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‘Why are you applying there?’: ‘race’, class and the construction of higher education ‘choice’ in the United Kingdom

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'Why are you applying there?'

'Race', class and the construction of higher education 'choice' in the United Kingdom

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Abstract

Despite entering higher education in good numbers, candidates from some black and minority ethnic groups are concentrated in less prestigious institutions. A similar pattern is evident in candidates' applications, raising important questions about the role of 'self-exclusion'.

Statistical analysis confirms that candidates from some minority ethnic groups tend to target lower ranking institutions, but these differences are almost entirely explained by other variables, particularly academic attainment, type of school attended, number of A-levels taken and subject mix. It follows that some minority ethnic groups appear to be indirectly disadvantaged by patterns of schooling that do not prepare candidates for elite higher education. Similar processes are evident in relation to social class, though candidates from less privileged family backgrounds remain less likely to target high status institutions even when other variables are taken into account.

Key words: 'Race'; social class; higher education; choice

Introduction

A ‘bleak portrait of racial and social exclusion at Oxford and Cambridge’ – this is how *The Guardian* (December 6 2010) newspaper characterised data acquired by the former Minister for Higher Education, David Lammy, showing that more than 20 Oxbridge colleges had made no offers to black candidates for undergraduate courses the previous year and only ‘one black Briton of Caribbean descent’ had been accepted for undergraduate study at Oxford. The Prime Minister, David Cameron, described the situation as ‘disgraceful’, insisting ‘We have got to do better’ (*The Guardian* April 11 2011), yet the number of black students admitted to Oxbridge fell by almost a third the following year to just 36 (*The Telegraph* December 18 2011). In response, Oxford University (2010) identified school attainment as ‘the single biggest barrier’ to admitting more black students, while Sir Michael Wilshaw, head of Ofsted, suggested: ‘The statistics clearly show that [state] schools aren’t doing enough to encourage black and ethnic minority students to apply to the top universities’ (*The Telegraph* December 18 2011). A different set of possibilities was raised by Elly Nowell’s withdrawal from Oxford’s application process. Following an interview at Magdalen College, which left her feeling like ‘the only atheist in a gigantic monastery’, Elly sent a ‘rejection’ letter parodying those the University sends to unsuccessful candidates, criticising the college’s ‘traditions and rituals’ and insisting ‘while you may believe your decision to hold interviews in grand formal settings is inspiring, it allows public school applicants to flourish... and intimidates state school applicants, distorting the academic potential of both’ (BBC 2012).

This article focuses on a neglected aspect of the admissions process into higher education across the United Kingdom (UK) – candidates’ decisions about where to apply. While there is considerable research on access to higher education, there is much less on how students

choose between institutions (Reay et al 2005). We are concerned here with the role of ‘choice as self-exclusion’, forming “an aspect of closure...in the form of aversion to particular HE settings (in terms of class and ethnic ‘fit’)” (Ball et al 2002a, 69). In particular we address the propensity of different ethnic and social class groups to apply to higher and lower status institutions.

Higher education and social stratification

Higher education is often viewed as vehicle for social mobility, but has largely served to reproduce established class relations and existing patterns of privilege (Brown and Hesketh, 2004). Even the transition from an elite to a mass system of higher education has benefited ‘those from richer backgrounds far more than poorer young people’ (Blanden et al 2005, 20; see also, Ross, 2003). It follows that the expansion of higher education has, if anything, contributed to a reduction in social mobility at a time of widening inequality (Hills et al, 2010).

While higher education reproduces existing class hierarchies its role in relation to ethnic disadvantage is more nuanced. Black and minority ethnic groups tend to enter university in good numbers, often doing so from relatively disadvantaged positions (Modood, 1993 and 2004; Chowdry, 2008; Jackson, 2012). Participation in higher education has also facilitated upward social mobility within minority groups (Iganski and Payne, 1996; Platt, 2005), reflecting a ‘drive for qualifications’ that has been attributed to a certain ‘mentality’ associated with economic migrants, including an over-riding ambition to better oneself and one’s family (Modood 1998). Focusing on south Asian communities, Modood (2004) and Shah et al (2010) highlight the role of ‘ethnic capital’ in ameliorating social class

disadvantage. While parents and ‘dense co-ethnic networks’ promote norms stressing the value of education and enforce ‘appropriate’ behaviour, ‘structural constraints, selective school systems and racialized labour markets’ mediate the effectiveness of these forms of capital (Shah et al 2010, 1109). Black and minority ethnic groups have also been found to be advantaged, relative to the white British group, in terms of parental attitudes and behaviour as well as student risk and protective factors, including the desire to continue in post-compulsory education (Strand 2011).

