an overlapping but far greater quantity of evidence on short- and long-term impacts of racial, rather than socio-economic, composition of schools. There is by no means consensus: some meta-reviews questioned the methodologies of early studies and suggested that the impact of desegregation is minimal, confined to reading achievement or not sufficiently proven (St John, 1975; Cook, 1984; Schofield, 1995; Armor and Rossell, 2001). But most reviews concluded that minority students with more integrated schooling enjoy significant academic benefits. They also complete a greater number of years of school, have a greater probability of attending higher education and obtaining degrees, have higher occupational aspirations, are more likely to be working in white-collar and professional jobs, and go on to lead more integrated adult lives (Crain and Mahard, 1983; Hochschild and Scovronick, 2003; Orfield and Kurlaender, 2001; Wells and Crain, 1994; Hawley, 2004).

This is reflected in national trend data. The race gap narrowed significantly in the 1970s and 1980s, through substantial increases in black achievement (Perie et al, 2005a). Clearly, some gains can be explained by corresponding improvements in the socio-economic conditions of black pupils, such as their parents' occupational status, income and educational attainment. But these factors have also improved for white pupils, whose scores remained stagnant during this period. The race gap narrowed far more significantly in southern states and rural areas, where desegregation was extensive, than in northern and north-eastern metropolitan areas, where desegregation was limited or non-existent. And between the late 1980s and late 1990s, the gap widened again, coinciding with a period of reversal of desegregation remedies. A number of researchers have concluded that desegregation played a part in narrowing the achievement gap (Grissmer et al, 1998; Frankenberg et al, 2003; Orfield and Lee, 2004).

Racially segregated schools tend to concentrate poverty and other forms of disadvantage, and the positive relationship between desegregation and narrowing achievement gaps represents further evidence of the impact of the socio-economic composition of schools.

38. This author had similar findings with similar methodologies in other areas such as Albuquerque, Baltimore and Texas.

39. For example, where a pupil's performance in schools that his or her parents have chosen (or moved to be near) may at least partly reflect social background effects.

40. Rumberger and Palardy (2005), Kahlenberg (2001), Puma *et al* (1997), Chubb and Moe (1990), Gamoran (1996), Lee et al (1997), Goldhaber and Brewer (1997).

How does socio-economic composition have an effect?

What accounts for the independent influence of socio-economic composition on educational outcomes, and how do underlying causal mechanisms operate? The literature suggests a mix of direct and indirect peer, parental and school effects (Kahlenberg, 2001; Puma et al, 1997; Jencks and Phillips, 1998a; Kozol, 1991; National Commission on Teaching and America's Future, 1996; Ingersoll, 2003).

Direct peer to peer effects

Pupils have substantial direct influence on each other's performance through competition, learning from each other inside and outside the classroom, sharing vocabulary, values and educational and occupational aspirations, and through mutual motivation or demotivation. The individual social class effects discussed earlier are infectious in peer groups.

Indirect peer effects

School and classroom environment and culture are affected by such attributes of the pupil intake as behavioural issues, special educational and language requirements, attendance problems and high mobility between schools. High concentrations of these needs are a drain on teacher time and attention.

Parental effects

Parental involvement is a key characteristic of effective schools, through support for learning, increased accountability and expectations, volunteering and fundraising. Middle-class parents are far more likely to be involved in their children's school.

School effects

Pupil intake has further indirect effects through school characteristics. As mentioned, schools with high concentrations of poor children are more likely to suffer from lower teacher quality and expectations, more limited curricula and an absence of the critical mass of pupils required for more demanding learning opportunities.

That the negative impact of socio-economic segregation is related to direct peer and parent effects, and also to indirect effects through teachers and schools, has important policy implications. The latter can be addressed, at least partially, through resource allocation and teaching reform. Peer, and probably parent, effects are mainly addressed through admissions policies.

Is the impact of socio-economic composition a zero-sum game?

What are the net effects of socio-economic desegregation across a local area? According to the bulk of the research literature the relationship between socio-economic composition and pupil outcomes is not a zero-sum game. The positive influence of middle-class children on disadvantaged children is not offset by a corresponding reverse negative impact, as long as there is a critical mass of middle-class children and some ability grouping.⁴¹ Two explanations for this important finding have been put forward.

Tipping points

The research and statistics have shown that the impact of advantage and disadvantage in school intakes is nonlinear, and that there is a threshold at which the cumulative impact of schoolmate poverty becomes worse. This 'tipping point' has been variously placed at between 40 per cent and 75 per cent of pupils eligible for subsidised lunches, but the bulk of studies converge at around 50 per cent. It is argued that above this point, the benefits of a critical mass of middle-class pupils and culture are lost, and negative peer effects kick in, with shifts in discipline, and teachers gearing lessons towards lower norm standards.

41. 2005 NAEP data shows a large drop in the performance of both low-income and middle-class students for schools where there is not a critical mass of middle-class pupils. See note 36. For research see: Coleman et al (1966), Kahlenberg (2001), Hochschild and Scovronick (2003), Jencks and Phillips (1998a), Crain and Mahard (1983), Puma et al (1997), Rusk (2002b), Anderson et al (1992), Guryan (2001), Gamoran (2000).

Coleman's and others' view that whites are less affected by school factors than minorities are challenged in Hanushek et al (2002) and Rumberger and Palardy (2005).

Asymmetrical effects

Related to this, Coleman and others found that greater socio-economic heterogeneity has no adverse effects on children from advantaged backgrounds, since integration is 'asymmetric in its effects' having 'its greatest effect on those from educationally deficient backgrounds' (Coleman et al, 1966). Aspirations and achievement in middle-class families may be less sensitive to school effects because of the greater likelihood and extent of parental involvement and pressure. Disadvantaged children are more dependent on school for the development and encouragement of their talents, and are also more open to peer influence. But another explanation for asymmetry is that middle-class children in well-integrated schools are more likely to be placed in faster ability tracks.

Does desegregation between schools lead to segregation within schools?

School-level data may not adequately capture the impact of socio-economic composition on individual pupils who, because of tracking and ability grouping, may have very different access to resources, learning opportunities and peer effects. Some scholars have gone so far as to argue that segregation *within* schools through tracking and other forms of ability grouping is as important as segregation *between* schools in inhibiting the educational opportunities of disadvantaged pupils.⁴² The 1988 NELS study found that low-income and minority eighth graders were twice as likely as their white and middle-class schoolmates to be in remedial maths classes. And there is some evidence of a tendency for children from families of higher socio-economic status to be in higher ability groups and tracks than measured past performance would predict.⁴³

But recent research shows that tracking has positive overall effects on school performance, and a widespread view is that some form of ability grouping is necessary and inevitable, not least in schools with mixed intakes, for tailoring provision and for retaining a critical mass of middle-class pupils and parents (Puma et al, 1997; Kahlenberg, 2001; Jencks and Phillips, 1998a). However, research shows significant variations in systems of tracking and ability grouping, and in the extent to which schools protect low-income students. A 2001 review outlines eight evidence-based good practice steps for socially integrated schools, such as grouping within rather than between classes, for variable pacing, differentiating and limiting tracked subjects, monitoring for race or class bias; using objective criteria for ability, and ensuring high quality teachers are assigned to all tracks (Kahlenberg, 2001).

What effect does increased school choice have on intakes and achievement?

From its early days, concerns have been raised that choice reform tends to increase socio-economic segregation, because better educated and more motivated parents are more likely to participate.⁴⁴ Research shows that policies vary.

Intra- and inter-district choice

Research into district and state open enrolment initiatives has often, but not always, shown that for those parents who exercise it, preferences are fairly similar across socio-economic boundaries. But systems, even those explicitly designed to reduce or remedy inequality, have tended to differentiate those who exercise choice from those who don't by socio-economic status. Whether there is a causal link to increased social stratification of schools is not proven, since there have been no longitudinal studies before and after the introduction of open enrolment programmes, nor large-scale comparisons with other districts.⁴⁵

42. Bell (2004), Wheelock (1992), Oakes (1985), Lucas (1999), Michelson (2001), Welner and Oakes (1996).

43. Research reviewed in: Ferguson R (1998) Can Schools Narrow the Black-White Test Score Gap in Jencks and Phillips (1998a), and Kahlenberg (2001).

44. The Carnegie Foundation for the Advancement of Teaching (1992), Scott (2005), Fuller and Elmore (1996), Rasell and Rothstein (1993), Whitty (1997).

Note that in the US the motivation to 'control' the effects of choice was initially to ensure racial diversity, and more recently in some cases socio-economic diversity, whereas in Britain the focus has been more on spread of ability. See West (2006).

45. Boyd and Walberg (1990) (see in particular the chapter by Moore, D and Davenport, S - School choice: The new and improved sorting machine)

Meanwhile, after social background factors have been controlled for, studies have not shown that open enrolment has a significant impact on achievement.⁴⁶

Magnet schools

In general, districts have been successful in achieving racially mixed intakes in magnet schools. But studies have shown that parents of magnet pupils tend to have higher income and educational levels than those with children at other schools. Possible explanations are that they have better access to information and networks about school choice and performance and greater mobility and more flexible work hours for visiting schools. Magnets have also tended to increase segregation in neighbouring schools, siphoning off motivated and higher achieving pupils and the support of more involved parents.⁴⁷ However, a recent analysis of national data found that socio-economic segregation of schools in magnet districts was no different from anywhere else, once demographic and other district-level influences on segregation were factored out (Archbald, 2004).

In terms of educational outcomes, cross-sectional studies of large magnet systems show a mixed picture, but analyses of NELS data suggest some slight advantages for magnet pupils in achievement and aspirations once socio-economic advantages have been controlled for.⁴⁸

Charter schools

On average, charter schools are more likely to be located in poorer and higher minority areas. But studies have shown that they tend to serve a relatively more advantaged student body than their nearest public school, and to be more segregated (Frankenberg and Lee, 2003; Roy and Mishel, 2005). Unlike magnets, charters often have autonomy in admissions and there is evidence that intakes of many are skewed toward higher socio-economic groups through covert forms of selection such as targeted recruitment, requirements for meetings and interviews with pupils and parents, mandatory parental contracts and vague admissions criteria such as 'commitment to school's philosophy' or 'fit between the charter school and the family' (Carnoy et al, 2005; Wells et al, 2000; Renzulli and Evans, 2005).⁴⁹

A study of NAEP data found that charter school students – and low-income ones in particular – had on average lower reading and maths achievement than those in regular public schools, although there were concerns that the charter school sample was small and uneven (Nelson et al, 2004).⁵⁰ Analysis of fourth grade reading and maths scores of students in nearly all (99 per cent) charter schools found an advantage over students in the nearest regular public school (Hoxby, 2004a). However, further analysis of the same data, controlling fully for socio-economic and racial factors, eliminated any significant difference in school effectiveness (Roy and Mishel, 2005).

