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Francis Green, Jake Anders, Morag Henderson and Golo Henseke

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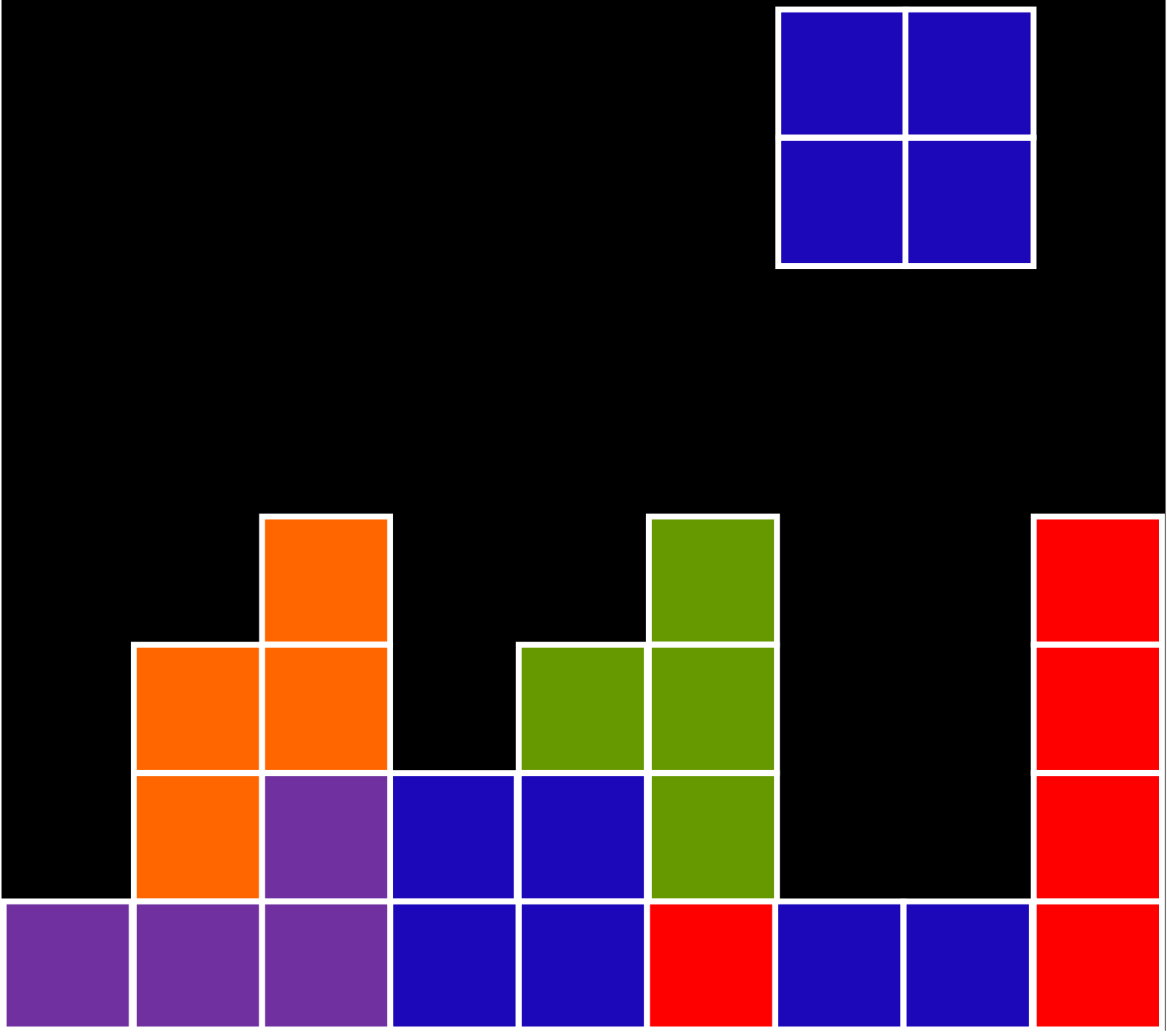

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Francis Green, Jake Anders, Morag Henderson and Golo Henseke

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ABSTRACT

Through their social exclusivity, private schools are held to have contributed negatively to social mobility among older generations educated in the 20th century. But with huge fee rises, increased income inequality, increased wealth-income ratios, fluctuating public and private means-tested support for fees, and a greater emphasis in public policy on school choice, there may have been changes in the distribution of participation in private schooling. This paper studies whether there has been a notable evolution over recent decades in the social and economic composition of the children who attend Britain's private schools. Where possible we have triangulated the description, using data from multiple surveys and aggregate information from censuses. Our main findings are as follows:

1.The proportion of school children from UK-resident families who are at private school has remained fairly constant and now stands close to 6 percent. About one in ten adults had been at private school at some point.

2. Private school fees have trebled in real terms since 1980. Despite rising incomes, the average fee for one child has risen from 20 percent to 50 percent of median income. For most, therefore, fees have become less affordable out of current income.

3. Participation in private school is concentrated at the very top of the family income distribution; however, even in the top five percent of the income distribution, only a minority attend private school – thus raising the salience of understanding parents' motives.

4. Leading motives for parents to choose private schooling are the wish for their children to gain better academic results through smaller class sizes and better facilities, and to mix with a preferred peer group. The peer group motive is masked by social desirability bias when using conventional survey methods, but is revealed through alternative methods.

5. We found no evidence that participation in private schooling has become less socially and economically exclusive in recent decades:

- *Both in the period 1994-2000, and in the period 2001-2016, just under half of private school families came from families in the top decile of the income distribution.*
- *Between 2004 and 2014, there was no change in the proportion of private school parents who belong to the managerial and professional classes.*
- *The cross-sectional income elasticity of participation is nearly zero across most of the income spectrum, but increases at very high incomes. At the 98th percentile it is estimated to be 2.1; in this sense, for the very rich private schooling is a luxury good. Conditional on income at this percentile, the wealth elasticity is estimated to be 0.57.*
- *There was no significant change in the pattern of intergenerational persistence of school-type between the periods 1996-2005 and 2006-2013.*

Keywords: social mobility, private education, independent school, school fees, Assisted Places Scheme, bursaries, peer group, inter-generational persistence.

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1. Introduction

For those who grew up in Britain in the latter half of the 20th century, there is known to be a strong association between social class or family income and attending a private school. Because there is also considerable evidence of a substantial effect of 20th century private schooling on educational attainments and on subsequent labour market outcomes, private schools are held to have contributed negatively to social mobility among these generations who are now in their mid or late careers (Sullivan and Heath, 2003; Feinstein and Symons, 1999; Dearden et al., 2002; Dearden et al., 2011; Sullivan et al., 2014; Green et al., 2011; McKnight, 2015). Since the start of the 1980s, however, the management of private schools has been modernised, the resources at their disposal have been transformed, and the external economic and social environment has been substantially altered through globalisation, the information technology revolution, de-industrialisation and growing inequality. At the same time, as education policy has evolved the prospect of school choice in the state sector has been increasingly promoted among parents (Gorard, 1999). These developments suggest that there may also have been changes in the distribution of participation in private schooling. This paper studies whether there has been a notable evolution since the 1980s in the social and economic composition of the children who attend Britain's private schools.

Evidence from among 21st century university graduates shows that private school participants continue to benefit from an economic premium in the labour market (Macmillan et al., 2015; Crawford and Vignoles, 2014; Crawford et al., 2016). The trends since the 1980s in the social and economic composition of private school participants have not, however, to our knowledge been investigated. While Walford (e.g. 1986; 2003) has closely studied the structure of the private school system over the years, as well as the experiences of private school pupils, deploying ethnographic methods, there are as yet no studies of the reasons why 21st century parents choose private schools, or of changing patterns of participation. While it is widely assumed that private schools continue to be associated with rich family resources, whether participation has become less or more exclusive than in the past has implications for private schools' effects on social mobility.

In Section 2 we consider the potential arguments, and some existing studies, about trends in the motives of parents who choose private schooling and in the social exclusivity of participation. Section 3 describes our data, and Section 4 presents some context and the salient aggregate facts surrounding participation in, and affordability of, Britain's private

schools. Section 5 presents some recent data about parents' motivations for choosing fee-paying schools, then Section 6 follows with our key findings surrounding the changing social and economic composition of private school attenders in recent decades. Section 7 concludes with a brief discussion on limits to the degree of openness achievable by private schools in the British system.

2. Potential Changes to the Exclusivity of British Private Schooling.

The close association between elite education and high social class pervades the writings of sociologists and ethnographers, especially those within a Bourdieusian tradition, with education seen as a 'structuring mechanism' for those from higher social classes to enhance and sustain their social and economic positions. In Britain, elite education has come to be largely, though not exclusively, located in autonomous, fee-paying, private schools (e.g. Maxwell and Aggleton, 2015; Forbes and Weiner, 2015; Walford, 1986).

Several factors could be expected to have had some impact on the pattern of participation over recent decades. The trebling of school fees (see below) would have considerably lowered the demand for private education among those whose income and wealth have not risen proportionately. The best estimate of price elasticity is around – 0.26 for 7-year-olds (Blundell et al., 2010) – relatively low, but enough to disrupt the market considerably when the price increases are so huge. Yet income – which, unsurprisingly, is also important (Dearden et al., 2011) – has also grown. Since income has also become more skewed towards the top end of its distribution since the 1980s (Jenkins, 2015), price increases will have impacted proportionately more on those below the top income groups; participation may therefore have become more socially exclusive over time – that is, more concentrated among those with top incomes.

On the other hand we might also expect a trend away from school trajectories based on class and family tradition, towards having them driven by the choice of rational agents. Where conscious choice is advanced, and a long-term orientation adopted, we could expect parents to select the school deemed to offer the best value in terms of educational achievements and later labour market outcomes, set against the costs of school fees compared with the cost of living in a neighbourhood with access to a good state school. Given capital constraints on borrowing to finance private education, the choice is affected by family wealth, whose association with current income can change, for example through house price inflation. School choice for parents was increasingly promoted in Britain, starting with the Thatcher

governments of the 1980s and continuing through the period of New Labour, under the assumption that competition and parental pressure would help to drive up academic standards (Ball, 2013). While any perceived improvements might have induced more to choose the state sector, an increased emphasis on choice among a wider proportion of the population could result in more opting to flee the sector, notwithstanding the high price of private schools. Thus, some have reported spreading disenchantment with the alternative of state education among groups that previously had not considered a private school, especially in the period of stagnant state expenditures in the 1980s and 1990s and before the reforms of state education that came with the early academies movement in the 2000s (Turner, 2015). The perception of relative improvement in the performance of London schools, on the other hand, could be expected to provide a regional offset to any flight to the private sector (Greaves et al., 2014).

If conscious choice, as opposed to family tradition, has become more important in the selection of private or public schooling, loosening somewhat the connection between family and private school, one might also expect to find a reduction in the intergenerational persistence of school-type. That family connection, however, is partly likely to reflect the continuity of family wealth. Aggregate personal wealth has risen from three times national income in the late 1970s to five times in 2010 (Atkinson, 2013). Between 1995 and 2005, relative wealth inequality fell in Britain, owing to house price inflation. Nevertheless, since personal wealth grew faster than income the absolute wealth gap between rich and poor households grew: Hills et al. (2013) estimate that the growth of wealth at the 90th percentile was £200,000, while at the median the growth was £73,000.