Although black and minority ethnic students are well represented within higher education, they are not evenly distributed across the sector. The amalgamation of universities and polytechnics into a single system has arguably been accompanied by greater stratification, creating a new hierarchy of institutions (Reay et al 2001; Pugsley, 2004). ‘Increasingly’, therefore, ‘the relevant questions about ethnicity and class in relation to higher education are not just about who goes, but also who goes where, and why?’ (Ball et al 2002b, 354).

Suggesting a pattern of ‘locked-in inequality’ (Gillborn 2008, 64), students from some black and minority ethnic groups have been repeatedly found to be concentrated in less prestigious institutions, particularly the post-1992 universities that are generally located in the lower reaches of the ‘league tables’ (Modood and Shiner 1994; Shiner and Modood 2002; Chowdry 2008; Boliver 2013).

Persistent inequalities have given rise to political concerns that young people from disadvantaged backgrounds are failing to access more prestigious universities (Brown and Hesketh, 2004). While higher education features prominently in the government’s strategy for social mobility (Cabinet Office 2011), *The Browne Review of Higher Education Funding and Student Finance in England* notes that more needs to be done to improve access,

particularly to the most selective institutions (Browne 2010). Despite these concerns, political developments, particularly the rise of neoliberalism, have been heavily implicated in the reproduction of inequality. Critics maintain that neoliberalism is a 'political scheme' that aims to reverse the social democratic gains of the post-war era by restoring class power to ruling elites, describing it as 'a huge success from the standpoint of the upper classes' (Harvey 2007, 34). As part of the neoliberal project, universities have been reorganised into a quasi-market, based on the principles of competition and choice, undermining 'the meritocratic ideal of a level playing field', which 'has been sacrificed in the battle for positional advantage' (Brown et. al., 2011: 133). With the rise of the 'parentocracy', middle class parents have increasingly sought to exploit their financial and cultural capital to ensure their children are positioned competitively within an expanded system of higher education. Distinctions between established 'old' universities and less prestigious 'new' universities assume considerable importance in this regard, facilitating the transfer of power and privilege between generations (Brown and Scase, 1994; see also Chevalier and Conlon, 2003).

Evidence that candidates from less privileged school and social class backgrounds are less likely to apply to more prestigious universities (Boliver 2013) has prompted some consideration of the choice-processes involved. According to Reay et al (2005, 19) higher education choice has a cognitive/performative dimension relating 'to the matching of performance to the selectivity of institutions and courses' and a social/cultural dimension relating 'to social classifications of self and institutions'. Finding little evidence of the calculative, consumer rationalism that dominates education policy, they highlight the role of cultural capital and habitus in the form of overlapping individual, familial and institutional influences (Reay et al 2001). While upper and middle class students tend to be oriented towards elite universities by their familial and institutional habitus, working class students

typically lack such forms of capital. Working class and minority ethnic students are said to experience emotional, as well as material, constraints on their choices: fears about being out of place or not fitting in mean traditional universities are often discounted as part of ‘a process of psychological self-exclusion’ (Reay et al 2001; Ball et al 2002b).

Other studies have also shown how the interplay of familial and institutional influences disadvantages working class students, who rarely enjoy the kind of advantages that are available to middle class students – schools that are geared towards getting pupils into elite universities, providing extensive guidance along the way; access to private tuition; and parents who are familiar with the applications process and can help guide their children into the ‘best’ universities (Bradley, 2013). Without these advantages, working class students are left ill-equipped to engage with the process, often making uninformed choices about where and what to study (Pugsley, 2004).