Voucher programmes

Voucher programmes in the US, by definition, transfer disadvantaged pupils to private schools with relatively high academic results. Research around this policy area is highly politicised, but reviews of empirical research in the half dozen or so states that have experimented with vouchers show achievement benefits that range from small to non-existent (Carnoy, 2001; Benveniste et al, 2003; Kahlenberg, 2003).⁵¹

46. Most of these studies found that the impact was non-existent or ambiguous, although Hoxby (2001) found a small positive impact for inter-district choice.

47. Levin (1999), Wells (1993), Moore and Davenport (1989), Fuller and Elmore (1996) (particularly chapters by Martinez, Godwin, and Kemerer (chapter 3), Henig (chapter 5) and Blank, Levine, and Steel (chapter 8)), Saporito (2003).

48. For example, advantages of magnet schools were substantial in St Louis, Missouri, slight in San Antonio, Texas and negative in Prince George's County, Maryland: Yu and Taylor (1997), Martinez V et al - Public School Choice in San Antonio in Fuller and Elmore (1996), Adcock and Phillips (2000), Blank (1990). See also Gamoran (1996). The Department of Education's 2003 evaluation of magnet schools showed no significant difference in gains in their performance with comparable non-magnet schools over a three-year period. See US Department of Education (2003).

49. A recent study compares the admissions policies of charter schools and their effects with autonomous English schools, finding parallels in their tendencies towards segregation. See West et al (forthcoming).

50. See also National Center for Education Statistics (2004). Critique from: Hoxby (2004b).

51. In Kahlenberg (2003), see particularly chapters by MacInnes G, Wasow B and Kahlenberg R.

Home schooling

The largest study of home-schooled pupils found that their average achievement level was between the 70th and 80th percentile of students nationwide, and that they performed around a grade ahead. However, there was no control for the fact that the median income of their families was 44 per cent higher than the national average or that 88 per cent of their parents continued their education beyond high school, compared with the 50 per cent national average (Rudner, 1999).

Research evidence and policy realities

This analysis of US-based research has shown that gulfs in pupil achievement and school performance can partly be explained by variations in pupil social background and school effectiveness. But over and above these factors, a school's socio-economic composition has a major independent effect on its outcomes and those of its individual pupils. And balanced intakes benefit low-income pupils without harming performance of middle-class schoolmates. Admissions policy is one of several influences on school intakes and achievement gaps. It is unlikely to be able to narrow gaps without the capacity for active intervention in pupil assignment to balance school enrolments.

The other two admissions policy drivers – the neighbourhood principle and choice – both have a clear tendency to stratify pupils and schools by race and social background, and hence to work against an equitable distribution of educational opportunities and outcomes. Attendance areas reflect segregated residential patterns. Choice is more likely to be exercised by better-educated and higher-income parents, whose preference is usually for schools whose intakes preserve advantage for their children – often, in fact, neighbourhood schools. The disadvantaged are less likely to exercise choice because they may be:

- less assertive about their children's education
- less knowledgeable about how to navigate often complex options and procedures
- less able to provide transport, or to miss work to engage with the choice process
- more likely to seek to preserve familiar cultural neighbourhood school settings.

Finally, autonomous or choice schools, particularly those that are over-subscribed, are able to exercise preferences for pupils, through recruitment and mainly covert, but sometimes overt, screening practices.

As in Britain, the political reality is that choice is now so prevalent that many parents – particularly the affluent and the vocal – see it as a right that should not be overridden. In general, there is an increasingly favourable disposition towards public school choice, and those who have exercised it have tended to be more satisfied with the school.⁵² Stratification is not an inevitable corollary of enhanced choice. The extent of choice, who chooses, how they are informed, how over-subscription is dealt with, and how intakes are affected are substantially determined by details of the design and implementation of pupil assignment systems. Sustainable admission policies may need to combine and balance all three policy drivers. We now look at three contrasting districts that, in different ways, are trying this.

52. The Annual PhiDeltaKappa/Gallup poll of the public's attitudes toward public schools used to ask 'Do you favor or oppose allowing students and their parents to choose which public schools in the community the students attend regardless of where they live?' In 1995, 69 per cent were in favour, up from 60 per cent in 1989. After 1995 the poll stopped asking that question and focused on private school choice. Teixeira R in Kahlenberg (2003) shows how the American public remains more in favour of public school choice than private school choice. In terms of parental satisfaction, in 2003, 64 per cent of parents who chose a public school were 'very satisfied' with the school their child attended, compared with 54 per cent for parents with a child in assigned public schools, and catching up with satisfaction levels for private schools. 2003 figures were obtained from the Department of Education. Trend data is from Bieleck and Chapman (2003).

C. Case Studies

Case Study 1: Wake County Public School System, North Carolina

Policy background

Wake County has a growing population of 720,000 across 864 square miles.⁵³ It is among the 30 largest districts in the US, with 134 schools serving 114,000 pupils, of whom 62 per cent are white, 26 per cent black, 6 per cent Hispanic and 4 per cent Asian (Young, 2001). Twenty-nine per cent of elementary, 25 per cent of middle, and 15 per cent of high school pupils are on subsidised lunches, and these figures are rising (WCPSS, 2004; Baenen et al, 2002). In 1976, the original county merged with the state capital, Raleigh, giving a single school board jurisdiction over the city and its surrounding suburban and rural areas. The merger went against public opinion but was pushed through by an alliance of administrators, educationalists and business interests, who saw tackling 'white flight' as critical to the city's economic development (Flinspach et al, 2003).

Without a court order, the newly unified board immediately adopted a racial integration plan, aimed at addressing both overcrowded white suburban schools and declining rolls in the predominantly black schools of central Raleigh. In 1982, many of the latter were converted into a network of 27 magnet schools, offering a range of enhanced and specialised provision such as arts and languages programmes (Gottlieb, 2002b). Magnets succeeded in attracting white pupils into inner city schools, although black pupils disproportionately shouldered the burden of mandatory busing out to suburban schools to help them meet their integration goals (Silberman, 2002). In the 1980s, precise racial balance targets were replaced by a floor and ceiling for minority enrolment of 15 per cent and 45 per cent respectively. By the early 1990s, nine out of ten schools were in compliance, but this dropped to two-thirds by the end of the decade (Flinspach and Banks, 2005). On the whole, the aim of desegregation was not unpopular, and vocal pro-neighbourhood school challengers failed to get elected to the school board (Silberman, 2002).

By the end of the 1990s, admissions policy faced twin pressures. First, legal uncertainty turned to threat, with key rulings prohibiting the use of race in pupil assignments in neighbouring districts and states.⁵⁴ Second, at the vanguard of emerging national policy, the school board adopted a challenging goal of 95 per cent of third and eighth grade pupils to pass state reading and maths tests by 2003.⁵⁵ The implications of admissions policies for achievement were considered and studied (Banks, 2001). The board was keen to find a way to boost standards, continue balancing enrolments to this end, and eliminate judicial vulnerability. It decided to implement, from 2000/01, an assignment process limiting the number of pupils in each school with low socio-economic status or achievement.

Policy and practice

The school board annually develops and signs off a 'reassignment plan' in early spring for the next academic year, which is effectively a revision of the assignment plan of the previous year (WCPSS, 2005). The district is divided into around 1,200 geographical 'nodes', varying in size and density. Data about pupils and their families is aggregated at this level.⁵⁶ Each school has an attendance area that incorporates a number of nodes, not necessarily contiguous, nor in its immediate vicinity. Each node – that is the pupils within it – is assigned to a school. Goals are set which state that no individual school should have:

- more than 40 per cent of pupils eligible for subsidised lunches
- more than 25 per cent of its pupils below grade level on the state reading test, averaged over two years.

Reassignment plans take account of a range of other variables and factors including:

- trends in the proportion and distribution of pupils below grade level

53. US Census estimates for 2004.

54. In 1999, Fourth Circuit Court of Appeals decisions in Virginia and Maryland, and a Federal District Court decision in Charlotte-Mecklenburg, North Carolina ruled against race-based assignments. See Flinspach and Banks (2005).

55. 'Goal 2003' was set in 1998. See Flinspach and Banks (2005).

56. The use of nodes continues the practice of the first desegregation plans in the 1970s. It preserves the confidentiality of information about individual pupils.

- anticipated demographic changes
- school capacities, facility improvement and expansion, and opening of new schools
- minimisation of distance and travel time, taking into account transportation offered
- maintenance of consistent feeder patterns from elementary to middle to high schools
- minimisation of the reassignment of pupils and nodes.

The element of choice in the system is that all pupils can apply for admission to one of 51 magnet and year-round schools, using a procedure run by the district in advance of the general pupil assignment schedule. Criteria for selection of applicants are:

- present magnet/year-round status
- siblings
- school and classroom capacity
- diversity
- transportation patterns.

Once all pupils have been assigned, there is a two-week window to request a transfer for the subsequent school year. Decisions are made on the basis of reasons for request, space available, and diversity in both assigned and requested schools. If denied, a brief final appeal can be made to the board.

The public is involved in the development of reassignment plans through:

- a citizens' committee
- publication of the proposed plan followed by feedback from parents, community and school administrators
- public hearings on the revised final plan before board approval.

Key challenges

Implementation has faced a number of difficulties, some of which predate the new system. First, growth of suburban areas has been so rapid that four towns which had 12 per cent of the district's population in 1990 had over 20 per cent ten years later, most of the influx being relatively affluent white families.⁵⁷ Prohibitive distances have made it extremely difficult for schools in these areas to serve children from low-income neighbourhoods. Meanwhile, schools in poor rural pockets of the county are too remote for busing to be practical for the district or acceptable to parents.

Second, there has been a lack of connection with housing policies that enabled affluent new suburban developments far from the inner city, thus increasing residential segregation. Magnet-style plans by the school board to locate new schools between these suburbs and the city were overridden by pressures to locate them adjacent to the residential developments (Silberman, 2002).

Third, there has also been a lack of connection with other schools' policy, most notably the introduction, from the early 1990s, of 15 year-round elementary and middle schools. These are mainly in the suburbs and – because of their unconventional school year of four phased calendars – need to be actively chosen, like magnets. Such choice has been neither practical nor desirable for those in distant minority and poor neighbourhoods (Flinspach and Banks, 2005; Gottlieb, 2002b; Silberman, 2002).

Fourth, the use of socio-economic and achievement factors in the assignment of pupils was not popular, at least initially, either as a general concept or in its application to individual schools with altered intakes. It may be that teachers and parents found it easier to express resistance to such rebalancing than to racial assignments. On the whole, the system is now accepted, although there have been specific parent protests, and in 2002 a group lobbying for neighbourhood schools and parental choice was formed – 'Assignment by Choice' – endorsing school board candidates (Flinspach and Banks 2005; Finder, 2005).

⁵⁷ Census figures quoted in Silberman (2002).