A policy explicitly designed to open up private schools to a wider group of children was the Assisted Places Scheme (APS), launched in 1981. The policy had been developed by the Conservative Party while in opposition, following the closure of Direct Grant schools in England and Wales and of grant-aided schools in Scotland, (Walford, 1988). Under APS private schools received state funding for educating pupils transferred from state schools, while retaining control over recruitment. It was intended that pupils should be mainly low-income, though in practice a preponderance of beneficiaries were from middle-class homes (Whitty et al., 1998; Power et al., 2009). When the scheme was closed in 1997 by the incoming Labour government, a subsequent growth of means-tested bursaries was set in train, later stoked by the requirements stipulated by interpretations of the Charities Act 2006.[1]

An additional phenomenon that might have disturbed the traditional distributional pattern of private school participation is educational globalisation, whose reach in recent decades has extended not only to higher education but to the elite school sector. With a rapid expansion of international schools around the world, there has been a reduction in demand for boarding school places from British ex-pats, especially those living in places that would in earlier times have had no schooling deemed adequate by the British upper class. This reduction is, however, set against a rising demand for English-medium high-quality private schooling from a growing class of foreign affluent families, especially from China and Russia. By 2016 more than 5 percent of private school pupils in Britain were non-British children whose parents lived abroad (Independent Schools Council (2016)).

With these disruptions pulling in different directions, it is not possible to predict whether the relationship between family income and private school participation would weaken or strengthen. Nor can we say whether or not the intergenerational persistence of school-type would have diminished over time. Moreover, families' motives for choosing private, despite the availability of free state education, are a complex mix of social and economic factors (Fox, 1985; Ball, 1997) which may alter over time, especially as the perceived value of academic outcomes expands, and the perceived contribution of a private education increases. Yet if the changes to the private schools' social class composition have been significant, and have altered the pattern of participation in the sector so that it has become less socially exclusive, it would call for a reconsideration of the role of private education in relation to social mobility. It is thus important to know whether private schools remain as dominated by richer families as they had been before the period of modernisation, and whether there have been other critical shifts in the pattern of participation.

Significant claims have indeed been made within the private sector that the demand for private schooling has developed a broader socio-economic base. It was asserted in 1994 that the proportion of private school applicants who were 'first time buyers' (families where neither parent had been privately educated) was rising.[2] Private schools are also said to have become more outward-looking, and are promoted as potential agents for raising social mobility. According to the Independent Schools Council, private schools' pupils are 'diverse and becoming increasingly so' (Independent Schools Council, 2015, p3). The claimed evidence of diversity is the presence of significant numbers of foreign pupils with parents living abroad (who provide 'a global perspective') and the fact that a quarter of new pupils come from state schools[3]; the evidence for *rising* diversity derives from the increasing

proportion of ethnic minority pupils in private schools, as happened in the rest of the population. The Scottish Council of Independent Schools (SCIS) proclaims that the children at its members' schools have a 'healthy and diverse mix of backgrounds' 'making for a vibrant and modern community that mirrors the real world'[4]; while in 2016 the former chairman of the Headmaster's and Headmistresses' Conference and of the Independent Association of Prep Schools wrote to the Times with the assertion that 'There are more families with children benefitting from independent education in the 'squeezed middle' income range than from the fabulously rich: aunts, uncles and grandparents as well as working spouses all contribute to the fees of many pupils. There are in these schools many children of families with incomes below the national average ..... '[5].

The Independent Schools Council also reports that more than five thousand pupils across the UK are on full bursaries. Although this number represents just one percent of private school pupils, it is also commonly maintained that private schools are being opened up through schools' bursary programmes.[6] Successive British governments, moreover, have urged that these programmes be scaled up along with further sponsorship of state schools, as part of a social bargain that allows the private schools to maintain their charitable status and the associated tax benefits. The 2010-15 Coalition government, for example, proclaimed 'We want all high performing schools – both state and independent – to play their part in promoting social mobility' (HM Government, 2011, p38).

Yet the tensions that emerged following the Charities *A*ct of 2006 showed that there are limits to the extent to which (especially smaller) schools would be able to find the resources, whether from donors or through cross-subsidisation from other parents) for a large-scale bursaries programme (Wilde et al., 2016). A portion of existing bursaries are a form of discounting, which profitably brings in marginal buyers (or holds on to children of parents who become unexpectedly financially distressed). Private schools are able to interpret their 'public benefit' obligations under the Act much more broadly than providing bursaries, emphasising 'partnerships' with state schools rather than enrolment of the less affluent. And some writers have maintained that educational segregation by social class matters less than in the past. The schools are held to have developed an effective political and civic education, enabling children to develop an understanding about how other sections of society live; it is also believed by some private school heads that they are effective in inculcating a charitable orientation in their children (Turner, 2015; Wilde et al., 2016).

These claims and aspirations for a more socially open participation in private schools are rarely heard beyond the sector itself, and should properly be evaluated. Each bursary for a genuinely low-income/low-wealth family self-evidently permits access to a private school that would otherwise not be affordable. Yet it will be far from clear whether either the scale of such bursaries (which we detail below) or the other noted social changes have been sufficient to alter significantly the socio-economic pattern of participation in the aggregate. Whether the motivations to participate in private schooling have changed, and whether the social composition has broadened or narrowed, are, therefore, empirical issues that remain to be settled.

Prior Evidence

With respect to motivations, earlier studies using survey methods have attempted to identify parents' motives for choosing private schooling and their perceptions about the advantages that they are getting in return for their school fees. The Public Schools Commission under the Wilson government, for example, tasked with finding ways to integrate both independent day schools and Direct Grant schools into the newly emerging state sector comprised of predominantly comprehensive schools with no academic selection, sponsored some primary research on parents' motives (Donnison, 1970). The main reasons advanced were family tradition, loyalty to particular schools and a belief that the private school they had chosen offered a better education. This belief was based on the presumed advantages of having lower class sizes and better facilities, on private schools' better teaching and stronger discipline, and on their reputation for helping children towards good careers or universities. Some parents also valued the option of a different social emphasis from what was available in state schools, including the 'character', values and religious dispositions they wished their children to experience.

Estimates of how prevalent each of these perceived motivations were at that time were not provided. In 1978, however, Fox (1985) collected views from a representative sample of British-resident parents of 190 boys attending prestigious private schools – selected from the Headmasters' Conference (Public) Schools. Through semi-structured interviews, Fox found that parents reported a multiplicity of reasons for choosing private education. Family tradition was a significant factor for only 9 percent of parents, with some relating that they had never even contemplated using the state sector of education. The most frequently stated motive for choosing a private education – mentioned by 52 percent of the parents – was to gain better academic results. They expected to achieve these through having 'better teachers or methods'

(40 percent), and smaller schools and class sizes (34 percent); only some (13 percent) anticipated beneficial peer effects from other children 'who want to learn', while fewer (8 percent) thought they were getting better facilities. Yet Fox argued that stated academic motives also served to legitimate other motives, and indeed nearly as many parents (48 percent) expressed belief in the character and discipline training provided by the schools. Some 26 percent of parents held that the private schools developed 'confidence and/or independence'. This range of views and motivations was found to be quite similar among parents from differing social backgrounds.

Strikingly, 27 percent of Fox's sample of parents had chosen private schooling because they wanted their children to 'mix with a better type of child' (ibid. 157). Another 18 percent of parents wanted teachers to 'polish' their children. These preferences seemed, from Fox's interviews, to reflect parents' concerns that their sons should grow up with a refined social demeanour, including accent and behaviour. Parents were anxious about their sons' friends, and wanted their children to associate 'with their own type' for fear of being drawn down the social hierarchy, despite some admitting to themselves that this would mean meeting 'too narrow a range of people' (ibid. 157). Interestingly, such concerns mirror contemporary research in the US that was emphasising the important of schools' social systems and the social capital associated with them (e.g. Coleman, 1988).

Occasionally a polling company (IPSOS MORI and its predecessors) has since surveyed parents of some private school children (accessed through schools) on behalf of the Independent Schools Information Service.[7] Typical findings are that the parents said they had chosen private schools for their class sizes, discipline and good quality teachers. Usually about half had considered state education. No in-depth analyses are provided by such polls, and none looked behind the figures at more fundamental motives. West et al. (1998), however, did just that in their analyses of private school choice among a selection of parents in London in the mid-1990s. They found that concerns for a child's happiness carried very different meanings among people from high and low social class backgrounds, and that a desire for a quality education would include a concern, sometimes explicit sometimes tacit, that the peer group in which their children would mix would have the required values and aspirations.

Meanwhile, Ball's interviews in the early 1990s with a selection of parents who had considered both state and private education revealed a complex mix of motivations, and choice processes, again including a powerful effect of a schools' composition on its

desirability (Ball, 1997). This study also found some parents for whom private school was a feasible choice, who were choosing state schools on principle because they were ideologically opposed to private education, or because they valued a broader social mix. In a subsequent study across south-east England Foskett and Hemsley-Brown (2003) found that associating with the 'right sort' of children was especially important for one in four private school parents and of some significance for almost all. They detected Veblen effects (also known as 'conspicuous consumption' motives) and the influence of social norms in school choice, and observed post-hoc and 'conscience-salving' justifications of private-school choice, all adding reasons for care in interpreting direct survey data on school choice motivations. All these studies also emphasised how private school parents were more likely than state school parents to take a conscious, long-term attitude to school choice, and to have started thinking about it substantially earlier in their children's lives, if only because it required long-term financial planning.

In light of the transformations of private schools and in education more generally in subsequent decades, it could be expected that academic motivations were becoming more important among late 20th century parents selecting the private route. With an ever-greater importance attached to university entrance, as opposed to a direct transition into work, and especially to high-ranking universities, academic credentials could have been expected to be valued yet more highly as a means to sustain and increase socio-economic status and income. Unfortunately the evidence is not good enough to determine whether this was the case. If anything the above-cited studies from the 1990s suggest continuity, rather than change, in the types of parents' motivations since the time of Fox's study in the late 1970s. However, whether some motivations became more, or less, prevalent is impossible to gauge from small-scale unrepresentative samples. And there are no subsequent published studies of parents' motivations in the 21st century.

We also know little about the recent trend in the social composition of private school attenders. For the earlier period between the birth cohort of 1958 and that of 1970, Green et al. (2011) report that there was no significant change in the demographic characteristics of the parents and children who attended private school at age 11, with the children of richer families much more likely to attend in both 1969 and 1981. For the 1990s and 2000s, using data from the British Household Panel Study Dearden et al. (2011) estimated a quadratic relationship between income and the probability of private school attendance, whereby the marginal effect of income is small for low incomes but strongly positive at higher income

levels; they also report a degree of intergenerational persistence of school-type. However, they did not study whether these effects had altered over time. Evans and Tilley (2007) also report evidence of intergenerational persistence, namely that 43 percent of the privately educated parent respondents to the British Social Attitudes Survey had one or more of their children to private school, compared with 9 percent of parents educated at state schools.[8]

Below we contribute some new evidence, studying hitherto unexamined 21st century data on parents' motivations for private school choice. We then document trends in the pattern of participation in private schooling, in relation to household income, social class and parental school-type. We address the following specific research questions:

- What reasons do 21st century parents give for choosing private schooling?
- Have the class and family income backgrounds of private school pupils changed since the 1980s?
- Has there been a rise or fall in the proportion of 'first-time' families – with a weakening or strengthening intergenerational link between parents' and children's school-type?