Methods

This study examines the higher education choices of 50,000 candidates who applied to UK universities in 2008. A statistical modelling procedure is used to try to explain differing patterns of application, drawing on a range of potential predictor variables covering ‘performative’ considerations as well as broader social and cultural influences. All applications were made to undergraduate courses through the main scheme administered by the Universities Central Admissions Service (UCAS). Candidates were randomly selected from home domiciled applicants (excluding those living in Northern Ireland), aged 20 years or below, who were taking a minimum of two A levels (or AS equivalents). Very few Scottish candidates were included because they typically take Higher Grade Examinations

rather than A-levels. Black and minority ethnic groups were oversampled, with half the sample comprising of white British candidates and half drawn from the remaining groups. Where possible at least 1500 cases were selected from each group, though two groups had fewer candidates than this, all of whom were sampled. Additional cases were drawn from each minority group in proportion to their number in the population until a sample of 50,000 was achieved¹. Weights were applied to correct for the differential sampling although the multivariate models were based on unweighted data. All relationships discussed below were significant at 0.01 level.

Our initial intention was to treat individual applications as the primary unit of analysis, using multi-level modelling to take account of candidate effects, but this procedure was unable to estimate a model because candidates' applications were clustered among similar types of institution (there was insufficient within candidate variation). As an alternative, a single level multinomial logit model was developed with a dependent variable that summarised candidates' patterns of application (ordinal regression was discounted because the proportional odds assumption was violated). To facilitate the analysis, institutions covered by the UCAS scheme were divided into quartiles based on rankings in *The Times' Good University Guide 2007*, which is an influential source of information for potential applicants (O'Leary 2011). The upper quartile comprised of elite institutions, including most of the 'leading' universities that make up the Russell Group; the second quartile contained most other 'old', pre-1992, universities; while the third and fourth quartiles were made up almost entirely of 'new', post-1992, universities. Each candidate's applications were combined into a single index or score ranging from -15 to +15, where -15 indicated that they applied exclusively to lower status institutions and +15 that they applied exclusively to elite institutions. Using this score, candidates were divided into four groups indicating the type of

university they tended to target: mainly lower ranking (-15 to -7), mainly middle ranking (-6.9 to 3.0); mainly higher ranking (3.1 to 11.0) and mainly elite (11.1 to 15). Close to a quarter of candidates fell into each category.

The model was developed in several stages. Ethnicity was initially included as the sole predictor (stage 1), identifying baseline differences between groups. The addition of age, sex and social class (stage two) allowed us to assess whether ethnic differences might be explained by other socio-demographic characteristics. Adding schooling variables (stage 3) then allowed us to assess whether they might explain apparent socio-demographic differences. Preferred subject and whether candidates applied to local institutions were added at stage 4, while academic attainment, in the form of UCAS tariff scores (split into deciles), was added at stage 5. Our main interest in these later stages was to assess whether the newly added variables explained the effects associated with socio-demographics and schooling. As the key variables of interest, all ethnic and social class categories were retained in the model regardless of statistical significance, while other non-significant items were excluded.

Patterns of application

Candidates' patterns of application followed a clear hierarchy of preferences: 40 per cent of applications went to elite universities compared with 18 to 23 per cent that went to higher, middle and lower ranking institutions respectively. While this suggests candidates were seeking to maximise the utility of their university education, their applications tended to cluster around similar types of institution, pointing to a highly differentiated market: 39 per cent of candidates applied exclusively to elite and higher ranking institutions, while 20 per cent applied exclusively to middle and lower ranking institutions.

Patterns of application varied markedly by ethnicity, with evidence of considerable diversity across minority groups (see Figure 1). While white British candidates targeted the different types of university in fairly equal numbers, minority groups tended to be more polarised. Most Asian groups leaned towards elite institutions, while black candidates, along with Pakistanis and Bangladeshis, tended to lean towards lower ranking institutions. Significant social class differences were also evident. Candidates from higher managerial or professional families targeted elite institutions at roughly twice the rate they targeted lower ranking institutions, while candidates whose parents were in lower supervisory and technical, semi-routine or routine occupations targeted lower ranking institutions at roughly twice the rate they targeted elite institutions. These patterns of application were reflected in patterns of admission².