Outcomes

Despite these challenges, implementation of the new assignment system was far from an upheaval. Two-thirds of schools were already racially desegregated and correlations with socio-economic status and under-achievement were typically high: over half of black and Hispanic pupils were low-income, compared with five per cent of white pupils (Flinspach and Banks, 2005). Moreover, in the late 1990s officials started factoring socio-economic status and achievement into assignment plans. As a result, many schools were already in compliance with the imminent diversity caps, or not far from being so (Flinspach, 2004).

Compliance rates have been higher than for the race-based system but fell from 108 out of 121 schools in 2002/03 to 101 out of 133 schools in 2005/06.⁵⁸ Racial enrolments are no longer monitored but segregation did not change much in the first two years of the new system.⁵⁹

Over the first three years, 6,653 pupils were reassigned, that is to say their nodes were shifted from one school to another. But helping schools to meet diversity standards was an explicit factor in only 2,820 of these reassignments, and the sole factor in 409. In these latter cases, black and low-income pupils were particularly highly represented. The other significant reason for reassignment has been the opening of new schools. While most have been placed in areas of population growth and where land is still affordable, the location and assignment plans of some have helped non-compliant schools and contributed to diversity without the need for explicit desegregation. Assignments and parental choices can be made for other reasons, such as to leave an overcrowded school or benefit from a brand new institution.

During the period of the new admissions system and the two previous years when aspects of it were being introduced informally, there were substantial improvements in reading and maths achievement levels, and a narrowing socio-economic gap, as can be seen in Table 4.

The white-black achievement gap has also narrowed substantially: from 33 percentage points to 18 for reading; and from 34 to 16 for maths (Baenen et al, 2004).

	1998	1999	2000	2001	2002	2003	2004
<i>Reading: total</i>	81.7	83.1	83.9	86.3	88.0	90.4	90.0
Not subsidised lunch	89.0	90.0	90.6	92.3	93.4	95.5	95.4
Subsidised lunch	53.8	56.2	57.7	63.2	68.5	74.9	75.2
<i>Maths: total</i>	82.2	83.1	86.0	88.6	90.8	92.2	92.1
Not subsidised lunch	89.5	91.2	92.0	93.6	95.1	96.3	96.2
Subsidised lunch	54.6	59.5	62.7	69.2	75.3	79.9	81.1

Conclusions

The period in which Wake County has used socio-economic and achievement factors in the assignment of pupils has coincided with significant improvements in attainment levels and equity, easily out-performing state and national averages.

The contribution that admissions policy has made cannot be quantified, and it should be noted that the system is one of a raft of educational reforms aimed at improving performance, particularly at lower levels (Banks, 2004). Compliance rates with the socio-economic caps have consistently fallen, but there seems little doubt that the system as a whole has held off otherwise worse segregation, building on longer experience of using magnet schools to draw suburban pupils to inner city schools. Meanwhile, the district's school population has doubled since 1985 and it is expected to double again in the next 20 years. The rapidity and uneven nature of this growth has been a serious challenge for planning, but in some cases has enabled new schools to be reasonably well integrated, avoiding the need to shuffle pupils between existing schools.

It should also be noted that there could be greater success in socio-economic desegregation if floors as well

58. Figures obtained from WCPSS.

59. Flinspach et al (2003) hypothesise that gains from racial desegregation might be preserved, with the positive effects of socio-economic integration being offset by the absence of a floor for disadvantage of any type.

as ceilings for pupils with low achievement or socio-economic status were specified. By improving the distribution of middle-class children, this would almost certainly help decrease the number of schools failing to comply with the ceilings. It would also reduce the symbolic power of the segregated white middle-class schools allowed by the current system.

Case Study 2: Cambridge Public School District, Massachusetts

Policy background

Cambridge is one of the most densely populated towns in the US, with 102,000 residents across six square miles.⁶⁰ Famous for its world-class universities, it also has substantial low-income and immigrant communities. Twelve elementary schools and one high school serve 6,183 pupils, of whom 39 per cent are black, 35 per cent are white, 15 per cent are Hispanic and 11 per cent are Asian. Forty-nine per cent of pupils are on subsidised lunches, and 8 per cent have limited English proficiency.⁶¹ Cambridge also has an elementary and a middle charter school, and quite a substantial private sector.

Until the late 1970s, Cambridge operated a neighbourhood school system, in which pupil assignment mirrored high levels of socio-economic and racial segregation of communities within the town. From the middle of that decade, the district became increasingly fearful of court-ordered desegregation, with violence accompanying the introduction of mandatory busing just over the River Charles in Boston. To head off such a remedy, the board decided to use parental choice as a mechanism for encouraging voluntary desegregation: first through opening two alternative schools and then, in 1979, by enabling pupils to attend schools outside their neighbourhoods, if places were free and if it reduced segregation. Few took up this opportunity, and redrawing attendance zones and providing transportation still failed to improve racial balances. So, from 1981, Cambridge became one of the first districts to introduce full open enrolment: abolishing neighbourhood zones and enabling all pupils to potentially attend any school (Fiske, 2002; Carnegie Foundation, 1992).

The 1981 plan honoured as many parental choices as it could, according to racial balance, siblings and proximity (Willie and Alves, 1996). Over time some alterations were made, in particular changes to the disparity targets so that each of three racial groups in elementary schools had to be within 10 per cent of their district representation.⁶² By 2000/01, six schools were in compliance for three groups, seven for two groups, and one for one, with a good overall racial balance.⁶³ A study of the district's only high school also found attitudinal and civic benefits from its racial mix.⁶⁴ As in Wake County, by 2000 two factors conspired to prompt a major review: an increasing focus on achievement gaps and their underlying causes, and legal uncertainty prompted by rulings in neighbouring districts.⁶⁵ The result was the launch of a new controlled-choice system for 2002/03, with improvements to the recruitment process, new strategies for unpopular schools, and the replacement of race by socio-economic factors.⁶⁶

Policy and practice

The socio-economic mix within schools, as proxied by eligibility or ineligibility for subsidised lunches, is an overriding aim of the system. The goal is that pupils in every grade of every elementary school should be within ten points of the district-wide percentage of elementary pupils eligible for subsidised lunches.⁶⁷ Parents use one of seven registration cycles in the year (with a strong incentive to go for the first) to rank three choices of school, and express any of the other priority factors:

- particular special educational or language needs

60. US Census Bureau estimate for 2003.

61. Figures, from Massachusetts Department of Education, are for 2004/05.

62. The three racial groups were White, African-American and other Black, and other students of color. The initial targets were for two out of three groups to be within 5 per cent of their district representation. Another significant change to the system, in 1989, strengthened the proximity priority factor through enlargement of school 'walk zones'.

63. Figures from Fiske (2002).

64. The Civil Rights Project (2002).

65. Most significantly, in 1998, the First Circuit Court of Appeals barred the use of race in admissions to a Boston school, and a year later race was dropped from that city's admissions policy.

66. Cambridge Public Schools (2001).

- presence of a sibling in a school
- preference for proximity (one of the two schools closest to home).

Parental choice is universal and various steps are taken to ensure it is informed:

- Parents cannot register unless they have visited the Family Resource Centre, and are encouraged to visit as many schools as possible.
- The district organises a range of opportunities for hearing about each school's programmes and philosophies (e.g. information sessions and booths at school fairs).
- Pamphlets for each school, and a comprehensive and user-friendly district-wide guide are published.
- Each school has part-time parent liaison, meets with prospective parents and gives tours.
- Pre-schoolers are targeted, for example, parents of Head Start children are canvassed through local day centres, receive personal letters, and are telephoned if they fail to register.

The choices made through this process are used in combination with the following lottery process:

1. For each elementary school, total kindergarten-level capacity is determined by budgets and class sizes.
2. A number of pupils are pre-assigned: mainly those already at the school in 'junior kindergarten' or held back in the kindergarten year, plus some appeals.
3. The number of available seats in each school for the two categories (subsidised and non-subsidised lunches) is derived by applying the +/- 10 per cent range to capacity, and subtracting the pre-assignments from each category.
4. A computer program provisionally assigns first choices to the two intake pools for each school while places are available, starting with students with special needs followed by those with sibling and proximity preferences.
5. When a prospective intake pool exceeds the number of places but is within the diversity range, pupils are randomly assigned.
6. If, however, the intake pool is outside the diversity range, then algorithms based on subsidised lunch status and the other priority factors are used to weight the pool from which pupils are then assigned.
7. Second and then third choices are processed to fill any remaining places.
8. Unallocated pupils are assigned to an available place in a nearby school such that it remains within the diversity range. Parents also have the option of requesting any other such school, and their children are also automatically placed and given priority on the waiting list for their first three choices.
9. Pupils entering the school system post-kindergarten or during the school year are assigned to schools with places available within the diversity range, on a first-come, first-served basis.
10. Any parent can request that their child be transferred from their assigned school and be placed on up to three waiting lists.
11. Parents have a right to appeal to the Hardship Appeals Board, whose recommendations are reviewed and decided upon by the district's Superintendent.

The system is subject to detailed annual review, including recruitment strategies and impacts on enrolments and achievement.

67. The original intention was to reduce the range as follows: 2002/03 = +/- 15 per cent, 2003/04 = +/- 10 per cent, 2004/05 and subsequent years = +/- five per cent. But the district has not yet moved to five per cent targets. Other diversity factors do not directly impact on the assignment process but are monitored closely to make sure that schools are broadly representative, and to inform consideration of whether they might be incorporated into the process in the future. These are: race or ethnicity (using the previous disparity ranges), special educational status, English language learner status, and gender.

Key challenges

In the penultimate year of the racial target system, socio-economic balance was poor. Proportions of low-income children in individual schools varied from 19 per cent to 79 per cent, with over half concentrated in five of fifteen schools, and only three would have been in compliance. This is surprising given the strong association of race and socio-economic status. In that year, just under half of pupils were low-income but the proportions by race varied greatly: 27 per cent of white, 62 per cent of African-American, 69 per cent of Hispanic, and 81 per cent of other black pupils.⁶⁸ The fact that school racial balances were reasonably good suggests that socio-economic segregation was prevalent *within* racial groups.

Second, despite efforts by the district, and some annual fluctuation in school popularity, there have been persistent biases in the exercise of choice. Annual research into registration shows that:⁶⁹

- white parents with higher educational levels tend to have a clearer idea of what they are looking for and tend to engage in more detailed research before expressing preferences
- less educated parents tend to rely more on information and advice from the Family Resource Centre
- a few schools are deemed 'desirable' by middle-class families but not necessarily with those with low incomes, and these schools tend to receive more visits
- poorer and less educated parents are more likely to choose neighbourhood schools that are generally less popular, effecting a form of voluntary segregation
- there are wide variations in test scores between schools, and those chosen by middle-class parents tend to be higher performing than those chosen by low-income parents.

Third, the fact that elementary school capacity (760 in 2005/06) exceeds enrolments (704) reduces the district's ability to influence the intake of less popular schools. In addition, a strong private sector provides the constant threat of middle-class families responding to mandatory assignments by defecting.