3. Data

We deploy both high quality nationally representative survey data and some official administrative data. The Living Costs and Food Survey (LCFS) is a series of cross-sectional random probability survey of households in Britain that have been collected annually since 2008 by the Office for National Statistics. LCFS collects information on household composition, spending patterns, costs of living and available resources. As part of the household grid it gathers data on school-type for household members who participate in full-time education programmes. Much of its content continues modules and items from long-running predecessors: the Family and Expenditure Survey and the National Food Survey (1957-2001) and the Expenditure and Food Survey (2002-2007). In combination these surveys can trace the history of private school participation of school-aged children up to the present. We deploy these surveys to estimate changes in the association of private school participation with household income over time. More information on the survey is found at: https://discover.ukdataservice.ac.uk/series/?sn=2000028.

We are able to triangulate some of our analyses with the LCFS using data from the Family Resources Survey (FRS). The FRS is an ongoing series of repeated cross-sectional

probability surveys of the private household population in Britain. Since 1994/95, it has collected detailed annual information on household composition, economic activity, income and capital formation from approximately 25,000 households up until 2010 and a sample of around 20,000 respondent households thereafter. The Department for Work and Pensions (DWP) cleans and processes the raw data further to prepare, among others, the Households Below Average Income reports (HBAI). As part of HBAI, DWP re-weights (using weights calibrated from the Survey of Personal Incomes) and imputes the income of very rich households to account for under-representation and item non-response among this group (Burkhauser et al., 2017). Deploying this adjusted data may thus portray with greater accuracy the association between income and children's private school attendance. More information on FRS and HBAI are found on the websites of DWP.[9]

The British Social Attitudes Survey (BSAS) is an annual cross-section survey, representative of individuals aged 18 and above in Britain, carried out since 1983. It collects data on attitudes about a range of topics and several background variables including the education of members of the respondents' family. Whether each of the respondents, and the respondents' children have ever attended a private school was regularly asked in a consistent way between 1996 and 2013 (though not in 1997). Details of the survey can be found at Natcen: http://www.bsa.natcen.ac.uk/.

Next Steps is a longitudinal survey, begun in 2004, of a cohort of 15,770 children born in England in 1989-90. It includes data on education, as well as details on economic, employment, and family life data, health and well-being, attitudes and social participation. We use information from the first wave, including the data on whether the children attended a private school at the time of the survey (i.e. when aged 13/14), and if so the reasons for so choosing. The Millennium Cohort Study (MCS) is a survey of a cohort of nearly 19,000 children born in 2000/2001 and their families. There are six waves of the survey so far, and we use the age 14 survey, in which parents of children attending private school were asked about their motivations for their choice; we also take information from two earlier waves. Survey details for both Next Steps and MCS are available from the Centre for Longitudinal Studies at http://www.cls.ioe.ac.uk.

We also use data from the British Household Panel Study (BHPS). BHPS was a long-running household panel survey of members of British private households. It launched in 1991 and collected annual detailed individual-level information on life histories, socio-economic

circumstances and trajectories from initially around 10,000 individuals until 2008. More details are found at https://www.iser.essex.ac.uk/bhps.

We also draw on official schools data from each nation's education department. Finally, we use the annual census of the Independent Schools Commission (ISC), which covers all schools in the UK that belong to the ISC's constituent associations. About 4 in every 5 children at a private school are at an ISC school. In 2016 there were 1,280 such schools. Further details at https://www.isc.co.uk/research/annual-census/isc-annual-census-2016/.

4. Aggregate Context: Participation And Price.

Before addressing our research questions, we first collect together a descriptive picture of the salient aggregate facts surrounding participation in, and the price of, private schools in the UK.

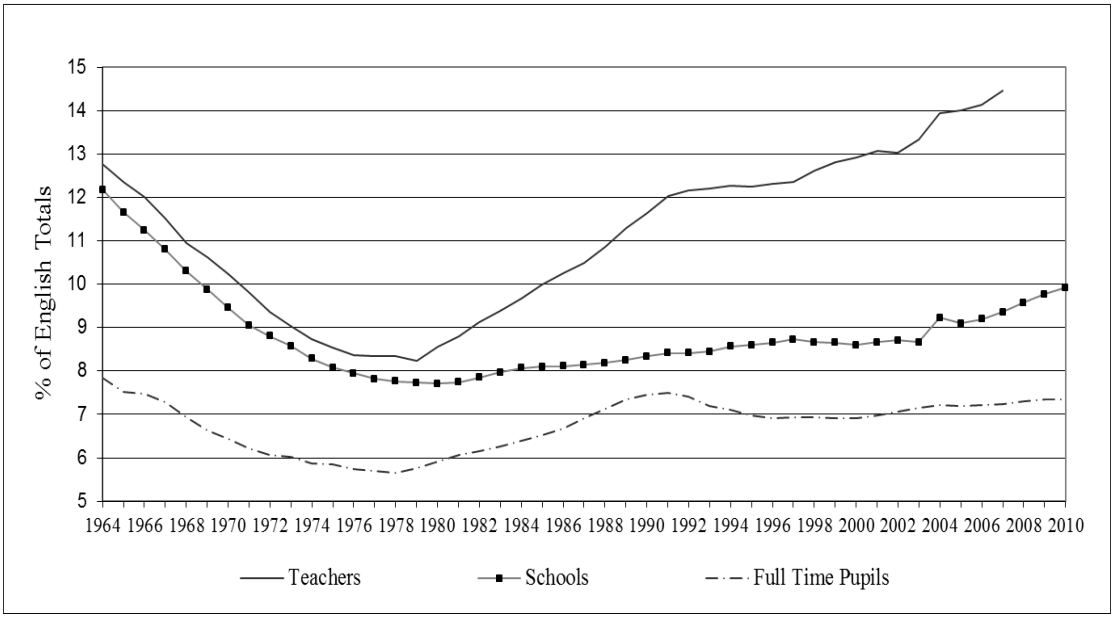
Participation.

British private schools are disproportionately concentrated in England. Figure 1a, which is reproduced from Green et al., (2011), shows the historical trend for the private school sector in England. Its share of pupils, schools and teachers reached a low ebb in the late 1970s, and thereafter until the end of the 2000s we see a slowly rising proportion of schools that were private, and a more rapidly rising share of England's teachers working in private schools. The share of pupils also rose from its low point in 1978, but after just a one percentage point rise through the 1980s it stabilised thereafter at close to 7 percent.

Figure 1b takes up the participation story from 2000 virtually to the present day. From 2000 until 2012, the number of private schools in England increased by 11 percent, and the proportion in relation to all schools also rose by 1½ percentage points, so that one in ten schools was private. Thereafter the numbers fell slightly, and in 2016 there were 2,311 private schools across England (including among them 436 'special schools' that cater for children with special needs usually in very small classes and typically receiving state support). On the whole the sector has been stable, with relatively few closures and start-ups. In the decade since 2006, 178 private schools closed; these were small schools with an average capacity of just 68, often special schools; in the same period 308 schools opened, with an average capacity of 60, more than half of whom were special schools.[10] Also steady is the proportion of all school pupils in private schools, which has remained at its historical average of at or just below 7 percent.

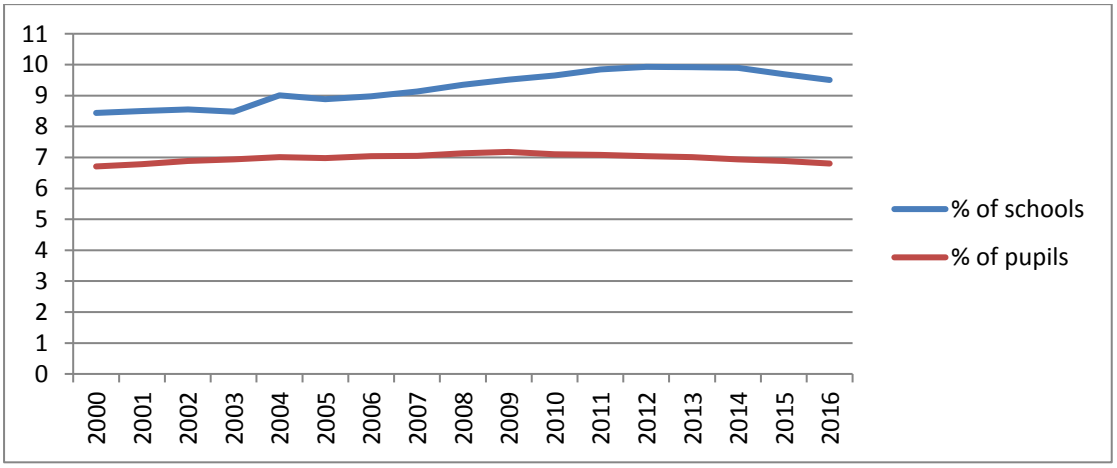
This stability in the recent decade is, however, a little misleading in respect of private school participation by pupils with families resident in Britain, since the schools census numbers also include foreign pupils, whose numbers have been rising in the last decade. There were 47,385 foreign pupils in the UK-wide 2016 ISC Census, mostly in England, of whom roughly 58 percent were from families living abroad. A simple adjustment suggests that the participation in private schools by pupils from families resident in England is about half a percentage point lower, i.e. 6.3 percent.[11]

Figure 1a Share of Private Schools, Pupils and Teachers in England, 1964-2010.



Source: Green et al., (2011).

Figure 1b Share of Private Schools and Pupils in England in the 21st Century



Source: School Census (state schools) and School Level Annual School Census (independent schools); see https://www.gov.uk/government/statistics/schools-pupils-and-their-characteristics-january-2016.

Participation varies considerably over the age of children (Table 1). The biggest jump occurs at age 16, when some state school pupils switch to private school sixth forms, while others leave the school system altogether. One in five schools is for single-sex only, while as many as 24 percent still take boarding pupils, compared with very few state schools (see Table 2). In earlier decades both boarding schools and single-sex schools were more prominent. England's private schools are disproportionately concentrated in London and in the South East region. They are also concentrated within London, where in some boroughs – Richmond-Upon-Thames, Camden and Westminster – more than three in ten schools are independent.

While some famous private schools, such as Fettes College and Merchiston Castle, are to be found in Scotland, on the whole private school participation north of the border is notably lower. Though participation grew a little during the 2000s, it reached just 4.3 percent in 2009, when there were 159 private schools (primary, secondary and special).[12] As in England, private school education is concentrated in the capital: a fifth of Scotland's private schools (taking a third of Scotland's private school pupils) are situated in Edinburgh. Most teach to an English exam system, and one in ten Scottish private school pupils are boarders. In Wales, private school participation is even lower: there were just 69 private schools in 2017, comprising 4 percent of all schools and educating 2.0 percent of the children.[13] In Northern Ireland, there are just 14 private schools.[14]

Looking at the UK as a whole, the proportion of children of UK-resident families participating in private education is approximately 5.8 percent -- rather lower, in other words, than the 7 percent figure that is commonly used in public discourse.

Table 1 Participation by Pupil Demographic Group (England)

	% private in each group
Gender	
Male	6.8
Female	6.8
Age group	
Under 5	6.1
5 to 10	5.0
11 to 15	7.6

Over 16	17.3
ALL	6.9

Source: DfE data base and authors' calculations. https://www.gov.uk/government/statistics/schools-pupils-and-their-characteristics-january-2016.