Figure 1 about here

Ethnic and social class differences were inter-linked though the relationship between them was not straightforward (see Modood 2004). Some ethnic groups had social class profiles that were consistent with, and potentially help to explain, their patterns of application. Bangladeshi and Pakistani candidates, for example, were concentrated in those social classes that tended to target less prestigious universities. For other groups, however, ethnicity seemed to over-ride or subvert the influence of social class. Black Caribbean and black other candidates targeted lower ranking institutions at a fairly high rate, but did not do so from a particularly disadvantaged position. They, along with black Africans, were disproportionately from lower managerial and professional families, suggesting a degree of class privilege (see Rollock et al 2012), though relatively few had parents in higher professional or managerial occupations. Chinese candidates, by contrast, targeted elite

institutions at a higher rate than any other ethnic group despite coming from a relatively disadvantaged class position – 37 per cent had parents in lower supervisory and technical, semi-routine or routine occupations, which was second only to Bangladeshis (48 per cent) and was almost twice the rate for white British candidates.

Other variables were also related to candidates' patterns of application, potentially helping to explain apparent ethnic and social class differences. The suitability of a course and its entrance requirements feature prominently in candidates' decisions (Pugsley, 2004) and are clearly implicated in their patterns of application. Some courses are provided by a limited range of institutions, so that candidates' decisions about where to apply may be largely a function of what they want to study. Applications from candidates who favoured medicine and dentistry, for example, were almost exclusively made to higher ranking and elite universities, while applications from candidates who favoured mass communications or education were made almost exclusively to middle and lower ranking universities. Of all the variables included in the analysis, academic attainment was most strongly associated with university choice: candidates with high UCAS tariff scores tended to target elite institutions, while those with middling scores tended to concentrate on higher or middle ranking institutions and those with low scores leaned more towards lower ranking institutions (see Figure 3)³.

Figure 2 about here

Although most candidates were willing to travel considerable distances, approximately one-in-ten limited their applications to universities within 20 miles of home and targeted lower ranking institutions at twice the rate of those who applied further afield. A small number of

candidates (7 per cent) applied through UCAS the previous year and they targeted elite institutions at a slightly higher rate than those who were applying for the first time.

Illustrating the importance of institutional capital, candidates' higher education choices varied across a range of schooling-related variables. The type of school candidates attended was much more strongly linked to their patterns of application than either ethnicity or social class⁴, with those who attended selective schools (i.e. independent or grammar schools) targeting elite institutions at more than twice the rate of those who attended non-selective providers (i.e. maintained schools, further education colleges or 'other'). The influence of school-type was, in part at least, a function of what candidates were studying. While A-level subject choice has been identified as a key factor in university admissions, it has been suggested that state school students often lack guidance and are prone to making uninformed choices that limit the subsequent pathways available to them (Sutton Trust 2011; Bradley, 2013: see also Pugsley, 2004).

Recent guidance from the Russell Group (2011) highlights the role of 'facilitating' subjects. 'Generally speaking', the guide advises, "students who take one 'soft' subject as part of a wider portfolio of subjects do not experience any problems applying to a Russell Group University" (2011, 29). This guidance was unavailable to candidates in our cohort and does not specify what constitutes 'hard' or 'soft' subjects, but we attempted to capture something of the distinction in a relatively systematic way by drawing on Coe et al's (2008) analysis of the relative difficulty of A-level subjects⁵. Having calculated a net difficulty score for candidates' A-level subjects, we found those who were taking mainly difficult subjects targeted elite institutions at 10 times the rate of those who were taking mainly less difficult subjects. As well as taking more A-levels and having higher tariff scores, candidates who

attended selective schools tended to study ‘harder’ subjects, all of which facilitated applications to elite universities.

Finally, candidates’ patterns of application varied according to their sex and age, though these differences were not large: males targeted elite institutions at a slightly higher rate than females, while younger candidates (aged 18 or below) did so at a slightly higher rate than older candidates (aged 19 or 20).

Predicting patterns of application - multivariate analysis

The multivariate model confirmed that academic attainment was the single most powerful predictor of candidates’ patterns of application (see Table 1). Higher tariff scores tended to increase the probability of targeting elite and higher ranking institutions, while lower tariff scores tended to increase the probability of targeting middle and lower ranking institutions. For an average candidate the probability of targeting elite institutions varied from 0.02 to 0.63 depending on their UCAS tariff score, while the probability of targeting lower ranking institutions varied from 0.01 to 0.40.