Fourth, based on 2000-03 data, the state judged the district to be 'low performing', but the areas of its analysis and recommendations did not include admissions policy, thus diverting attention and resources in other directions.⁷⁰

Outcomes

Despite these challenges Cambridge has been remarkably successful in combining a choice-based system with socio-economic balance, as shown by the outcomes for 2005/06 summarised in Table 5.⁷¹

	Subsidised	Non-subsidised	Total pupils
Pre-assigned	139	132	271
Assigned first choice	156	205	361
Assigned second choice	2	11	13
Assigned third choice	2	8	10
Mandatory assignment	6	43	49
Final enrolment	305	399	704

The pre-assignment of 271 pupils represents 36 per cent of the overall capacity of 760 school places, and this group was slightly biased towards subsidised-lunch children. There remained 489 places across the system to be allocated by the lottery as described earlier. Eighty-three per cent of pupils were assigned to their first choice school, three per cent to second choice and two per cent to their third, leaving 11 per cent

68. Low income = eligible for subsidised lunch. See Fiske (2002).

69. CPSD Kindergarten Registration Surveys, various.

70. Office of Educational Quality and Accountability (2004).

71. Data from Cambridge Public Schools District (2005).

mandatory assignments, mainly non-subsidised. In previous years, between six per cent and 12 per cent of pupils in the lottery had initial mandatory assignments, but around half ended up being transferred to one of their schools of choice, the rest either staying in their assigned school or withdrawing from the system.

Assignments for the 12 elementary schools ran as follows.⁷²

- One school was over-chosen by both socio-economic categories, so the lottery ensured balance.
- In four schools, the number of first choices was roughly equal to places available for each socio-economic category, so balance was achieved with little intervention.
- Three schools were over-chosen by non-subsidised applicants, so nine, 15 and 20 were disappointed, but under-chosen by subsidised applicants, of whom all but one got places in these schools. Two of these three schools were balanced, the other nearly so.
- Four schools were under-chosen all round (one had only one non-subsidised first choice) with final enrolments under capacity. Exacerbated by imbalanced pre-assignments, two of these schools were well outside the diversity range, two just outside.

In terms of achievement levels over this period, Table 6 shows Cambridge's performance against the state's, a tough comparator given that Massachusetts is the highest performing state in both fourth and eighth grade reading and maths and is relatively successful in narrowing achievement gaps.⁷³

	2001/2	2003/4	2005	Gain 2001/2 – 05
English language and arts				
All pupils	69.4 (80.4)	76.4 (83.7)	76.7 (83.7)	7.3 (3.3)
Low-income pupils	60.7 (64.0)	69.2 (70.2)	67.0 (70.6)	6.3 (6.6)
Maths				
All pupils	55.7 (65.2)	61.8 (70.4)	64.0 (72.4)	8.3 (7.2)
Low-income pupils	43.7 (45.1)	51.2 (53.0)	54.3 (55.6)	10.6 (10.5)

Cambridge's overall performance is lower than the state-wide average in both subjects. This is unsurprising given that low-income pupils account for 49.0 per cent of Cambridge's far more racially diverse school population, compared with 27.7 per cent for the state as a whole.⁷⁴ But the table also shows that in Cambridge the overall rate of improvement is faster, and the socio-economic performance gap is much narrower and is closing as fast as the rest of the state, except for English in 2005. Table 7 (next page) examines the socio-economic gap in proficiency by grade. Whereas in Massachusetts as a whole the gap widens through school, in Cambridge it narrows in maths and in English in the upper reaches of elementary school.⁷⁵

72. Leaving aside the two bilingual programmes, which have slightly different assignment rules.

73. Composite Performance Index is the 'measure of the distribution of student performance relative to attaining proficiency' used in Massachusetts. It combines results from state tests across all grade levels. 2001/2 and 2003/4 figures each averaged across two years. Source of figures for the state and district is Annual Yearly Progress data from the Massachusetts Department of Education. Massachusetts performance in relation to other states is from NAEP figures in: Perie et al (2005b), Perie et al (2005c).

74. Massachusetts figure from the Massachusetts Department of Education. It is possible that numbers of graduate students with children eligible for subsidised lunches contribute to the relatively narrow socio-economic achievement gap in Cambridge.

75. Cambridge figures from 2004-05 District Report Card, CPSD.

Massachusetts figures from 2004-05 Massachusetts State Report Card, from Massachusetts Department of Education.

Table 7: Achievement of proficiency or above in 2004 state test

Percentage point gap between low-income and aggregate			
		Cambridge	Massachusetts
English language and arts	Grade 3 (reading)	14	23
	Grade 4	15	25
	Grade 7	9	25
	Grade 10 (high school)	15	28
Maths	Grade 4	18	21
	Grade 6	16	22
	Grade 8	14	23
	Grade 10 (high school)	13	25

Conclusions

Controlled choice in Cambridge has been successful in simultaneously achieving good socio-economic balances in most schools and honouring the great majority of first preferences. The district has managed to keep seven of twelve schools within the socio-economic caps, three just outside, and two well outside. In relative terms this can be described as a qualified success. The fundamental difficulty with the system is the primacy of choice in a system in which overall capacity exceeds the number of pupils.

While differential patterns in the exercise of choice remain, the district has worked hard to improve the quality of the parental decision-making process and to tackle the problem of non-choosers discussed earlier. It has also used preferences and annual research into registrations – including open-ended interviews with parents – as a guide for strategy and policy, and to help principals with recruitment plans. The impact of the new admissions system on achievement is as yet unclear, but the district is continuing to increase overall levels while at least holding its relatively narrow socio-economic gap steady.

Case Study 3: San Francisco Unified School District, California

Policy background

San Francisco's Unified School District (SFUSD) has 119 schools across 47 square miles, serving an enrolment of 57,000 that has declined by nearly 40 per cent since the late 1960s.⁷⁶ Only 14.5 per cent of three-quarters of a million residents are under 18 years old, the lowest of any US city, and 25 per cent of children are in private schools, compared with 11 per cent nationwide.⁷⁷ The city also has one of the highest proportions of foreign-born population, and 29 per cent of pupils have limited English proficiency.⁷⁸ Large and growing proportions of pupils are Chinese (32 per cent) and Hispanic (22 per cent); a declining proportion are black (14 per cent) and white (nine per cent); other groups are fairly stable with six per cent Filipino and nine per cent 'other non-white'. Poverty rates are variable, and 53 per cent of pupils are currently on subsidised lunches.⁷⁹

San Francisco has persistently high levels of racial segregation in neighbourhoods and schools (Frey and Myers, 2005). In the early 1980s, a desegregation lawsuit resulted in the 1983 Consent Decree, which ruled that schools should have pupils from at least four of nine defined racial groups, and no more than 45 per cent

76. Overall population figure is US Census Bureau estimate for 2003. Current school population figure is from San Francisco Unified School District. Historical figures are from Flinspach *et al* (2003).

77. US Census figures are for 2000. Private school figures are from Lapkoff and Gobalet Demographic Research (2002).

78. Foreign-born population figures from White and Bueker (2002).

79. English proficiency figure from San Francisco Unified School District (2004) 2003-2004 District Accountability Report Card SFUSD. Socio-economic and race figures are from SFUSD website <http://portal.sfusd.edu>

from any one.⁸⁰ However, a 1994 lawsuit *Ho v. SFUSD*, triggered by fierce competition for places in elite schools, claimed that this constituted racial discrimination, and the next settlement prohibited use of race or ethnicity in pupil assignment from 1999-2000.⁸¹ During a two-year period without intake balancing, a comprehensive plan was drawn up aimed at accommodating the two lawsuits (SFUSD, 2001).

A new system of desegregating schools using socio-economic factors was introduced in 2001/02. This failed to prevent racial resegregation of schools and in November 2005 the US District Court ceased the Consent Decree from the end of the year.⁸² Whether, without federal court supervision, San Francisco will continue with the current system or attempt to balance school intakes at all, remains to be seen. However, the approach holds much interest, as does the complementary Weighted Student Formula (see below).

Policy and practice

Every pupil has a profile made up of five or six equally weighted binary variables:

- socio-economic status⁸³
- academic achievement⁸⁴
- whether mother had any post-high school education
- whether pupil is English proficient
- whether English is primary language spoken in pupil's home⁸⁵
- prior school's academic performance (not for kindergarten level).⁸⁶

This gives 32 or 64 combinations. The diversity index is the probability that two pupils selected from a group will differ on one of these characteristics. The composite diversity index (CDI) is the probability that they will differ on the combination.⁸⁷

At each transition, pupils rank up to seven schools, and a computerised process runs as follows:⁸⁸

1. Pupils are pre-assigned if they have a sibling at the school, or if they qualify for priority placement, for example for special education or bilingual programmes. For each school, the base CDI for the pre-assigned group is calculated.
2. For each school, pupils who list it as one of their choices and live in the attendance area are provisionally assigned, one by one, according to greatest contribution to diversity (whose profile most increases the base CDI).⁸⁹ Each time, the CDI is recalculated. Ties between applicant profiles are settled by who ranked the school higher, and then by random selection. This continues until either all

80. NB: 40 per cent for alternative schools. See United States District Court for the Northern District of California (1983) *San Francisco et al, Plaintiffs, v. San Francisco Unified School District et al, Defendants*. Civ. No. C-78-1445 WHO. 576 F.Supp. 34. The Consent Decree also called for two new 'schools of excellence' and targeted four struggling and segregated schools for funded improvement or 'reconstitution', extended less successfully to a further 19 schools during the next decade. See report of Committee of Experts chaired by Professor Gary Orfield: *Desegregation and Educational Change in San Francisco: Findings and Recommendations on Consent Decree Implementation* (July 1992).

81. United States District Court for the Northern District of California (1999) *San Francisco et al, Plaintiffs, v. San Francisco Unified School District et al, Defendants*. No. C-78-1445 WHO, No. C-94-2418, U.S. Dist. LEXIS 12128.

82. United States District Court for the Northern District of California (2005) *San Francisco et al, Plaintiffs, v. San Francisco Unified School District et al, Defendants*. Order Denying Proposed Extension of Consent Decree. No. C-78-1445 WHO, No. C-94-2418, U.S. Dist. LEXIS 12128.

83. Does family participate in at least one of following: subsidised lunch, CalWorks (welfare program that gives cash aid and services to eligible needy California families) or public housing.

84. For kindergarten, did the child attend preschool? For grades 1-12, did the student score at the 30th percentile or above on a standardised test?

85. Determined by answers to language survey questions on the application form.

86. Is the California Academic Performance Index ranking of the sending school (the school the student last attended or the student's neighborhood school if s/he has not attended school) four or above? NB: This factor is excluded for kindergarten.

87. Diversity index = $1 - (x^2 + y^2)$ where x and y are the proportions of pupils with or without the characteristic. CDI = average of the characteristic diversity indices.