Table 2 School Characteristics in 2016 (England)

	Private	State
Median size (no. of pupils)	153	249
Region (%)		
East Midlands	6.7	9.4
East of England	10.1	11.7
London	23.8	11.7
North East	1.8	5.3
North West	10.5	14.6
South East	22.9	15.4
South West	9.2	10.7
West Midlands	9.0	11.0
Yorkshire and the Humber	6.0	10.3
% rural	26.3	25.1
% takes boarders	24.0	0.8
% with affiliation to a religion	21.7	31.0
% single-sex	20.0	2.0

Source: DfE data base, authors' calculations. https://www.gov.uk/government/statistics/schools-pupils-and-their-characteristics-january-2016. Note: other demographic information, e.g. on ethnicity, is not available for private schools from the census.

The Dynamics Of Private School Participation Through Childhood.

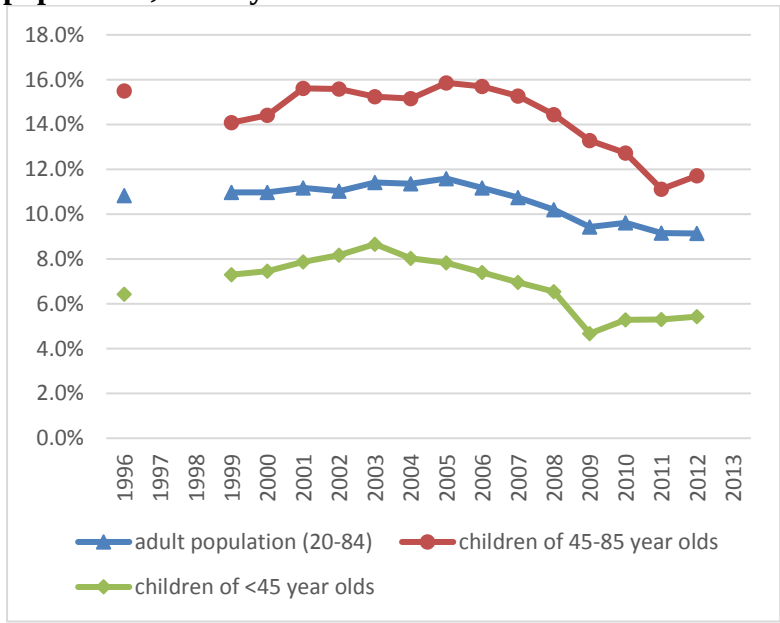
Participation also varies considerably across age groups and between certain socio-economic groups (see Table 1): it is much higher among older children, and among children living in London and the South East. The former arises because participation is dynamic through the course of a child's education. Many children change school-type in the course of their schooling, with the key decision points coming at ages 7, 11, 13 and 16. The predominant switch is from state to private sector. Of those MCS cohort members being educated at private school at age 14, 36 percent had earlier been at a state primary school, while just 1 percent of 14-year old state school children had come over from prep school to state secondary school.

As a consequence of these switches during the school career, the proportion of adults who have been educated privately at some point in their childhood is higher than the proportion of

school children in private schools at any one time. The blue line (with triangle markers) in Figure 2 displays the proportion of adults in Britain who had ever attended private school, derived from the BSAS data. It is relatively stable at around 11 percent until 2007, when it drops to around 10 percent and below towards the end of the observation window.

Table 3 (first panel) shows a simple regression of ever-participated against year, and the raw figures (Column 1) confirm that the slight downward trend is statistically significant. It is possible that this shift, which contrasts with the stability of the aggregate participation rate, could have arisen from changes in the dynamics of participation among later cohorts, and/or from changing social composition of the population. Here the survey data allows us to control for respondents' demographic characteristics (ethnicity, age, sex, religion and region of residence). The second column shows that, once these controls are added, there is no significant downward trend.

Figure 2: Trends in ever-participated in private education in the adult British population, 20-85 years.



Source: British Social Attitudes Survey, authors' analysis.
Note: The questions asked to respondents were: 'Have you ever attended a fee-paying, **private** primary or secondary school in the United Kingdom?'; and 'And (have any of your children / has your child) ever attended a fee-paying, **private** primary or secondary school in the United Kingdom?'. Nursery schools were not included. From 1999 these are 3-year moving averages; but there is no information on private school attendance in 1997.

Table 3: Trends in the Proportion Ever-Participated in Private Schooling

	(1) Raw	(2) Demographics	(3) Socio-Economic
Panel I	Ever-participated in private secondary school, ages 20-84		
Average	-0.000991**	-0.000598	
annual change	(0.000)	(0.000)	
N	49061	49061	
Panel II	At least one child ever-participated – adults 45-84		
Average	-0.00116*	-0.000910	-0.00351***
annual change	(0.001)	(0.001)	(0.001)
N	21967	21967	21936
Panel III	At least one child ever-participated – adults <45		
Average	-0.00120*	-0.00137*	-0.00229***
annual change	(0.001)	(0.001)	(0.001)
N	11285	11285	11259

Source BSAS.

Note: The estimates are the derived average annual change in the probability of private school participation, resulting from logit estimation of individual past private school attendance (panel I) or private school experience of their children (panels II and III) on year. The first column displays the raw change, Column (2) adjusts for age, sex, and ethnicity, region of residence and religion of the respondent. Column (3) adds respondents' age when leaving full-time education and the concurrent socio-economic group (High Status, Intermediate, Routine and manual, jobless, other). All estimations deploy the individual-level survey weights. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Participation can vary within families too, with some children attending private schools at some point while others attend only state schools. The red line (circle markers) in Figure 2 displays the proportion of respondents aged 45-85 who state that *any* of their children had ever attended private secondary education. Over the whole period an average 14.8 percent of these respondents stated that at least one of their children was at some point enrolled in private education. The proportion has fallen in recent years after a peak of 15.9 percent around 2005, though estimates are imprecise. The green line (diamond markers) displays the same metric for younger respondents under the age of 45, many of whose children will still be in school. Among these respondents around 7 percent report that at least one of their children has ever attended private school, and again there may be a downward trend towards the end of the observation window. The time series peaks in 2003 at 8.7 percent and declines subsequently.

Common to all three series is the slight downward trend since approximately the mid 2000s, contrasting with the stability of the participation rate shown by official data. The rising proportion of foreign students partly accounts for this discrepancy. Further possible reasons

are changes in the intra-household distribution of private school participation, or in the proportion of each child's school years spent in private education.

Table 4: Breakdown of private school attendance in family with multiple children in the age bracket 5-15

PRIVATE SCHOOL ATTENDANCE	NONE	SOME	ALL
PANEL 1: PERIOD			
1994-2003	0.953 (0.001)	0.016 (0.001)	0.031 (0.001)
2004-2015	0.941 (0.002)	0.022 (0.001)	0.036 (0.001)
PANEL 2: GENDER COMPOSITION			
BOYS	0.949 (0.002)	0.016 (0.001)	0.035 (0.002)
MIXED	0.947 (0.002)	0.021 (0.001)	0.032 (0.001)
GIRLS	0.946 (0.002)	0.017 (0.001)	0.037 (0.002)
PANEL 3: AGE COMPOSITION			
PRIMARY SCHOOL AGE	0.956 (0.002)	0.007 (0.001)	0.037 (0.002)
MIXED	0.946 (0.002)	0.027 (0.001)	0.027 (0.001)
SECONDARY SCHOOL AGE	0.937 (0.003)	0.019 (0.001)	0.044 (0.002)

Source: FRS/ HBAI 1994-2015/16. Base: UK Families in private households with more than one child aged 5-15 years.

Intra-household Variation.

The intra-household distribution of private school participation is shown in Table 4. Among households with multiple school-age children, few send any to private school, but of those that do a substantial minority were splitting their children between the private and public sector. Households where all children are of the same sex tend to favour equity in private school participation more strongly than households with boys and girls (Panel 2). The differences are small, however. Panel 3 suggests that mixing of school sectors within households may partly be explained by the age of composition of children. Choices are more uniform in households where either all children are of primary school age or of secondary school age, whereas sector mixing dominates in households where some but not all children have reached secondary school age.

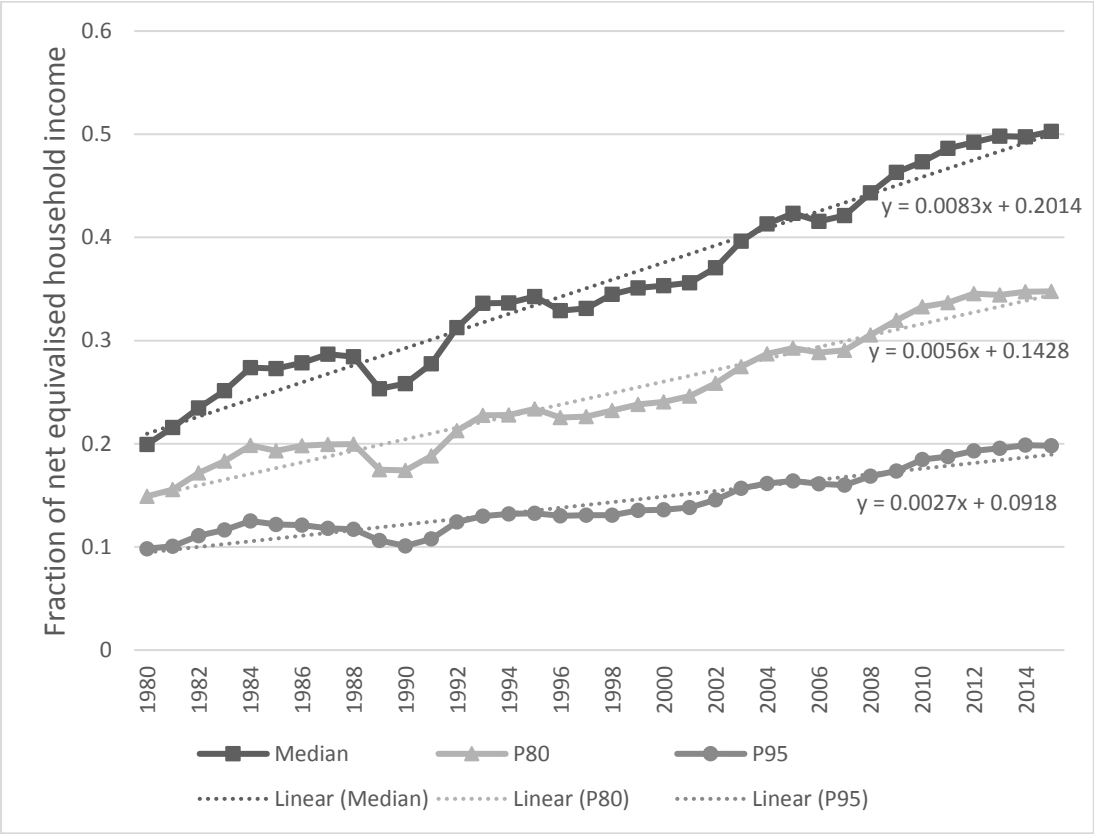
Intriguing questions are raised by this description. Are some parents motivated by equity considerations when they send either all or none of their children to private school? If, for some parents, sector mixing is considered acceptable, do they discriminate in favour of their boys or on the basis of birth-order? Is sector-mixing more likely in larger families? An investigation of these patterns and of the factors underpinning the decision for children to switch at the transition from primary to secondary school between the state and the private sector awaits future research, and is for now beyond the intended scope of this paper. For now, the main point to note is that some families are economising on private education. A likely reason is the high fees – to which we now turn.