Table 1 about here

Academic attainment varied between ethnic groups and went some way towards explaining their differing patterns of application. Chinese and mixed white and Asian candidates had higher average UCAS scores than white British candidates, while the remaining minority groups had lower average scores. The addition of academic attainment into the model had a marked impact on the effects associated with ethnicity. According to the final model there

was almost no evidence that candidates from minority ethnic groups were less strongly oriented towards high status institutions than their white British counterparts. Indeed, candidates from most minority groups, including black Caribbeans, black others and Bangladeshis, became significantly *less* likely than their white British counterparts to target lower or middle ranking institutions than elite institutions. Pakistanis were the *only* ethnic group, at this stage, where there was any suggestion of an orientation away from elite universities - they were significantly more likely than white British candidates to target higher ranking than elite institutions.

In contrast to ethnicity, social class continued to be associated with evidence of self-exclusion. Less privileged family backgrounds tended to orient candidates away from elite institutions and towards lower ranking institutions. An average candidate was more likely to target elite institutions than lower ranking institutions if their parents were in higher managerial and professional occupations (with probabilities of 0.17 and 0.11 respectively), but was more likely to target lower ranking institutions than elite institutions if their parents were in lower supervisory and technical, semi routine or routine occupations (these probabilities ranged from 0.14 to 0.17 and 0.11 to 0.12 respectively).

Schooling had a striking effect independently of other variables in the model. Other things being equal, candidates from independent schools were the most likely to target elite or higher ranking universities, followed by those from grammar schools (see Table 2).

Candidates from non-selective providers were, conversely, the least likely to apply to elite or higher ranking universities and the most likely to target middle or lower ranking universities.

A-level subject choice had a similar, albeit more marked, effect.

Table 2 about here

Candidates' preferred degree programme had a fairly marked effect, reflecting the tendency for some courses to be concentrated in particular types of university. Applying locally also had a significant effect, increasing the likelihood of targeting non-elite institutions: for an average candidate who only applied to local universities the probability of targeting lower ranking institutions increased from 0.13 to 0.20, while the probability of targeting elite institutions fell from 0.15 to 0.09. Having applied through UCAS previously reduced the likelihood of targeting non-elite institutions, albeit by a relatively modest amount.

Age and sex were excluded from the final model as they were no longer statistically significant. Sex ceased to be significant at stage 4, followed by age at stage 5. A set of interaction terms also indicated that the effects associated with ethnicity were similar for men and women. Only one interaction term was significant in the socio-demographic model (stage 2) - being Chinese reduced the probability of targeting higher ranking rather than elite institutions to a greater extent for females than males. There were no significant interaction effects between ethnicity and sex in the final model.

What happened to ethnicity?

Academic attainment did not fully explain why candidates from some minority ethnic groups were less likely to target high status institutions than their white counterparts. In a model including ethnicity and the UCAS tariff score, being black Caribbean, black other, mixed white and black Caribbean or Pakistani significantly increased the likelihood of targeting non-elite universities (model not shown). It follows that other variables were also important in explaining these differences. Table 3 shows how the effects associated with ethnicity

changed during the various stages of the model. The figures provided are relative risk ratios or what we call relative probability ratios and are calculated by taking the exponential of the multinomial coefficients. These ratios compare the probability of one event (i.e. targeting lower ranking institutions) versus the probability of another event (i.e. targeting elite institutions) for different groups (e.g. black Caribbean versus white British). A value greater than 1 indicates that coming from a specified minority group - rather than the white British group - increases the relative probability of targeting lower status rather than elite institutions. A value less than 1 indicates that it reduces the relative probability of targeting lower status rather than elite institutions.