88. Parents are strongly encouraged to use all seven choices.

89. This pool of pupils includes those whose attendance area based on home address is a 'satellite zone' and who pick that school as their highest choice. Satellite zones are priority neighbourhoods outside the immediate attendance zone.

places are filled, or there are no more applicants whose profile will increase the CDI.

3. For schools where places remain, there is a second 'run' for pupils outside the attendance area who list it. The same process goes on until there are no more places available. Where a school is under-subscribed, all applicants are provisionally admitted, places remain, and the diversity index has no effect.
4. At this stage many pupils have been provisionally admitted to more than one school, and a reconciliation process assigns them to the one they ranked highest.
5. Pupils not assigned to any of their chosen schools are manually assigned to another school that has places, based on proximity and transportation, but not diversity.

In parallel, the district operates a Weighted Student Formula (WSF) in which an element of funding is allocated directly and transparently to schools on a per-pupil basis, according to specific needs. Both the delegation of large proportions of funding to schools and the weighting are relatively unusual features in the US, where teachers are generally allocated directly to schools according to pupil numbers and ratios, and schools have discretion over only a tiny proportion of their budgets. In San Francisco, delegation is only partial, giving schools control over 60 per cent of unrestricted district funds. Two portions of these funds are not pupil-related: a 'foundation' allocation to protect small schools, equivalent to salary and benefits of a principal and a clerk, and 'floor plan funding', to guarantee basic staffing levels. A third portion is pupil-related. A base funding factor (currently \$2,561) is differentiated and weighted for each enrolled pupil by four sets of factors:⁹⁰

- grade level
- special educational needs
- English language proficiency
- socio-economic status.

Combinations of these attributes can increase a pupil's allocation by between nought and 50 per cent, although this is not as high in some of the other districts with WSF systems.⁹¹ The committee that established the parameters for characteristics and weights is responsible for monitoring and improving the progress of the system (Ackerman, 2004).

Key challenges

A number of design aspects of the admissions process, and the way that families have used it in a context of residential segregation, have impeded its ability to improve socio-economic integration and achievement equity.⁹²

The attendance area element is a significant barrier. Higher performing schools are clustered in relatively affluent areas. Meanwhile, the south east of the city has high concentrations of poor, black and Hispanic pupils, and faces neighbourhood attrition and declining school enrolments. The small numbers of mid-to-high performing schools in these areas are heavily over-subscribed.

Second, transportation logistics have not risen to the occasion. Restricted, outdated and rigid bus routes and schedules have led administrators to 'generally characterize existing bus routes as limitations on student enrolment access, not as tools that can be utilised to allow students from different parts of the city to attend their schools' (Biegel, 2003).

Third, there is a strong tendency for choice, particularly first choice, within neighbourhoods. It is possible that part of this is caused by the system, like many others, incentivising families to rank neighbourhood

90. Special education teachers and assistants are not site-based budget responsibilities but are budgeted and allocated centrally. The pupil-related funds only cover costs for teaching materials and professional development.

91. Others can be found in Seattle, Houston, Sacramento, San Diego, Cincinnati, Pittsburgh and Washington DC. Districts differ in terms of extent of delegation of funding and whether they charge for actual or average teacher salaries; choice of factors (others include gifted and talented pupils, specialist provision such as vocational, pupils in a 'high-mobility' school); the weighting of factors; and whether pupil number figures are affected by attendance rates. For an examination of systems in Houston, Seattle and Edmonton (Canada) see Ouchi (2003). Also see Goertz and Odden (1999), National Association of State Boards of Education (2003), Archer (2004), EdSource (2004).

92. This analysis draws on the various reports, supplements and appendices (in particular Reports 20-22 for 2003, 2004 and 2005) of the Consent Decree Monitoring Team, submitted to the United States District Court for the Northern District of California. For choice figures, see SFUSD (2005a).

schools first since they have a better chance of securing a place there and would lose priority if they did not rank it first.⁹³ It has also been observed that non-local students in high performing schools in affluent areas tend to be previously local, to now live in similar neighbourhoods, or to not remain at the school for long.

Fourth, the diversity index element only assigns to requested schools. The system is such that after the reconciliation process and manual assignments, applicants are eventually accommodated by their preferred school, if there is capacity. Many schools are under-subscribed, some ending up under capacity, and for these the diversity index has little or no impact.

Outcomes

Judicial oversight of the assignment system is ceasing, partly because of the continued racial resegregation of schools. In 2004/05, between 43 and 45 schools were 'severely resegregated' with more than 60 per cent of any one race at one or more grade level, compared with 30 in 2001/02 (Biegel, 2005). The court has not been concerned with socio-economic composition, but the picture here is much better, particularly for middle and high schools. Table 8 shows few that might be described as segregated (more than 20 percentage points from the district average) and that many are in balance.⁹⁴ While there is a long way to go, there was significant socio-economic desegregation at all levels in the first three years. Given that it only affects pupils in transition, it is fair to say that the diversity index has had a clear impact in balancing school intakes.

	District-wide pupils eligible for subsidised lunch %	No of schools in the district	No of schools with subsidised pupils within 10 % points of district average	No of schools with subsidised pupils within 20 % points of district average
Elementary	64.3 (68.6)	68 (71)	22 (19)	49 (32)
K-8	39.4 (36.8)	10 (7)	3 (2)	5 (4)
Middle	58.3 (56.3)	18 (17)	11 (7)	16 (13)
High	40.5 (35.3)	22 (21)	13 (7)	19 (14)
Total	53.4 (54.4)	118 (116)	49 (35)	89 (63)

Meanwhile the system satisfies parental choice reasonably well. Schools vary hugely in popularity: a few have more than 20 requests per non-sibling place, as many as eight of which are first choices; while others have fewer requests than places available. But Table 9 shows that the great majority of pupils get their first choice (SFUSD, 2005b).

	No. of applicants	Got their first choice (%)	Got another of their choices (%)	Did not get one of their choices (%)
Elementary (K)	4,018	65	19	16
Middle (sixth grade)	3,501	76	14	10
High (ninth grade)	4,606	63	22	15
Non-transitional	1,748	32	14	54
All K-12	13,873	63	18	19

93. This problem is outlined in detail in: Ergin and Sönmez (2005), Chen and Sönmez (2004). A possible solution is an 'applicant-proposing deferred-acceptance system' such as recently introduced for high schools in New York City, where there are additional strategic gaming issues relating to school selection of applicants. See Abdulkadiroglu et al (2005).

94. The figures in this table are compiled from raw data supplied by SFUSD. The 2001/02 figure for K-8 includes a K-12 school.

In terms of educational outcomes, San Francisco has done very well in the past few years. Test scores have improved steadily and have made it the top performing urban district in California two years running.⁹⁵ Table 10 and more detailed data show that:

- gains have been across races, socio-economic groups and subjects
- gains for the socio-economically disadvantaged are greater than average, thus narrowing the achievement gap
- at high school level, in the last year alone low-income tenth grade pupils improved 4.5 percentage points for English language and arts (ELA), and 2.1 points for maths
- the socio-economic achievement gap is much narrower than California as a whole
- black gains have lagged behind the district average gains
- black pupils perform worse than in any other Californian urban district.

	San Francisco 2002	San Francisco 2005 (and three-year gain)	California 2005
Academic Performance Index			
<i>All pupils</i>	683	746 (63)	709
Low-income	638	706 (68)	N/A
White	766	833 (67)	N/A
Black	527	576 (49)	N/A
Hispanic	564	636 (72)	N/A
Asian	769	832 (63)	N/A
English language and arts (ELA): per cent at or above proficient			
<i>All pupils</i>	33.0	46.3 (13.3)	41.9
Low-income	23.7	37.6 (13.9)	26.6
White	52.3	68.2 (15.9)	60.8
Black	11.9	20.7 (8.8)	28.8
Hispanic	14.9	26.5 (11.6)	26.8
Asian	44.9	60.8 (15.9)	64.5
Maths: per cent at or above proficient			
<i>All pupils</i>	37.3	53.0 (15.7)	44.9
Low-income	31.0	47.2 (16.2)	32.9
White	46.9	65.9 (19.0)	59.5
Black	9.7	20.1 (10.4)	27.4
Hispanic	15.2	29.7 (14.5)	32.6
Asian	58.5	75.0 (16.5)	73.5

95. As measured by its Academic Performance Index (API): a score ranging from 200 to 1000 that annually measures the academic performance and progress of individual schools in California. All figures are from state and district state and district API, Adequate Yearly Progress, and Accountability and Progress Reports

Conclusions

San Francisco has been relatively successful in raising standards and narrowing the socio-economic achievement gap, but its black pupils are improving at a much slower rate than average. Cross-tabulations by socio-economic status and race are unfortunately not available, but it might be construed that part of the rapid improvement of low-income pupils in San Francisco has come from the large, high-achieving but relatively poor Chinese community.

The current admissions policy is aimed at effecting racial desegregation without the use of explicit racial quotas. The convolutions associated with this were always going to inhibit clarity and popularity. But in the context of segregated neighbourhoods, the weakness of the intake-balancing element in comparison with the choice and proximity elements of the system, and possibly the specific composition of the diversity index, have made it ineffective in racial desegregation. Indeed its days are, literally, numbered.

However the system has, almost unobserved, enabled quite substantial socio-economic desegregation, while satisfying parental choice for a large urban system. There are elements of the system that, if adjusted and effectively applied, might be used successfully in other contexts. In particular, a diversity index, with the right components and given more weight, is potentially a flexible and powerful tool for balancing intakes. Meanwhile, although it is early days and the differential incentives are relatively small, anecdotal evidence suggests that the WSF is starting to encourage schools to make more effort to recruit disadvantaged pupils.

D. Conclusions

US research confirms that the distribution of pupils across schools matters: for individual pupils, for schools, and for wider areas and systems. The independent influence of the socio-economic composition of a school on educational outcomes compounds the effects of its pupils' individual backgrounds. And balanced intakes improve achievement for disadvantaged pupils without harming advantaged pupils. In this context, the role for admissions policy in tackling persistent achievement gaps is unenviable but critical.

The traditional and obvious admissions tool – the attendance area – tends to concentrate advantage and disadvantage in schools, reflecting segregated residential patterns in the neighbourhoods around them. The initial policy motivation for bypassing attendance areas was momentous: to ensure racial balance in schools, many of which had been totally segregated, whether by law or in practice. Desegregation was slow, patchy and often confrontational, and is now in abeyance. However, examples of its implementation, successful or otherwise, provide an important research base for any admissions policy concerned with equality of opportunity. More recent lessons come from direct use of socio-economic and achievement factors in pupil assignment.

The second challenge to the proximity principle was school choice: first, to encourage voluntary desegregation, but later as an admissions principle for its own sake. Choice and differentiation policies have had neutral or stratifying effects on the socio-economic composition of schools, depending on:

- how unfettered or regulated choice is
- which families exercise it, and how it is informed
- the ways in which transportation arrangements and funding extend it
- the role of schools themselves in admissions, for example in recruitment, or in procedures if they are oversubscribed.