Fees And Affordability

In striking contrast to the stability in the overall participation rate for private schooling, its 'affordability' – as indicated by fees relative to income – has undergone a radical change over the period.[15] The average annual fee in 2016 was £16,119, but within this there is much variation between day and boarding schools, and between senior and junior schools. Fees have been rising above the general inflation rate in almost all years. Within senior schools, for example, the average 2016 boarding school fee was £30,651, which compares with the 1980 average fee of approximately £10,622 (in 2016 prices)[16]; in junior schools, the 2016 average fee for day pupils was £12,234, compared with the 1980 fee of £4,002. In both cases we see an approximate trebling of fees over these 36 years.[17]

Despite real income increases these fee hikes translated into very significant falls in affordability relative to income (Figure 3). Even for those at or above the 95th income percentile, between 1980 and 2016 the average fees for one child have risen from 10 percent of income to 20 percent of income. For someone with just a median income the challenge to affording the fee has risen even more, with the fee/income ratio rising from 20 percent to 50 percent. Even though fees also vary between schools the figure suggests that, for many children, the expense would have to have been met from sources other than just current income, such as personal wealth or gifts from relatives (typically grandparents).

Figure 3: The Affordability of Private Schools for Households at the Median, 80th Percentile and 95th Percentile of Net Equivalised Household Income.



Source: Independent Schools Council (ISC) Census 1980, 1984-2015; IMF-Report 'Living standards, poverty and inequality in the UK: 2016'. Incomes are measured net of direct taxes and inclusive of state benefits and credits. Expressed as the equivalent for a childless couple using the modified OECD equivalent scale.
Notes: interpolated day school fee values in 1981, 1982, 1983, 1985 assuming exponential growth process. The ISC census (and its predecessors) covers the large majority of, though not all, private schools in the UK.

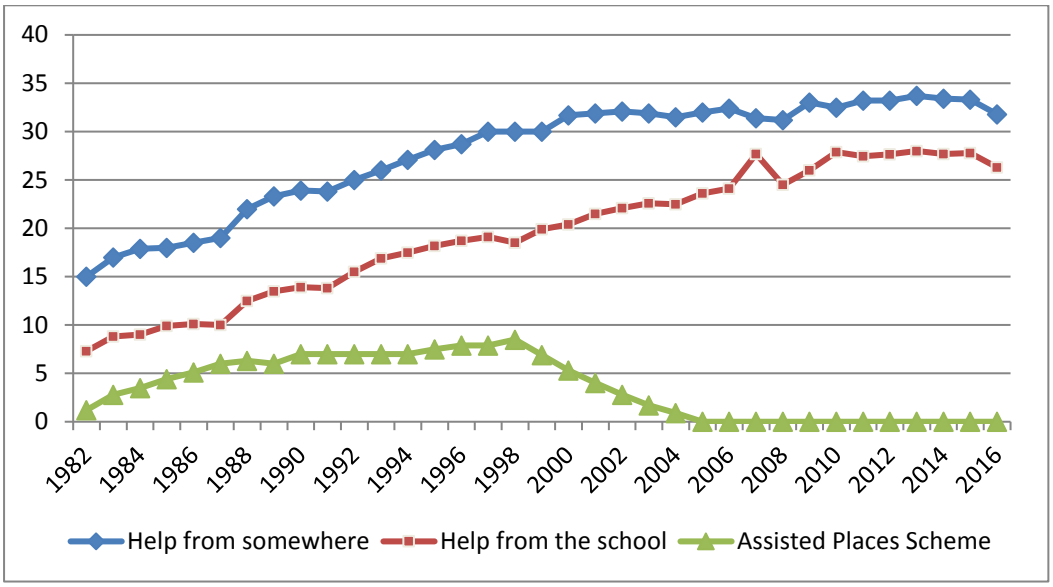
Potentially ameliorating this trend of decreasing affordability, however, the period has also seen an increase in the proportion of private school pupils whose families do not pay the nominal school fees in full (Figure 4). Even in 1982, 7 percent of pupils received some support from the schools; typical recipients were the children of HM Forces overseas, the children of clergy, or others in receipt of scholarships. This proportion rose to 28 percent in 2008, and since then the parents of somewhat over one in four children have been receiving fee reductions from the school.

Meanwhile others with special needs received help from local authorities or other sources. On top of this, the Assisted Places Scheme (APS) was expanding from the early 1980s. In 1998 at its height, at the point of its abolition, some 40,000 pupils – 8.5 percent of all private

school pupils – were in the scheme. With no new subsequent entrants, the scheme had all but ceased by 2005, but the substituted rise in help from schools meant that, in total, from the turn of the new century a steady third of children were receiving help with school fees from one source or another. From the perspective of affordability and social inclusion in recent years, it is means-tested bursaries (partial and full) that are likely to matter, and these reached 8 percent of pupils by 2014. The extent to which the affordability trend is ameliorated in aggregate by these bursaries is, however, very limited in practice. For the years from 2010 onwards, the average fee relief was a little over a half the average school fee, remaining steady at this level. Bursaries thereby amounted to just 4 percent of total fee income, among schools covered by the ISC.[18]

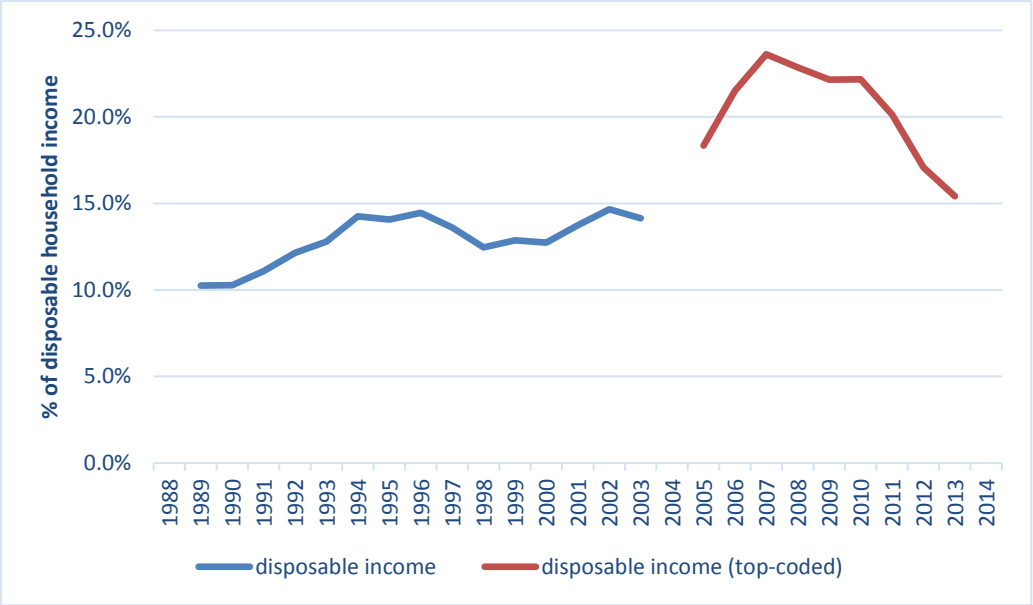
With declining affordability, even for those in the top 5 percent of income band, one might expect that families that choose to send their children to private school would have to be spending an increasing proportion of their incomes on school fees, and therefore making increasing savings in other areas or drawing more on their wealth. To study this, Figure 5 shows actual expenditure on school fees in relation to incomes for a period covering mainly the 1990s.[19] The figure reveals something of an increase, as expected, in the first part of the 1990s from just over 10 percent to nearly 15 percent of income. Thereafter until 2003 the share hovers in the range of 12 percent to 15 percent, with no ongoing rise. At this point there is a break in the series, since top incomes were placed in a single band. For the next decade, the share rises initially then falls. Taking the two series together, then, there is no evidence for a trend towards families who do choose private schooling having to spend an increased proportion of their income on this item. Thus it appears that, among families choosing private education, the incomes of private school families may have kept pace with their expenditures on private schooling. Yet while it is true that incomes have risen fastest at the very top of the income distribution (where private school families are concentrated), given potential errors in fees measures arising from differences in the period covered by school fee payments (see footnote 18) we urge caution in over-interpreting this finding from Figure 5 until corroborating evidence is forthcoming.

Figure 4 Proportion of Pupils Helped with School Fees (%)



Source: Independent Schools Census, all years. Authors' calculations.
Note: The census of the ISC (and its predecessors) covers the large majority of, though not all, private schools in Britain.

Figure 5: Average expenditure by private school households on school fees as percent of disposable household income (three year moving averages).



Households with at least one child aged 5-15 years at private school
Source: FES 1993-2001, LCFS 2002-2014.

The salient aggregate features of the private school system over the previous several decades may thus be summed up as follows: a low but reasonably stable participation rate which now stands at 6 percent if we extract foreign pupils from the calculation; a certain amount of dynamic change through childhood, with net switching to the private sector at the start of secondary school and at sixth form; a changing intra-household variation in participation, with fewer multi-children households sending some but not all to private school; a huge increase in the price of access for the large majority of private school participants, and limited fee relief for poorer households; hence an increase in the devotion of private resources other than current income to school fees. Against this backdrop, we now address the questions posed above about how participation in private schools has changed over the long term.

5. What Do 21st Century Parents Report As Their Reasons For Choosing Private Education?

Before turning to evidence about the characteristics of parents who select private schooling, it is informative first to examine critically the recent direct evidence from parents themselves about their own motives. Considering the increasing difficulty of affording private schooling for many, it is a natural question to ask: why do some parents nevertheless pay for private schooling for some or all of their children's school careers? Are there any signs that academic motivations have come more to the fore than in the time of Fox's study in the late 1970s?

Twenty-first 21st century motivations for private school choice have been collected as part of the Next Steps survey. The parents of sampled children were asked in wave 1 (when the children were 13/14 in 2003/4) why they had chosen an independent school. They were offered several choices, coded as 'Young person's friends were going there', 'School has good exam results', 'There is relatively little bullying at the school', 'It's easy to get to', 'Religious grounds' , 'Brother/Sister goes or went there', 'It takes the pupils from the school he/she was at before', 'Mother/Father went there', 'Other relative went there'. They could also add further responses which were later coded into categories. Respondents gave an average of approximately two reasons/motivations. The data thereby comprise a large number of coded reasons for choosing private. Table 5 groups these into four broad areas: academic quality, religious/cultural, social relationships in the school, and family connections to private schooling.

Table 5: Parents' Motivations for Choosing Private Schooling, 2003/2004

(% of respondents)

Academic quality	62.6
Religious or cultural	8.2
Social relationships in school	16.9
Connections to school	31.2
General Quality	68.0

Source: Next Steps, authors' analysis. Weighted by design weights. n=497.
Academic quality: any of 'the school has good exam results', 'suited to academic needs', 'strength in particular specialisms', 'broad curriculum or wide choice of subjects or options', 'small classes', 'competent teachers'. *Religious or cultural*: either 'on religious grounds' or 'respects child's cultural or ethical origins'. *Social relationships*: any of 'relatively little bullying', 'firm discipline', 'strict uniform or dress', 'child will be happy there', 'caring staff'. *Connections to school* : connections from child's friends, family members' private school attendance, came from feeder school, or parent is teacher at school. *General Quality*: academic quality (as above) plus any of: 'good reputation/high recommendation', 'best in area'.