The first model shows the raw effects of ethnicity before any other variables were taken into account and confirms that candidates from various minority groups were significantly more likely to target non-elite universities than their white British counterparts. The effects of being black Caribbean or black other were among the most striking in the initial model and remained so when age, sex and social class were included (model 2), but were sharply reduced with the addition of schooling variables (model 3). To an extent, then, the tendency for these groups to target non-elite universities was mediated by their patterns of schooling: members of these groups were particularly concentrated in non-selective schools and colleges, a relatively large proportion were taking fewer than three A-levels and they tended to study less difficult subjects, all of which oriented them away from elite universities. The effects of being black Caribbean or black other were further mediated by the relatively high rate at which these groups limited their applications to local institutions and by the types of degree programme they favoured (model 4). Whether candidates had applied through UCAS previously had little impact.

The effects of being black African or mixed white and black Caribbean followed a broadly similar pattern, though the tendency to apply locally was less of a mediating factor. Schooling variables also operated slightly differently for black Africans because they were no less inclined than their white British counterparts to study 'difficult' A-level subjects. Black Africans were more heavily concentrated in non-selective schools, however, and were more likely to be taking fewer than three A-levels: hence the net effect of schooling was to orient them away from elite universities.

Table 3 about here

The initial model indicated that Bangladeshi and Pakistani candidates were significantly more likely to target non-elite universities than their white British counterparts. These effects were reduced quite sharply by the inclusion of other socio-demographic characteristics, especially family social class. Schooling variables, by contrast, pulled Bangladeshi and Pakistani candidates in different directions. Members of these groups were particularly concentrated in non-selective schools and colleges, with a relatively large proportion taking less than three A-levels, yet they tended to take difficult subjects. The net impact of schooling variables was to reduce the effects of being Bangladeshi, while increasing the effects of being Pakistani. This difference was driven by the tendency to take 'difficult' A-level subjects, which was particularly marked among Pakistani candidates and for whom it more than off-set the influence of other schooling variables. While the influence of schooling helps to explain why Bangladeshis tended to target non-elite universities, Pakistanis were much more likely to target such universities than we would expect given the 'difficulty' of their A-levels. The effects of being Bangladeshi or Pakistani were substantially reduced in the later stages of the model due largely to the high rate at which candidates from these groups applied to local

institutions and their relatively low UCAS tariff scores. Reflecting previous findings that ‘Asian’ higher education students are far more likely than others to live with their parents (Callender and Kemp, 2000), Bangladeshi candidates were the most likely to apply exclusively to local institutions, followed by Pakistani candidates: 46 and 26 per cent compared with 7 per cent of white British candidates.

The influence of schooling also helps to explain why some ethnic groups were more strongly oriented towards elite universities than others. From the outset, being Chinese, Asian other, mixed white and Asian or Indian significantly reduced the probability of targeting non-elite universities (relative probability ratios were less than 1). Candidates from these groups were among the most likely to be attending independent or grammar schools and to be taking a full complement of A-levels in difficult subjects. The inclusion of schooling variables moderated the effects of being Chinese, Asian other, mixed white and Asian or Indian (the ratios became closer to 1) and helped to explain why candidates from these groups tended to target elite institutions. For most of these groups, particularly the Chinese, schooling helps to offset the influence of social class⁶.

What happened to social class?

Family social class remained a significant predictor throughout, though its effects were substantially reduced during the course of the model (see Table 4). Initial raw effects indicated that, compared to candidates from higher managerial or professional families, those from all other social class backgrounds were significantly more likely to target non-elite institutions: these effects were particularly marked for those whose parents were in lower supervisory and technical, semi routine and routine occupations or were working as small

employers and own account workers. The effects of family social class were sharply reduced by the inclusion of schooling variables, as well as the UCAS tariff score, with school-type, number of A-levels taken and their difficulty all playing an important role. Other considerations relating to candidates patterns of application were less influential. To a large extent, then, it seems candidates who were not from higher professional and managerial families were more inclined to target non-elite universities because of the schools they attended and the A-levels they were taking as well as their academic attainment.

Table 4 about here

Conclusion

With the expansion of higher education, access to elite universities has played a significant role in the reproduction of social class relations and existing patterns of privilege. Self-exclusion forms an important part of this process as candidates typically target a narrow range of institutions within a highly differentiated market. Candidates are well aware of the university ‘pecking order’ (Bradley, 2013) and decisions about where to apply are strongly related to academic attainment, highlighting the role of cognitive / performative considerations as candidates seek to match their performance to the selectivity of institutions and courses. While applications as a whole are skewed towards elite institutions, suggesting that some candidates, at least, are seeking to maximise the returns on their education, this pattern is largely driven by those with high levels of academic attainment.