As in Britain, shifting policy agendas and variations in local application have resulted in a complex patchwork of admission practice. But in both countries it might be argued that successful and sustainable admissions policies need to combine all three principles: proximity, school choice and balancing intakes through intervention in assignment. We have seen three examples of districts that are in effect doing this, with some success. They are summarised in Table 11.

1. Neighbourhood	Wake County	Cambridge	San Francisco
	Geographical nodes determine school attendance zones	Proximity a key factor for adjudication of over-subscribed schools and for mandatory assignments	First run of assignment process is for applicants within school attendance zones
2. Intake balancing	Node assignment to meet school diversity targets (socio-economic and achievement)	Assignment process aims to keep schools within 10 per cent of district average socio-economic mix	Diversity index based on socio-economic and achievement factors, assigning pupils when schools are over-subscribed
3. Pupil/parental choice	Magnet and year-round school application, in advance of general assignment process	Rank three schools. Assignment process starts with first and then second choices	Rank up to seven schools. These preferences are honoured for under-subscribed schools, and in reconciliation process

In these districts, schools have relatively good or improving socio-economic balances. But as mentioned earlier, absence in the US of longitudinal or cross-district studies of admissions policies prevents objective quantitative assessment of their impact on school intakes, let alone on educational outcomes. In all three districts, socio-economic achievement gaps have narrowed substantially, but in each case a range of other

policies is geared to raise standards for disadvantaged pupils and under-performing schools.

None of the case studies, or indeed any other school districts, have developed systems that would be appropriate for importing wholesale into the UK. But there are important lessons and elements from each – supported by the wider policy and research analysis – which could contribute to a pick-and-mix approach. The paper ends by listing these.

1. While all three districts introduced new systems in the past four years, in each case good or improved socio-economic mixes are, to an extent, building on longer periods of intake balancing. Successful admissions policy takes time to bed down.
2. The role of a local or intermediary body in conducting the admissions process is essential. Autonomous schools do not have enough incentive to balance intakes or to serve wider ends, and in order for them to do so they need some form of regulation.
3. An inclusive approach to the development of admissions policy pays dividends. Wake County, for example, benefited from building an alliance incorporating the business community, gaining support of the local press, and using public consultation and involvement in assignment plan development.
4. The strength of demographic factors in the three districts reflects the general analysis earlier. All three contend with issues relating to residential segregation which neither busing nor choice have managed to overcome. For some areas of the US, the best that can be hoped for is to hold off segregation rather than reverse it.
5. In Wake County, the continual rapid growth of the school population has provided greater scope for intervention in assignment, through adjudicating for over-subscribed schools and opening new ones. In Cambridge and San Francisco, with declining school populations, enrolments fall well below system-wide capacity, and so less popular schools are under-subscribed. And in both cities, significant private sectors have eroded the critical mass of middle-class children that research shows makes such a difference.
6. The efficacy of admissions policy can be inhibited if it is not joined up with other education policies and with public policy areas such as housing. It also has implications itself for areas inside and outside education, ranging from pupil ability grouping to transport and the environment.
7. Detailed design and implementation issues have substantial effects on actual intakes. The most significant is the relative strength of the pupil assignment element vis-à-vis the choice element. For example, in Cambridge and San Francisco, honouring first choices where places are available has made it impossible to achieve balanced intakes in some schools. Meanwhile, in Wake County it has become increasingly difficult for assignment plans to keep all schools in compliance with diversity ceilings. This is partly because the absence of diversity 'floors' in the growing number of suburban schools has limited the middle-class children available for schools in less affluent areas, assuming such assignments would be politically acceptable. This problem has been accentuated by the growth of 'year-round' choice schools, mainly in the suburbs.
8. For intake balancing, the use of a diversity index, providing a more sophisticated measure of disadvantage should be strongly considered. However, detailed modelling with component variants should be undertaken in advance.
9. Well-resourced and distinctive magnet-type schools, strategically located in low-income areas, can achieve good socio-economic balance by attracting children from affluent suburban families, as exemplified in Wake County.
10. Choice needs to be universal, real and well-informed. In practice this means it should be compulsory, supported by the sort of advisory system instigated in Cambridge, and enhanced by a carefully designed and evolving transportation service that aims to equalise opportunities for children who cannot be taken to school by their parents.
11. Multiple ranking is essential. But attention needs to be paid to the fact that in some areas stated choices are often tactical, and may not accurately reflect real preferences. This problem might be addressed through detailed mechanism design.⁹⁶

96. See note 93.

-
12. The demand-side needs to be more than a one-off exercise of choice. Authorities and schools should supplement the data from preferences with qualitative surveys, and use these to inform strategic planning for the school system for future choosers.
 13. The use of a Weighted Student Formula – such as implemented in San Francisco, but probably with stronger weightings – should be considered, to complement the admissions system and incentivise and support improved intake mixes in the longer run.

Bibliography

- Abdulkadiroglu A, Pathak P and Roth A (2005) 'The New York City High School Match' *Paper for American Economic Association Annual Meeting*
- Ackerman A (2004) 'The Weighted Student Formula: a Superintendent's Perspective' *The School Administrator* August
- Adcock E and Phillips G (2000) 'Accountability Evaluation of Magnet School Programs: a Value-Added Model Approach' *Paper presented at the annual meeting of the American Educational Research Association* New Orleans
- Alexander K, Cook M and McDill E (1978) 'Curriculum Tracking and Educational Stratification' *American Sociological Review* 43
- Alwin D and Otto L (1977) 'High School Context Effects on Aspirations' *Sociology of Education* 50
- Anderson J, Hollinger D and Conaty J (1992) *Poverty and Achievement: Re-examining the Relationship between School Poverty and Student Achievement* Washington DC: Office of Educational Research and Improvement
- Archbald D (2004) 'School Choice, Magnet Schools, and the Liberation Model: An Empirical Study' *Sociology of Education* 77
- Archer J (2004) "'Weighted'" Funding of Schools Gains Favor' *Education Week* 3 November
- Armor D and Rossell C (2001) 'Desegregation and Resegregation in the Public School' in Thernstrom A and Thernstrom S (eds) *Beyond the Color Line: New Perspectives on Race and Ethnicity in America* Stanford, CA: Hoover Institute
- Baenen N, Dulaney C, Banks K and Yaman K (2002) 'Gaps in Academic Achievement: WCPSS Status 2001-2' *WCPSS Evaluation and Research Report No. 02.23*
- Baenen N, Yaman K and Dulaney C (2004) 'WCPSS Outcomes Summary for 2003-04, with an Emphasis on Achievement Gap Status' *WCPSS Evaluation and Research Report No. 04.28*
- Banks K (2001) 'The Effect of School Poverty Concentration in Wake County Public School System' *WCPSS Evaluation and Research Report No. 01.21*
- Banks K (2004) 'From Complacency to Excellence Through School District Reform: A Case Study of the Wake County Public School System' Paper presented to the American Educational Research Association, San Diego, CA
- Bell D (2004) *Brown v. Board of Education and the Unfulfilled Hopes for Racial Reform*, New York, Oxford University Press
- Benveniste L, Carnoy M and Rothstein R (2003) *All Else Equal: Are Public and Private Schools Different?* New York: Routledge Falmer
- Berends M, Lucas S, Sullivan T and Briggs R (2005) *Examining Gaps in Mathematics Achievement among Racial-Ethnic Groups, 1972-1992* Santa Monica, CA: RAND Corporation
- Biegel S (2003) *Report No. 20 of Consent Decree Monitor* United States District Court, Northern District of California
- Biegel S (2005) *Paragraph 44 Independent Review (Report #22): SFUSD Consent Decree, Appendix 2*
- Bieleck S and Chapman C (2003) *Trends in the Use of School Choice: 1993 to 1999* Washington DC: US Department of Education, National Center for Education Statistics
- Blank R (1990) *Educational Effects of Magnet High Schools* in Clune W and Witte J (eds) *Choice and Control in American Education, Vol. 2: The Practice of Choice, Decentralization and School Restructuring* Bristol, PA: Falmer Press
- Boyd W and Walberg H (eds) (1990) *Choice in Education: Potential and Problems* Berkeley, CA: McCutchan
- Brown C, Lopez-Medina L, Piche D and Taylor W (2004) *Choosing Better Schools: A Report on Student Transfers under the No Child Left Behind Act* Washington DC: Citizens' Commission on Civil Rights
- Cambridge Public Schools (2001) *Controlled Choice Plan* Cambridge, MA: School Committee
- Cambridge Public Schools District (2005) *First Cycle Kindergarten Registration Data 05-06*, Cambridge, MA: Cambridge Public Schools
- Campbell J, Hombo C and Mazzeo J (2000) *NAEP 1999 Trends in Academic Progress: Three Decades of Student Performance* Washington, DC: US Department of Education, National Center for Education Statistics
- Carey K (2004) *The Funding Gap 2004: Many States Still Shortchange Low-Income and Minority Students* Washington DC: The Education Trust
- The Carnegie Foundation for the Advancement of Teaching (1992) *School Choice: A Special Report*. Princeton: Carnegie Foundation for the Advancement of Teaching
- Carnoy M (2001) *School Vouchers: Examining the Evidence* Washington DC: Economic Policy Institute
- Carnoy M, Jacobsen R, Mishel L and Rothstein R (2005) *The Charter School Dust-Up: Examining the Evidence on Enrolment and Achievement* Washington DC: Economic Policy Institute
- Carter S (2000) *No Excuses: Lessons from 21 High Performing High-poverty Schools* Washington DC: Heritage Foundation
- Cashin S (2004) *The Failures of Integration: How Race and Class Are Undermining the American Dream* New York: Public Affairs