The data show that, by the 21st century, the desire for high academic quality, as the prime motivation for choosing private schooling, had become quite explicit for at least 63 percent of the parents, and as many as two thirds if one includes more vague references to 'good reputation' and 'best in area'. Given the different methodology one cannot be sure that this indicates an increase over the sample interviewed in depth by Fox in the late 1970s, which in any case only covered the boys' schools belonging to the Headmaster's Conference. Nevertheless, the dominance of academic quality motives is consistent with the view that in the decades since the 1970s academic success had come to be seen as especially important for labour market success.

There also remain other significant reasons for choosing private schooling: social reasons are cited by one in six parents, religious and cultural reasons by one in twelve. These other reasons are not alternatives to the academic motivations: neither giving a social reason, nor giving a religious reason makes a parent less likely to have also given an academic quality reason.

Yet what is most remarkable in this modern data are the absences. There is no mention of non-academic outcomes such as confidence, 'character' or leadership, or any of the other qualities that are sometimes put forward in both public and academic discourse as the province of private schooling (Green et al., 2017). Nor is there much mention of sporting and

artistic outcomes, or of the relevant facilities and extra-curricular staff that facilitate these. Only 4 percent of parents mentioned facilities including sports, or the range of activities and hobbies available in the school. While these motivations may have been tacit, hidden behind some of the responses focusing on family connections, there is something of a disjuncture between the parents' *stated* motivations and the intensity with which sporting and artistic prowess, or the proclaimed 'character' building aims of private schools are often promoted.

Also missing from the responses is any reference to the social composition of the student body in private schools, which had also been prominent in Fox's interviews in the 1970s, and in those of Ball (1997) and of Foskett and Hemsley-Brown (2003) in the 1990s. This motive was not offered explicitly in Next Steps' response frame, though could have been stated among the many additional open verbatim responses. This absence cannot, however, be taken as evidence of its irrelevance in the 21st century. Motivation data collected in this way – with answers given direct to interviewers, and with no opportunity for prompting and probing as could occur in a semi-structured interview – are likely to be especially open to severe social esteem bias. It seems likely that this bias would lower the propensity of respondents to report that the social composition was important. When evidence is collected in alternative ways, other than as a tick-box exercise in a survey interview, the social composition of a schools' children is found to be a strong determinant of parental choice. One example is the role of social background in determining school choice within England's state sector (Burgess et al., 2015). Another is the evidence of 'white flight' in the United States, wherein opting for a private school is found to be affected by the proportion of ethnic minority pupils in a district (Fairlie and Resch, 2002). Or, to take a third example, Schneider and Buckley (2002) found that parents prioritised online searching for data on the social (especially ethnic) composition of schools as much as searching for data on the schools' academic performance. The parents' motivations, revealed indirectly in this way, had not shown up through the more conventional route of asking direct survey questions. Extrapolating to the context of choosing a private school in Britain, it seems likely that the methodology adopted in the Next Steps survey was inadequate to pick up the potential effect of schools' social composition. We say this, partly because this motive was not included as an explicit response point on the coding frame; but in addition, even if it had it is likely that the motivation would be severely under-reported compared to the situation of a semi-structured qualitative interview.

In the latest survey method attempt to directly measure motivations, the 733 parent respondents of private school children in the Millennium Cohort Survey were also asked,

when the children were 14 in 2014, why they had chosen a fee-paying school. In this case, no pre-coded answer frame was presented, and *all* the answers were collected verbatim, then post-coded into summary categories. As with the Next Steps survey a considerable range of answers is found. With no presented response frame, however, fewer responses per respondent (an average of 1.4) were forthcoming. Quantitative comparisons with the earlier surveys are therefore invalid. For the majority who gave just one answer, one could think of this as the main reason, but earlier evidence would suggest that most parents would have additional reasons in mind. The modal response, coded as 'generally better education' (56 percent ticked) is, unfortunately, less informative than we would like: while we can expect that this motivation encompasses a desire for good academic performance, it is nevertheless too general for us to discern which aspects of a good education are being highly valued. Whatever it means, a lower proportion (one in four) of the lowest family income quintile, cited it. No other motivation predominates, but for small proportions there remain the same religious motivations (5 percent), and the same family connections such as 'parent had private education' (4 percent) as seen in earlier surveys, while 4 percent report a need for privately provided special schooling.

Again absent from all these MCS responses is any explicit indication of concern about the social composition of the student body in private schooling. As with the Next Steps data, it is likely that revealing preferences for a certain social composition would be too undesirable to mention to a MCS survey interviewer. We cannot conclude that these concerns are no longer relevant, and would recommend that in future surveys the utility of attempting to extract motivation information in conditions of such strong social desirability bias is reconsidered.

Finally, these surveys did not ask respondents about motivations for choosing the state sector, as opposed to the independent sector. It is perhaps worth noting that, compared with the 53 percent of private school parents in the Next Steps survey who specifically cited 'the school has good exam results' as their reason for choosing a private school, only 39 percent of parents who had gained their first choice of state school said that this was the reason for placing their child's school as their first choice. However, while the two questions are similar they are not strictly comparable; so we cannot conclude that state school parents care less than similar private school parents about exam results. Other than the directly academic rationale, other motivations for choosing the state sector noted by Ball (1997), namely political principle and/or a high valuation of the broader social composition, can be found in media discourse but have not, to our knowledge, been researched in the 21st century.[20]

6. The Changing Social And Economic Composition Of Private School Pupils' Families

At the end of this analysis of recent motivation data, then, we are left with the conclusion that perceived academic quality is a prime motivation among at least two thirds of private school parents, possibly greater than in the 1970s. We are wary, however, of taking all of the survey data at face value, given the evidence from elsewhere that important motives open to social desirability are not revealed through this method. We next proceed to examine the changing relationship between family income and private school participation.

Concentration Of Private School Attendance

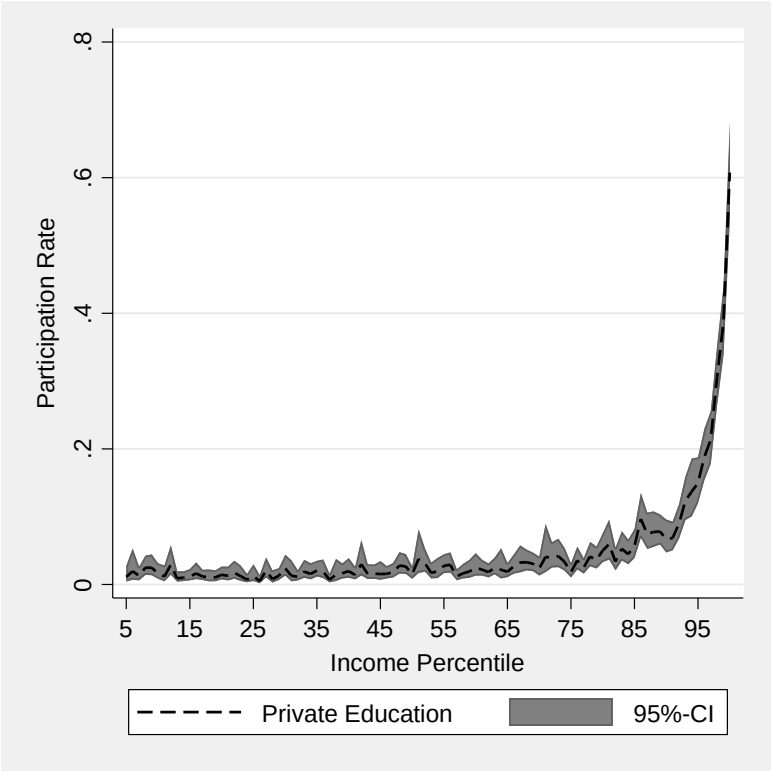
We begin, in Figure 6, by plotting 21st century participation in private schooling against the distribution of income measured in percentiles, for the sample of families with children in the 5-15 age range. The Figure is based on pooled data from the Family Resource Survey. It shows the extent to which participation is especially skewed at the very top of the income distribution. At the 100th percentile, six in ten children go to private school. At the 95th percentile, however, this proportion is much lower, with only one in seven children in the private sector. While still much greater than the average, it is striking that only a minority of the affluent, top 5 percent families are paying for private education.

Figure 6 also shows that there is a non-zero – albeit low – private-school participation rate among lower-income and middle-income households, for whom fees would otherwise appear to have become unaffordable given liquidity constraints and partial limits to borrowing. Some of this participation may be accounted for by means-tested bursaries, but it is also likely the wealth of the immediate and extended family wealth affects participation.

A key question is whether the income and class backgrounds of private school pupils has been changing. We address this issue in three ways. First, we use descriptive cross-tabulations for the period up to 2000 and for the period 2001/2 and beyond as covered in Figure 6. To do so, we have two independent sources of data. The Family Resources Survey has the advantage of greater scale, and since it starts in 1994 our first period is from 1994 to 2000. The Living Cost and Food Survey and its prequel the Family Expenditure Surveys has the advantage that it also contains expenditure data and goes back further in time. However, in view of a change in 1992 in the way income was computed (before 1992 rents for owner occupiers and households in rent-free accommodation were included), and because we

wanted to be consistent with the FRS analysis, we use the same periods for this data set. We use both data sets as a way of triangulating and thus gaining more confidence in any trends revealed.

Figure 6: Participation in private school education across gross family income percentiles, 2001-2016



Notes: Private school participation among children aged 5-15 in private households in Great Britain by gross weekly family income percentiles. There is no data for those with incomes below the 5th percentile, which have been suppressed.
Sources: FRS 2001/2002 – FRS 2015/2016 and HBAI files. N = 68,238.

Second we compute the concentration index for these two periods. The concentration index summarises with one number the degree of inequality. It is a bivariate generalisation of the Gini coefficient, and there is a theoretical literature that examines the properties of different definitions and their relation to different concepts of inequality (e.g., O'Donnell et al. 2016). Greater socio-economic inequality in access to private education would result in a higher index, and the index ranges from zero (no socio-economic inequality) to one (all concentrated at the top). We estimate the concentration index using the package CONINDEX in Stata (O'Donnell et al., 2016), which calculates correct standard errors and can account for the binary character of the variable of interest (Wagstaff 2005, 2011).

Third, we examine change during the 21st century – that is, within the period covered by Figure 6 – we supplement FRS with a comparison of age 14 participation data in England, using data from the Next Steps and the Millennium Cohort Study.

Table 6: The income distribution of families with children at private school, 1994-2000 and 2001-2016

	FRS (HBAI)		LCFS & FES	
Income Rank (deciles)	1994-2000	2001-2016	1994-2000	2001-2016
	Column Percentages			
10th	0.479 (0.013)	0.455 (0.010)	0.465 (0.023)	0.469 (0.019)
8th & 9th	0.230 (0.011)	0.220 (0.008)	0.217 (0.019)	0.269 (0.016)
6th & 7th	0.110 (0.008)	0.115 (0.006)	0.101 (0.014)	0.108 (0.011)
4th & 5th	0.082 (0.007)	0.086 (0.005)	0.114 (0.014)	0.063 (0.009)
<4th	0.099 (0.008)	0.124 (0.006)	0.102 (0.013)	0.091 (0.010)

Note: weighted breakdown of gross weekly family income position for families with privately educated children aged 5-15. For FES waves before 1996, constant weights assumed.
Source: FRS 1994/1995 – FRS 2015/2016 and HBAI. Sample restricted to families in Great Britain with at least one child aged 5-15 in private education. FRS: N = 4,843, LCFS: N = 1,327

- H0 for test of conditional distributions is not rejected in FRS/HBAI, i.e. H0: no statistically significant change across periods (F = 1.87, p=0.112). But income bands are few and broad.
- In LFCS/ FES data, H0 is rejected (F=3.24, p=0.011)

Table 6 shows that, as expected and consistent with Figure 6, the families of children at private school are disproportionately concentrated in the top decile of the income distribution. In 1994-2000 some 48 percent of families were in this decile according to the FRS (HBAI) data. This proportion changes little between the first and second periods. Similarly there are no major changes at any of the income quantiles further down the spectrum, suggesting little or no change in the degree to which private schooling is concentrated. The LCFS/FES dataset gives a slightly different picture, showing an increase from 22 percent to 27 percent between periods for the combined 8th and 9th deciles, though again, like FRS, no change at the top decile. With LCFS/FES the overall distribution is significantly different between periods. In short, there is somewhat increased concentration at the near-top end, according to one of the datasets, and no significant change according to the other.