- Chemerinsky E (2005) 'The Segregation and Resegregation of American Public Education: The Court's Role' in Boger J and Orfield G (eds) *School Resegregation: Must the South Turn Back?* Chapel Hill: University of North Carolina Press
- Chen Y and Sönmez T (2004) 'School Choice: an Experimental Study' *Journal of Economic Theory*
- Chubb J and Moe T (1990) *Politics, Markets and America's Schools* Washington DC: The Brookings Institution Press
- The Civil Rights Project (2002) *The Impact of Racial and Ethnic Diversity on Educational Outcomes: Cambridge, MA School District* Cambridge, MA: Harvard University
- Coleman J, Campbell E, Hobson C, McPartland J, Mood A, Weinfield F and York R (1966) *Equality of Educational Opportunity* Washington DC: US Government Printing Office
- Coleman J, Kelly S and Moore J (1975) *Trends in School Segregation 1968-1973* Washington DC: Urban Institute
- Colvin R (2004) *Public School Choice: An Overview* presented at American Enterprise Institute conference *Leaving No Child Behind: Options for Kids in Failing Schools*
- Cook T (1984) *School Desegregation and Black Achievement* Washington, DC: US Department of Education
- Crain R and Mahard R (1983) 'The Effects of Research Methodology on Desegregation Achievement Studies: a Meta-Analysis' *American Journal of Sociology* 88
- DeNavas-Walt C, Proctor B and Lee C (2004) *Income, Poverty, and Health Insurance Coverage in the United States: 2003* Washington DC: US Census Bureau
- EdSource (2004) 'Weighted Student Formula' *Concept Enlivens School Finance Debate* Palo Alto, CA: EdSource
- Education Commission of the States (2005) *Open Enrolment: 50-State Report* Washington DC: ECS
- Eitle T (2006) 'Diversity, Desegregation and Accountability in Florida Districts' in Borman K and Dorn S (eds) (forthcoming) *Educational Reform in Florida: Diversity and Equity in Public Policy* New York: State University of New York Press
- Entwisle D and Alexander K (1992) 'Summer Setback: Race, Poverty, School Composition, and Mathematics Achievement in the First Two Years of School' *American Sociological Review* 57
- Ergin H and Sönmez T (2005) 'Games of School Choice under the Boston Mechanism' *Journal of Public Economics*
- Finder A (2005) 'As Test Scores Jump, Raleigh Credits Integration by Income' *New York Times* 25 September
- Fiske, E. (2002) 'Controlled Choice in Cambridge, Massachusetts' in The Century Foundation Task Force on the Common School (ed) *Divided We Fail: Coming Together Through Public School Choice* Washington DC: The Century Foundation, Century Foundation Press
- Flinspach S (2004) 'Desegregation in the Post-Brown Era: Socioeconomic Diversity Policies in Student Assignment' *Paper for American Educational Research Association* San Diego, CA
- Flinspach S and Banks K (2005) 'Moving Beyond Race: Socioeconomic Diversity as a Race-Neutral Approach to Desegregation in the Wake Country Schools' in Boger, J and Orfield, G (eds) *School Resegregation: Must the South Turn Back?* Chapel Hill: University of North Carolina Press
- Flinspach S, Banks K and Khanna R (2003) 'Socio-economic Integration as a Tool for Diversifying Schools: Promise and Practice in Two Large School Systems' *Paper for the Color Lines Conference* Cambridge, MA: The Civil Rights Project at Harvard University
- Frey W and Myers D (2005) *Racial Segregation in US Metropolitan Areas and Cities, 1990-2000: Patterns, Trends and Explanations*, Ann Arbor MI: Population Studies Center, University of Michigan, Institute for Social Research
- Frankenberg E and Lee C (2003) *Charter Schools and Race: A Lost Opportunity for Integrated Education* Cambridge, MA: The Civil Rights Project at Harvard University
- Frankenberg E, Lee C and Orfield G (2003) *A Multiracial Society with Segregated Schools: Are We Losing the Dream?* Cambridge, MA: Harvard University Civil Rights Project
- Friedman M (1962) *Capitalism and Freedom* Chicago IL: University of Chicago Press
- Fuller B and Elmore R (eds) (1996) *Who Chooses? Who Loses? Culture, Institutions and the Unequal Effects of School Choice* New York: Teachers College Press
- Gamoran A (1987) 'The Stratification of High School Learning Opportunities' *Sociology of Education* 60
- Gamoran A (1996) 'Student Achievement in Public Magnet, Public Comprehensive, and Private City High Schools' *Educational Evaluation and Policy Analysis* 18
- Gamoran A (2000) *High Standards: A Strategy for Equalizing Opportunities to Learn?* in Kahlenberg R (ed) *A Notion at Risk: Preserving Public Education as an Engine for Social Mobility* New York: Century Foundation
- Glaeser E (2001) *Racial Segregation in the 2000 Census: Promising News* Washington DC: The Brookings Institution Center on Urban and Metropolitan Policy
- Goertz M and Odden A (eds) (1999) *School-Based Financing* Thousand Oaks, CA: Corwin Press
- Goldhaber D and Brewer D (1997) 'Why Don't Schools and Teachers Seem to Matter? Assessing the Impact of Unobservables on Educational Productivity' *Journal of Human Resources* 33
- Gonzales P, Guzmán J, Partelow L, Pahlke E, Jocelyn L, Kastberg D and Williams T (2004) *Highlights From the Trends in International Mathematics and Science Study (TIMSS) 2003* Washington, DC: US Department of

- Education, National Center for Education Statistics
- Gottlieb A (2002a) 'Economically Segregated Schools Hurt Poor Kids' *Term Paper reporting on Piton Foundation* research by Dianne Lefly
- Gottlieb A (2002b) 'Raleigh: a Model for Economic School Integration' *Piton Foundation Term Paper 1 (2)*
- Grissmer D, Flanagan A and Williamson S (1998) 'Why Did the Black-White Score Gap Narrow in the 1970s and 1980s?' in Jencks and Phillips (1998a)
- Guryan J (2001) *Desegregation and Black Dropout Rates* Cambridge MA: National Bureau of Economic Research Working Paper No. 8345
- Hanushek E, Kain J and Rivkin S (2002) *New Evidence about Brown v. Board of Education: The Complex Effects of School Racial Composition on Achievement* Cambridge, MA: National Bureau of Economic Research Working Paper no. w8741
- Harris D (forthcoming) *Beating the Odds or Losing the War? A National Portrait of Student Achievement in High-Poverty Schools* Washington DC: Economic Policy Institute, Quoted in Century Foundation (2004) *Can Separate be Equal? The Overlooked Flaw at the Center of No Child Left Behind*. Washington DC: The Century Foundation.
- Hawley W (2004) 'Designing Schools that Use Student Diversity to Enhance the Learning of all Students' *Paper presented at Positive Interracial Outcomes Conference* Cambridge, MA
- Hayes W (2004) *Are We Still a Nation at Risk Two Decades Later?* Lanham, Md: Scarecrow Education
- Hochschild J and Scovronick N (2003) *The American Dream and the Public Schools* New York: Oxford University Press
- Hoffman L (2003) *Overview of Public Elementary and Secondary Schools and Districts: School Year 2001-02* Washington, DC: US Department of Education, National Center for Education Statistics
- Hoxby C (2001) *How School Choice Affects the Achievement of Public School Students* Paper prepared for Hoover Institution's Koret Task Force on K-12 Education
- Hoxby C (2004a) *Achievement in Charter Schools and Regular Public Schools in the United States: Understanding the Differences* Mimeo: Harvard University
- Hoxby C (2004b) *A Straightforward Comparison of Charter Schools and Regular Public Schools in the United States*. Mimeo: Harvard University
- Ingersoll R (2003) *Quality Counts 2003: 'If I Can't Learn From You': An Analysis of the 1999-2000 Schools and Staffing Survey* Washington DC: Education Week
- Jencks C and Phillips M (eds) (1998a) *The Black-White Test Score Gap* Washington DC: Brookings Institute Press
- Jencks C and Phillips M (1998b) 'America's Next Achievement Test: Closing the Black-White Test Score Gap' *The American Prospect* September
- Jerald C (2001) *Dispelling the Myth Revisited: Preliminary Findings from a Nationwide Analysis of High-Flying Schools* Washington DC: Education Trust
- Kahlenberg R (2001) *All Together Now: Creating Middle-Class Schools through Public School Choice* Washington DC: Brookings Institution Press
- Kahlenberg R (ed) (2003) *Public School Choice vs. Private School Vouchers*. Washington DC: Century Foundation Press
- Kane T, Staiger D and Riegg S (2005) *School Quality, Neighborhoods and Housing Prices: The Impacts of School Desegregation* Cambridge MA: National Bureau of Economic Research
- Kennedy M, Jung R and Orland M (1986) *Poverty, Achievement, and the Distribution of Compensatory Education Services: An Interim Report from the National Assessment of Chapter 1* Washington DC: Department of Education, Office of Educational Research and Improvement
- Kleiner B, Porch R and Farris E (2002) *Public Alternative Schools and Programs for Students at Risk of Education Failure: 2000-01* Washington DC: US Department of Education, National Center for Education Statistics
- Kluger R (2004) *Simple Justice: The History of Brown v. Board of Education and Black America's Struggle for Equality* New York: Vintage
- Kozol J (1991) *Savage Inequalities: Children in America's Schools* New York: Crown
- Kozol J (2005) *The Shame of the Nation: The Restoration of Apartheid Schooling in America*. New York: Crown
- Lapkoff and Gobalet Demographic Research (2002) *Demographic Analyses and Enrolment Forecasts: San Francisco Unified School District* Berkeley, CA: Lapkoff & Gobalet Demographic Research, Inc
- Lee V and Bryk A (1989) 'A Multilevel Model of the Social Distribution of High School Achievement' *Sociology of Education* 52
- Lee V and Burkam D (2002) *Inequality at the Starting Gate: Social Background Differences in Achievement as Children Begin School* Washington DC: Economic Policy Institute
- Lee V, Smith J and Croninger R (1997) 'How High School Organization Influences the Equitable Distribution of Learning in Mathematics and Science' *Sociology of Education* 70
- Levin B (1999) 'Race and School Choice' in Sugarman S and Kemerer F (eds) *School Choice and Social Controversy: Politics, Policy, and Law* Washington DC: Brookings Institute
- Levine D and Lezotte L (1990) *Unusually Effective Schools: A Review and Analysis of Research and Practice*