Table 7 presents the concentration index, using the FRS and the same periods of pooled data. The concentration index confirms the conclusions from the cross-tabulation in Table 6. A test for statistically significant differences does not reject H0 at 5 percent level (p=0.099).[21]

Table 7: Concentration index for private school uptake over real gross weekly family income, 1994-2000 and 2001-2016

	FRS (HBAI)	
Period	**CI**	**N**
1994-2000	0.546 (0.0195)	38,947
2001-2016	0.505 (0.0146)	71,069
Total	0.518 (0.0119)	110,016

Notes: Weighted concentration index of private school attendance for 110,016 families in FRS in Great Britain with children aged 5-15 years between 1994 and 2016.
Sources: FRS 1994/1995 – FRS 2015/2016 and HBAI.

Tables 8a and 8b look for the possibility of change in the socio-economic composition within the 21st century. Table 8a is based on a comparison of Next Steps and MCS, while Table 8b uses FRS to examine a closely similar period of change, by combining three successive FRS waves around each of the survey periods, 2004 and 2014. The FRS sample is different since it covers all families with children in the 5 to 15 range, rather than age-specific cohorts in the Next Steps and MCS.

Table 8a: Socio-economic background of students at secondary private schools, 2004 and 2014

	Attended a private school		Participation Rate	
	2004	2014	2004	2014
NS-SEC				
Managerial & professional	0.77	0.78	0.13	0.12
Intermediate occupations	0.05	0.06	0.04	0.03
Small Employers/ Own-account workers	0.07	0.09	0.05	0.05
Routine and manual occupations	0.06	0.04	0.02	0.01
Other*	0.05	0.03	0.04	0.02

Source: NS for 2004, MCS wave 6 for 2014. *Not working, missing.

Table 8a shows that just over three quarters of private school children in the two surveys come from families in the Managerial and Professional class, and that the proportion barely changed over the decade between the two surveys. This picture of no or little change in the socio-economic composition also emerges from the FRS data in Table 8b. There is one small statistically significant change in the social class composition of families who have at least one child in the age bracket 5-15 in private education (F= 7.65, p=0.00), with the proportion rising from 78 percent to 83 percent. There were no statistically significant changes in the composition of private school families by income quantile over the period.

Table 8b: Socio-economic background of students at private schools, 2003-2005 and 2013-2015

	Attended a private school		Participation Rate	
	2003-2005	2013-2015	2003-2005	2013-2015
NS-SEC				
Managerial & professional	0.775 (0.015)	0.831 (0.018)	0.101 (0.005)	0.091 (0.006)
Intermediate occupations	0.039 (0.007)	0.043 (0.009)	0.020 (0.004)	0.021 (0.006)
Small Employers/ Own-account workers	0.072 (0.009)	0.063 (0.012)	0.044 (0.008)	0.026 (0.005)
Routine and manual occupations	0.051 (0.008)	0.051 (0.011)	0.008 (0.001)	0.007 (0.001)
Other	0.062 (0.008)	0.011 (0.004)	0.014 (0.003)	0.016 (0.009)
Gross Family Income				
10th	0.461 (0.018)	0.435 (0.026)	0.250 (0.015)	0.248 (0.023)
8th & 9th	0.236 (0.015)	0.212 (0.020)	0.057 (0.006)	0.053 (0.007)
6th & 7th	0.099 (0.011)	0.100 (0.014)	0.021 (0.003)	0.020 (0.003)
4th & 5th	0.082 (0.010)	0.102 (0.014)	0.015 (0.002)	0.022 (0.004)
<4th	0.122 (0.012)	0.151 (0.017)	0.020 (0.003)	0.024 (0.003)

Source: FRS 2003/2004, 2004/2005, 2005/2006, 2013/2014, 2014/2015, 2015/2016 (weighted). Number of families with children aged 5-15 = 27,772. Number of families with at least one child aged 5-15 at private school = 1,302.

According to the FRS data, over the decade there were also no statistically significant changes in participation rates, according either to social class classification (F=0.83, p=0.53) or to income quantiles (F=0.68, p=0.64), and a similar stable picture is indicated in Table 8a by the Next Steps/MCS comparison.

In short, based on two entirely separate data sources, the picture of the 21st century so far seems to be one of no significant change in the social composition of private school attendance. This static picture, when combined with the longer-term narrative shown in Tables 6 and 7, indicates that the social composition of private school attendance has been remarkably stable and resilient over two decades.

Income And Wealth Elasticity

Figure 5 above presented a picture of a highly non-linear relationship between income and participation, consistent with the earlier study by Dearden et al. (2011). Here we present new estimates of both the income elasticity and the immediate family wealth elasticity.

Since families can choose to send one or more children to private school we estimated a weighted Poisson count model, using the FRS data underpinning Figure 5. We regressed, at the family level, the number of children at private school on deflated gross weekly income, total wealth and controls. To capture the non-linearity evident in the figure, we transform log income and log wealth into restricted cubic splines. For the income spline, the nodes are set at P10, P30, P50, P70, P90 and P98. For the wealth spline, given that around 40 percent have no positive wealth, the nodes are set at P1, P50, P70, P90 and P98.

In each regression we also include a number of control variables to account for differences in private school demand decisions possibly linked to family composition and labour market status, changes in the relative price of private school years, and other relevant pre-determined factors. These controls are: number of children in age brackets (0-1, 2-4, 5-7, 8-10, 11,12, 13-15, 16-19); a dummy for single parent households; the number of adults in full-time employment; the number of adults in part-time employment; parents' highest school leaving age (21+, 18-20, 16/17, <=15); the age, sex and ethnicity of the household reference person; and finally a set of government region dummies interacted with period effects.

Table 9 presents the estimated income and wealth 'elasticities' at each spline node – that is, it gives the percentage changes in the purchased number of private school years associated with a 1 percent increase in income/ wealth. As can be seen, for the lower portion of the income

distribution, the majority up to P70, changes in income do not affect private school participation. Our interpretation is that, for this section of the private school population the availability of means-tested bursaries, of wealth support from outside the immediate family, and of less-well-resourced schools which charge lower fees, all lead to income being of low importance.

At the 70th percentile, 'income elasticity' is positive. Above P90, the 'income elasticity' exceeds 1, and reaches 2.1 at the top spline node. These estimates are only cross-sectional associations, and do not constitute unbiased estimates of the causal income elasticity for individuals. Nevertheless, it is worth recalling that a positive income elasticity below one would indicate a normal good and a necessity good, while when it is above one the good is classified as a superior/ luxury good. Thus, through the top range -- where a substantial proportion of private school children are concentrated – private schooling can be classed as a luxury good in the sense that the cross-section income elasticity is significantly greater than one.

Wealth also affects private school participation. When entered separately from income, there emerges a sizable elasticity in the splines above the 70th percentile, but the effect is zero in lower wealth points. This tells us that within-family wealth does not account for much of private school participation in the lower half of the distribution; it suggests that participation is enabled by other factors which might include bursaries and scholarships, and other sources of help from outside the immediate family, such as grandparents or the local authority. The estimates above the 70th percentile, however, remain significant albeit notably reduced once income is simultaneously introduced.

Table 9: Income and wealth elasticities of the demand for private education, 2001-2016

	(1) Income	(2) Wealth	(3) Income + Wealth
Weekly income			
£336 (P10)	-		-
£515 (P30)	-0.040		-0.014
	(0.092)		(0.078)
£728 (P50)	0.098		0.113
	(0.112)		(0.098)
£1,032 (P70)	0.396***		0.374***
	(0.101)		(0.097)
£1,771 (P90)	1.061***		0.976***
	(0.104)		(0.109)
£3,929 (P98)	2.106***		1.959***
	(0.111)		(0.114)
Wealth			
£0 (P1)		-	-
£315 (P50)		0.104	0.069
		(0.072)	(0.070)
£3,700 (P70)		0.305***	0.145*
		(0.065)	(0.064)
£26,160 (P90)		0.749***	0.331***
		(0.065)	(0.067)
£213,267 (P98)		1.326***	0.574***
		(0.076)	(0.081)
N	70,876	70,876	70,876

Note: Poisson regression using income and family weights from HBAI. Adjusted variables in HBAI compensate for potential under-coverage and item non-response among very rich households. Total wealth estimates from FRS. In 2010/2011, there is a break in the way wealth is imputed for families with incomplete information on assets and bank accounts. Robust standard errors in parentheses.* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Inter-generational persistence

We next address the question of whether there have been any changes in the intergenerational persistence of school-type. The fact that many parents choosing private education for their children have not themselves been to private school can be seen as a signal of partial openness. If the persistence of school-type is falling, moreover, this could be taken as an indication of growing inclusiveness.

For this purpose we first deploy the BSAS data, which records both whether the respondent and any of the respondents' children, had ever been to a private school. Since BSAS is not a household survey we do not, unfortunately, know whether the children are still in school.

However, the information on parent's and child's school type is recorded consistently for most years between 1996 and 2013. Table 11 cross-tabulates parents' private school attendance with their children's, recording both column percentages and the weighted number of cases in each cell.

Table 11: Intergenerational school-type persistence

		Respondent ever participated	
At least one child ever attended		State	Private
	State	91.0 [27,089]	60.1 [2,031]
	Private	9.0 [2,681]	39.9 [1,349]

Note: Weighted responses for individuals 20 to 84 years who ever had a child in secondary education in the British Social Attitude Surveys, 1996-2013.

Among parents who never had private education, 9 percent state that at least one of their children ever attended a private secondary school. This is an indication of the extent to which a private school experience is entering the world of persons who have only known state education. By contrast, among the ever-privately-educated parents a substantially greater proportion – 40 percent -- of families had sent at least one child to private school during their upbringing. Intergenerational persistence is therefore present.

Has this relation changed with time and how do individual demographics and socio-economic factors moderate the transmission of school type across generation? To answer this question, we estimate a set of logistic regressions with private school attendance of children as outcome and parental private school experience as a key independent variable. The coefficient of the school type variable, which is equal to the derived log ratio, measures sector-persistence/ mixing. We divide the period of data availability into two periods, 1996-2005 and 2006-2013, corresponding as closely as possible to the last two periods studied in the analyses in the previous section.[22] Table 12a compares estimation results from these two periods.