- Madison, WI: National Center for Effective Schools Research and Development
- Lockwood A (2004) *The Charter Schools Decade* Lanham, Md: Scarecrow Education
- Logan J (2002) *The Suburban Advantage: New Census Data Show Unyielding City-Suburb Economic Gap, and Surprising Shifts in Some Places* New York: Lewis Mumford Center for Comparative Urban and Regional Research, University at Albany
- Logan J (2004) *Resegregation in American Public Schools? Not in the 1990s* Albany, NY: Lewis Mumford Center for Comparative Urban and Regional Research, University at Albany
- Logan J and Oakley D (2004) *The Continuing Legacy of the Brown Decision: Court Action and School Segregation, 1960-2000* New York: Lewis Mumford Center for Comparative Urban and Regional Research, University at Albany
- Lucas S (1999) *Tracking Inequality: Stratification and Mobility in American High Schools* New York: Teachers College Press
- Meier D and Wood G (eds) (2004) *Many Children Left Behind: How the No Child Left Behind Act is Damaging Our Children and Our Schools* Boston, MA: Beacon Press
- Michelson R (2001) 'Subverting Swann: First- and Second-Generation Segregation in the Charlotte-Mecklenburg Schools' *American Educational Research Journal* 38
- Moore D and Davenport S (1989) *School Choice: The New Improved Sorting Machine* Madison, WI: National Center of Effective Secondary Schools, University of Wisconsin
- National Association of State Boards of Education (2003) *School-Based Financing* NASBE Policy Update 11 (7)
- National Center for Education Statistics (2003) *The Condition of Education 2003* Washington, DC: Department of Education, US Government Printing Office
- National Center for Education Statistics (2004) *America's Charter Schools: Results From the NAEP 2003 Pilot Study* Washington DC: US Department of Education, Institute of Education Sciences
- National Commission on Excellence in Education (1983) *A Nation at Risk: The Imperative for Educational Reform, a Report to the Nation and the Secretary of Education* Washington DC: US Department of Education
- National Commission on Teaching and America's Future (1996) *What Matters Most: Teaching for America's Future* New York: National Commission on Teaching and America's Future
- Nelson F, Rosenberg B and Van Meter N (2004) *Charter School Achievement on the 2003 National Assessment of Educational Progress* Washington DC: American Federation of Teachers
- Oakes J (1985) *Keeping Track: How Schools Structure Inequality* New Haven, CT: Yale University Press
- OECD – Organisation for Economic Co-operation and Development (2005) *Education at a Glance: OECD Indicators 2005* Paris: OECD
- Office of Educational Quality and Accountability (2004) *School District Examination Report: Cambridge Public Schools* Boston, MA: The Commonwealth of Massachusetts
- Ogbu J (2003) *Black American Students in an Affluent Suburb: A Study of Academic Disengagement* Mahwah, NJ: Lawrence Erlbaum Associates
- Ogletree C (2004) *All Deliberate Speed: Reflections on the First Half Century of Brown v. Board of Education* New York: Norton
- Olson L (2004) 'Taking Root' *Education Week* 8 December 2004
- Orfield G and Kurlaender M (eds) (2001) *Diversity Challenged: Evidence on the Impact of Affirmative Action* Cambridge, MA: Harvard Education Publishing Group
- Orfield G and Lee C (2004) *Brown at 50: King's Dream or Plessy's Nightmare?* Cambridge, MA: The Civil Rights Project at Harvard University
- Orfield G, Easton S and the Harvard Project on School Desegregation (1996) *Dismantling Desegregation: the Quiet Reversal of Brown v. Board of Education* New York: New Press
- Ouchi W (2003) *Making Schools Work* New York: Simon & Schuster Adult Publishing Group
- Patillo-McCoy M (1999) *Black Picket Fences: Privilege and Peril Among the Black Middle Class* Chicago: University of Chicago Press
- Perie M, Moran R and Lutkus A (2005a) *NAEP 2004 Trends in Academic Progress: Three Decades of Student Performance in Reading and Mathematics* Washington, DC: US Department of Education, National Center for Education Statistics
- Perie M, Grigg W and Donahue P (2005b) *The Nation's Report Card: Reading 2005* Washington, DC: US Department of Education, National Center for Education Statistics
- Perie M, Grigg W and Dion G (2005c) *The Nation's Report Card: Mathematics 2005* Washington, DC: US Department of Education, National Center for Education Statistics
- Peterson P and West M (eds) (2003) *The Politics and Practice of School Accountability* Washington DC: Brookings Institution Press
- PISA – Programme for International Student Assessment (2004) *Learning for Tomorrow's World: First Results from PISA 2003* Paris: Organisation for Economic Co-operation and Development
- Princiotta D, Bielick S and Chapman C (2004) *Issue Brief: 1.1 Million Homeschooled Students in the United States in 2003* Washington DC: US Department of Education, National Center for Educational Statistics
- Puma M, Karweit N, Price C, Ricciuti A, Thompson W and Vaden-Kiernan M (1997) *Prospects: Final Report*

- on *Student Outcomes*. Cambridge, MA: Abt Associates
- Rasell E and Rothstein R (eds) (1993) *School Choice: Examining the Evidence* Washington DC: Economic Policy Institute
- Rathbun A and West J (2004) *From Kindergarten Through Third Grade: Children's Beginning School Experiences* Washington DC: US Department of Education, National Center for Education Statistics
- Ravitch D (2001) 'American Traditions of Education' in Moe T (ed) *A Primer on America's Schools: An Assessment by the Koret Task Force on K-12 Education* Stanford, CA: Hoover Institution Press
- Renzulli L and Evans L (2005) 'School Choice, Charter Schools, and White Flight' *Social Problems* 52 (3)
- Rossell C (2005) 'Magnet Schools' in *Education Next*, Spring 2005, Stanford, CA: Hoover Institution
- Rothstein R (2002) 'An Accountability Push and Fuzzy Math' *New York Times* 29 March
- Rothstein R (2004) *Class and Schools: Using Social, Economic, and Educational Reform to Close the Black-White Achievement Gap* Washington, DC: Economic Policy Institute
- Roy J and Mishel L (2005) *Advantage None: Re-Examining Hoxby's Finding of Charter School Benefits* Washington DC: Economic Policy Institute EPI Briefing Paper #158
- Rubenstein M, Hamar R and Adelman N (1992) *Minnesota's Open Enrolment Option* Washington DC: Policy Studies Associates, sponsored by US Department of Education
- Rudner L (1999) *Scholastic Achievement and Demographic Characteristics of Home School Students in 1998* Education Policy Analysis Archives <http://epaa.asu.edu/epaa/v7n8>
- Rumberger R and Palardy G (2005) *Does Segregation Still Matter? The Impact of Student Composition on Academic Achievement in High School* New York: Teachers College Record 107 (9)
- Rusk D (2001) *The 'Segregation Tax': the Cost of Racial Segregation to Black Homeowners*. Washington DC: Brookings Institution: Center on Urban & Metropolitan Policy
- Rusk D (2002a) 'Trends in School Segregation' in Century Foundation Task Force on the Common School: *Divided We Fail: Coming Together through Public School Choice* Washington DC: Century Foundation Press
- Rusk D (2002b) *Classmates Count: A Study of the Interrelationship between Socioeconomic Background and Standardised Test Scores of 4th Grade Pupils in the Madison-Dane County Public Schools* www.gamaliel.org
- Rusk D (2005) *Housing Policy is School Policy*, Denver: Denver University (forthcoming)
- Sammons P, Mortimore P and Hillman J (1995) *Key Characteristics of Effective Schools* London: OFSTED
- Saporito S (2003) 'Private Choices, Public Consequences: Magnet School Choice and Segregation by Race and Poverty' *Social Problems* 50 (2)
- Schofield J (1995) 'Review of Research on School Desegregation's Impact on Elementary and Secondary Students' in Banks J (ed) *Handbook of Research on Multicultural Education* New York: Macmillan
- Schulte B and Keating D (2001a) 'Pupils' Poverty Drives Achievement Gap' *Washington Post*, 2 September
- Schulte B and Keating D (2001b) 'Closing Student Gap Opens Door to Conflict' *Washington Post*, 3 September
- Scott J (ed) (2005) *School Choice and Diversity: What the Evidence Says* New York: Teachers College Press
- SFUSD – San Francisco Unified School District (2001) *Excellence For All: A Five-Year Comprehensive Plan to Achieve Educational Equity in the San Francisco Unified School District for School Years 2001-02 through 2005-06* San Francisco: SFUSD Board of Education
- SFUSD Educational Placement Center (2005a) *Three Year Comparison of Round 1 Demand: 2003-04, 2004-05 and 2005-06* San Francisco: SFUSD
- SFUSD Educational Placement Center (2005b) *Round 1 Placement Results: 2005/06 School Year* San Francisco: SFUSD
- Silberman T (2002) 'Wake County Schools: a Question of Balance' in Century Foundation Task Force on the Common School: *Divided We Fail: Coming Together through Public School Choice* Washington DC: Century Foundation Press
- Spring J (2004) *American Education* Boston, MA: McGraw Hill
- St John N (1975) *School Desegregation: Outcomes for Children* New York: Wiley & Sons
- Swanstrom T, Casey C, Flack R and Dreier P (2004) *Pulling Apart: Economic Segregation among Suburbs and Central Cities in Major Metropolitan Areas* Washington DC: Brookings Institution Living Cities Series
- Teddle C and Reynolds D (2000) *The International Handbook of School Effectiveness Research* New York: Falmer Press
- Thernstrom A and Thernstrom S (2003) *No Excuses: Closing the Racial Gap in Learning* New York: Simon and Schuster
- US Department of Education (2003) *Evaluation of the Magnet Schools Assistance Program, 1998 Grantees* Washington, DC: US Department of Education
- US Department of Education (2005) *Fiscal Year 2006 Budget Summary* Washington DC: US Department of Education
- US Department of Education, Office of the Under Secretary (2004) *Evaluation of the Public Charter Schools Program: Final Report* Washington, DC: US Department of Education
- WCPSS (2005) *Student Assignment Process* WCPSS website: www.wcpss.net
- WCPSS Evaluation and Research Department (2004) *Free and Reduced-Price Lunch Participation in the Wake*

- County Public School System 1993-2004 WCPSS E&R Report No. 04.02*
- Wells A (1993) *Time to Choose: America at the Crossroads of School Choice Policies* New York: Hill & Wang
- Wells A and Crain R (1994) 'Perpetuation Theory and the Long-term Effects of School Desegregation' *Review of Educational Research*, 64
- Wells A, Holme J, Lopez A and Wilson Cooper C (2000) 'Charter Schools and Racial and Social Class Segregation: Yet Another Sorting Machine?' in Kahlenberg R (ed) *A Notion at Risk* New York: Century Foundation Press
- Welner K and Oakes J (1996) '(Li)Ability Grouping: The New Susceptibility of School Tracking Systems to Legal Challenges' *Harvard Educational Review* 66
- West A (2006) 'School Choice, Equity and Social Justice: the Case for More Control' *British Journal of Educational Studies*, forthcoming
- West A, Ingram D and Hind A (forthcoming) "'Skimming the Cream": Admissions to Charter Schools in the US and Autonomous Schools in England' *Educational Policy*
- Wheelock A (1992) *Crossing the Tracks: How 'Untracking' can Save America's Schools* New York: New Press
- White M and Bueker C (2002) *The Impact of Immigration on Residential Segregation Revisited*. Paper presented to the American Sociological Association
- Whitty G (1997) 'Creating Quasi Markets in Education: A Review of Recent Research on Parental Choice and School Autonomy in Three Countries' *Review of Research in Education* 22
- Willie C and Alves M (1996) *Controlled Choice: A New Approach to Desegregated Education and School Improvement* Providence, RI: Education Alliance Press
- Wirt J, Choy S, Rooney P, Provasnik S, Sen A and Tobin R (2004) *The Condition of Education 2004* Washington, DC: US Department of Education, National Center for Education Statistics
- Witte J and Thorn C (1996) 'Who Chooses? Voucher and Interdistrict Choice Programs in Milwaukee' *American Journal of Education* 104
- Young B (2001) *Characteristics of the 100 Largest Public Elementary and Secondary School Districts in the United States: 1999-2000* Washington DC: U.S. Department of Education, National Center for Education Statistics
- Young B and Smith T (1997) *The Social Context of Education: Findings from the Condition of Education* Washington DC: National Center for Education Statistics
- Yu C and Taylor W (1997) *Difficult Choices: Do Magnet Schools Serve Children in Need?* Report of the Citizen's Commission on Civil Rights
- Ziebarth T (2004) *State Policies for Charter Schools Database* Washington DC: Education Commission of the States