Table 12a: Estimates of sector-persistence/ mixing, 1996-2005 and 2006-2013

	(1) Raw	(2) Demographics	(3) Socio-Economic
1996-2005	1.878***	1.782***	1.259***
	[1.768,1.988]	[1.662,1.902]	[1.129,1.390]
2006-2013	1.945***	1.787***	1.312***
	[1.806,2.084]	[1.628,1.946]	[1.140,1.484]
N	33150	33150	33096

Source: BSAS, 1996-2013

Notes: average marginal log odds ratio of parental private school attendance on children's private school education from weighted logistic regression. The first column reports raw figures. Column (2) adjusts for demographic factors and adds an interaction between respondent's private school education and age. In the last column we additionally add respondents' age when leaving full-time education and socio-economic group. Restricted to respondents in the age range 20 to 85 years. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

In column (1) no other variables are included, so the coefficients show just the raw relationship between parents' and children's school-type. While the magnitude increases slightly, the estimates do not differ significantly across periods. The 95 percent confidence intervals overlap and thus we cannot reject the null hypothesis that sector persistence has remained constant. Neither adjusting for demographics (column (2)), nor accounting in addition for socio-economic differences (column (3)) alters this conclusion, that there has been no significant decline in the intergenerational persistence of private school attendance since the mid-1990s.

In contrast to BSAS, BHPS can give a concurrent picture of private school attendance. Table 12b replicates the previous estimates for the sample of rising 16 years old who reported on their current or last school type when they joined the BHPS sample. We differentiate between youths born before and after 1986 to assess whether sector mixing has become more common over time. The key independent variable is a binary indicator which is one if either parent's last attended schools had been private, for which the information is retrieved from the family background questionnaire.

Despite using different definitions and covering different periods, the estimates of intergenerational persistence are reasonably close to the values obtained from the BSAS. As before, even after adjusting for socio-economic background and demographic factors, parents who themselves experienced private education were significantly more likely to choose private school for their offspring. For the more recent cohort, the estimate of sector

persistence is smaller but the difference does not reach statistical significance at conventional levels.

Table 12b: Estimates of sector-persistence/ mixing, BHPS, 1991-2009

Birth cohort	(1) Raw	(2) Demographics	(3) Socio-Economic
1972-1985	2.156***	1.955***	1.751***
	[1.738,2.574]	[1.526,2.384]	[1.304,2.197]
1986-1993	1.722***	1.446***	1.261***
	[1.176,2.268]	[0.862,2.031]	[0.637,1.885]
N	4555	4555	4555

Source: BHPS 1991-2008

Notes: average marginal log odds ratio of parental private school attendance on children's private school education from logistic regression. The first column reports raw figures by birth cohort. Column (2) adjusts for demographic factors (sex and ethnicity of child, year of birth of the oldest parent, sex of the oldest parent, region of residence). In the last column we additionally add highest parental educational attainment, social class, log of real annual household income and its squared value, outright homeownership. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

7. Discussion

The proportion of school children of UK-resident families who attend private schools has been fairly constant for several decades, and now stands at just under 6 percent. That this private school participation is associated with social class, or equivalently with a high-income social background is well-known. What is less well understood are the consequences of the substantial transformation of the private school sector of British education since the 1980s. A key characteristic of this transformation is the very considerable rise in the price of private education – a trebling over three decades. The large decline in affordability in relation to household income seems likely to have altered the balance of participation. The affordability trend is ameliorated only to a small extent by the rise of means-tested bursaries, which now average just 4 percent of fees spread over 8 percent of private school pupils. But other changes, not least the rise in prominence given to school choice for a broader section of the population than hitherto, and the rising wealth-income ratio may simultaneously have shaken up the pattern of participation in unpredictable ways.

A paper that merely rehearsed the narrative that British private schools are generally social exclusive would risk merely stating the obvious. The remarkable fact about the distribution of participation in relation to income, however, is the extent to which it is skewed at the very top of the distribution. Along much of the distribution – that is, below the 70th percentile – participation is not significantly linked to income. But at the 98th percentile, the elasticity of association of participation with income is 2.1.

Even at that percentile, however, only 60 percent of parents choose the private sector. A study of parents' motives for their choice is therefore relevant if we are to understand better the propensity to choose the private sector. We find, however, that simple surveys, while they commonly show the importance of academic motives (less so for the lowest income quintile), do not reveal all parents' motives. Preferences for an exclusive peer group, and a focus on confidence and aspiration building, are revealed only through in-depth interviewing techniques.

Since the trend in the social exclusivity over time is far from clear *a priori*: it remains an open empirical question. Given the importance of the social composition of private school participation for questions of social mobility in Britain, our main aim has been to ascertain whether the social exclusivity of private schools – as indicated by the link with household income and with the previous generation's school-type – has weakened or strengthened.

We find no evidence of any diminution in the social exclusivity of private schools compared with pre-2001 years, nor of any change during the 21st century. According to one data source there has been a minor strengthening in the connection between income and private school participation, while others indicate no significant change. Both before and after 2000, nearly a half of private school children came from families in the top 10 percent of the income distribution. Consistent with this pattern of no change, there was also no significant change in the pattern of intergenerational persistence of school-type between the periods 1996-2005 and 2006-2013. An obvious interpretation of these findings is that the effect of real-terms increased fees ahead of incomes has offset any impact from bursaries, scholarships and other attempts to open up to a wider public, or from the generally increased attention to conscious school choice.

Given the trebling of prices since the 1980s, and a plausible price elasticity in a normal range, an obvious question is: what accounts for the sustainability of the sector over decades with a largely stable participation rate? The high income elasticity we find at the top end provides

one potential answer. The known very large rises in top-end incomes that have occurred since the 1980s will have stimulated demand among this group (Jenkins, 2015), thereby to a considerable extent offsetting the trebling of prices. In addition, since wealth effects are also significant in the top third of the distribution, the rise in absolute wealth inequality that has occurred since the 1980s will also have been important.

The pressures towards higher prices seem to have been inexorable over a long period. Schools often use the unfortunate metaphor of an 'arms race' to describe the process whereby competition to provide the latest, greatest, facilities, and the lowest class sizes, has driven up costs and hence the fees. But the race has been underpinned by the rising incomes of private school parents. The market has been able to bear the increases, albeit with a little help from Chinese and Russian families. While top incomes continue to rise, and while absolute wealth inequalities also soar, there is unlikely to be a significant decline in fees. Periodic Canut-like calls to private schools to hold back their fee rises seem futile, in the absence of an economic crisis undermining top incomes to a serious extent.

The stasis in the degree of social exclusivity over a long period leads us to speculate that there may be strong limits to the degree of openness that could ever be achieved in Britain's highly-resourced private school system which is, apart from some tax incentives, largely lacking in state support, unlike most private school systems in other countries. The extent to which fee-paying parents could be induced to pay above the odds to finance a substantial increase in bursary funding for poorer children is bounded (Wilde et al., 2016). In the absence of an unexpected substantial fall in the fees, an unprecedented huge rise in charitable donations, or a radical policy change affecting the sector, we would speculate that the sector will remain, as a whole, as socially exclusive in the foreseeable future as it is now.

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[1] While the Charity Commission initially stipulated that bursaries were required for schools to fulfil their public benefit requirements, a later court ruling removed that requirement. Nevertheless, bursaries are widely seen as one of the primary channels for meeting their public benefit (Wilde et al., 2016), and at least some schools have consistently stated their intentions to step up their bursary commitments.

[2] The head of Independent Schools Information Service said at the time: 'Clearly the independent sector isn't some kind of hermetically sealed system or a no-go area for all but an exclusive and self-perpetuating class' (cited in the Independent http://www.independent.co.uk/news/uk/independent-schools-attract-more-first-timers-1393340.html). Unsurprisingly, less prominence was assigned to this issue when an equivalent 1997 poll showed the proportion of first-time buyers falling (see https://www.ipsos.com/ipsos-mori/en-uk/small-classes-now-top-reason-going-independent).

[3] These joiners are the children who join at secondary or sixth-form level.

[4] http://www.scis.org.uk/information-for-parents/why-choose-an-independent-school/

[5] See letter from Christopher Ray, reproduced at: http://expressiveparents.com/charitable-status-and-independent-schools/

[6] An example is the 2017 Chelsea Flower Show exhibition of Wellington School: entitled 'Breaking Ground', the school's exhibited garden depicted the claim that barriers to social mobility were receding, and promoted a bursary for poorer children to attend the school.

[7] https://www.ipsos.com/ipsos-mori/en-uk/ipsos-mori-survey-shows-record-demand-independent-education; https://www.ipsos.com/ipsos-mori/en-uk/small-classes-now-top-reason-going-independent; https://www.ipsos.com/ipsos-mori/en-uk/parents-listen-children-school-choice

[8] Dronkers and Avram (2010) report the associations between family wealth and attendance at a private school, using PISA data. Their results show a relatively high association (compared with other countries), but given that their regressions also include parents' social class and education, which are sure to be correlated with wealth, it is not possible to conclude from their study whether the overall relationship of private schooling with wealth is especially high or low in the UK.

[9] FRS: https://www.gov.uk/government/collections/family-resources-survey--2; HBAI: https://www.gov.uk/government/collections/households-below-average-income-hbai--2

[10] 32 schools merged in this time, while 13 became academies or free schools, and 24 were de-registered. Of the closed schools, only 46 had had a capacity above 100. Sourced from edubase, downloaded from http://www.education.gov.uk/edubase/home.xhtml on 8/6/2016.

[11] We do not know the numbers of foreign pupils in state schools. Our estimate assumes that it is as many as 100,000, but is not greatly sensitive to this assumption.

[12] Independent School Census 2009 http://www.gov.scot/Publications/2010/04/23144208/45. The census seems to have been discontinued in 2010. The pupils figure includes pupils in private special schools paid for by the state, roughly 1 in 30 pupils and declining.

[13] StatsWales, The Schools Census. https://statswales.gov.wales/Catalogue/Education-and-Skills/Schools-and-Teachers/Schools-Census.
[14] https://www.education-ni.gov.uk/articles/independent-schools.
[15] The fees data in this section refer to ISC schools, not the whole population of schools.
[16] Source: Independent Schools Census, 1980 and 2016; inflated using RPI.
[17] Apart from schools' endowments and associated income, school fees constitute most of the income of private schools. Therefore, notwithstanding scholarships and bursaries, the fees trend signifies at the same time an approximate trebling of the resources being deployed in private schools since 1980.
[18] Bursary outlay, as a percent of fees, amounted to 4.21 (2014), 4.20 (2015) and 4.14 (2016); authors' calculation from ISC Census figures Independent Schools Council (2016, and earlier years).
[19] When respondents record a payment of school fees in any three-month window, it is unclear what period such fees cover. We therefore aggregated expenditures across all respondents across a whole year's survey returns, counting non-records as zeros. If there were significant numbers of respondents refusing to record such fees, this procedure would underestimate the average expenditure on fees. Moreover, some fees might be paid directly from trust funds established in earlier years, or by family members. The figures should therefore be regarded as lower-bound estimates of private school expenditures.
[20] The Daily Telegraph, 5/9/2015.
[21] Owing to the top-coding of the 95th and above percentiles of income data in LCFS, the CI for the whole distribution of the LCFS cannot be computed.
[22] The periods refer to when respondents were interviewed, i.e. the respective survey waves. The outcome captures whether children have ever been to secondary school, but this will include adults who would have been at school in earlier periods.

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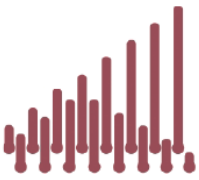

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