School attainment may, as Oxford University (2010) insists, be the biggest single barrier to admitting a more balanced intake, but this type of meritocratic explanation obscures a more

fundamental problem. The expansion of higher education has intensified the competition for academic qualifications, threatening to undermine the privileged position of elite groups, yet these groups have managed to preserve their status by acquiring and transferring ‘cultural capital gained by “playing the educational system” (Ogg, 2006, 81; see also Brown and Scase, 1994; Brown and Hesketh, 2004). While providing the basis for meritocratic rationalisations, it follows that attainment is subject to ethnic and other socio-economic inequalities (see Blanden et al 2005; Reay et al 2005; Strand, 2011; Jackson 2012), masking the processes through which these inequalities are reproduced.

Higher education choices are subject to a range of social and cultural influences, which mean some candidates are better placed than others to negotiate routes into elite universities. Ethnic differences reflect particular forms of ‘ethnic capital’ as well as the constraints within which these resources operate. Candidates from some minority groups apply to high status universities in good numbers, while others do so at considerably reduced rates. Such differences flatten out when other variables are taken into account and the apparent reluctance of candidates from some minority ethnic groups to target elite institutions does not appear to be directly attributable to their ethnicity. Above and beyond the effects of academic attainment ethnic differences are largely mediated by the combined effects of schooling and social class. Pronounced social class differences are evident, with candidates from less privileged backgrounds tending to concentrate on lower ranking institutions. Such differences become less marked when other variables are taken into account, but are not entirely explained by them. This suggests that social class, unlike ethnicity, has a direct influence in orienting candidates towards different types of university (see also Boliver, 2013).

Schooling plays a pivotal role in higher education choice, simultaneously facilitating and constraining the choices available to candidates. This is partly a matter of attainment, but is also a matter of institutional capital. Students who attend selective schools are strongly oriented towards elite universities and applications to such institutions are facilitated by the kind of A-levels they typically take. While some minority groups, most notably the Chinese, appear to be using selective schooling to create pathways into elite higher education, candidates from other minority groups, particularly black groups, and those from less privileged social class backgrounds are concentrated in non-selective schools and colleges, which orientate them towards a broader range of universities. It is through these various processes that higher education choice serves to reproduce patterns of inequality.

¹ The analysis was actually based on 49,210 candidates, excluding those who withdrew their application or applied to institutions not covered by *The Good University Guide*.

² The type of university candidates were admitted to was strongly related to their patterns of application: Kendall's tau-b= 0.72 (for those who gained a place through the main UCAS scheme) or 0.69 (including those who gained a place through clearing).

³ Most candidates have a reasonable idea of their likely grades when they apply to university. AS results, which contribute up to half the overall A-level grade, are typically announced the summer before candidates apply and predicted A-level scores are strongly correlated with actual A-level scores (Shiner and Modood, 2002).

⁴ Cramer's V = 0.20 (school type), 0.12 (social class) and 0.07 (ethnicity).

⁵ Using the rankings provided by Coe et al (2008), A-level subjects were divided into three equally sized groups – more difficult, neutral and less difficult. Subjects not covered by Coe et al were placed in the neutral group. Candidates were awarded one point for taking a more difficult subject, minus one for taking a less difficult subject and zero for taking a neutral subject. Points were aggregated and divided by the number of subjects to give a summary of net difficulty. Those with scores of -0.51 to -1.0 were classified as taking mainly less difficult subjects, those with scores of -0.1 to -0.5 as tending to take less difficult subjects, those with a score of 0 as being neutral, those with scores of 0.1 to 0.5 as tending to take more difficult subjects and those with scores of 0.51 to 1.0 as taking mainly difficult subjects.

⁶ A relatively large proportion of candidates from all these groups, except mixed white and Asian, had parents in lower supervisory and technical, semi-routine or routine occupations.

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Figure 1 Main type of institution applied to by ethnicity (percentage of candidates)

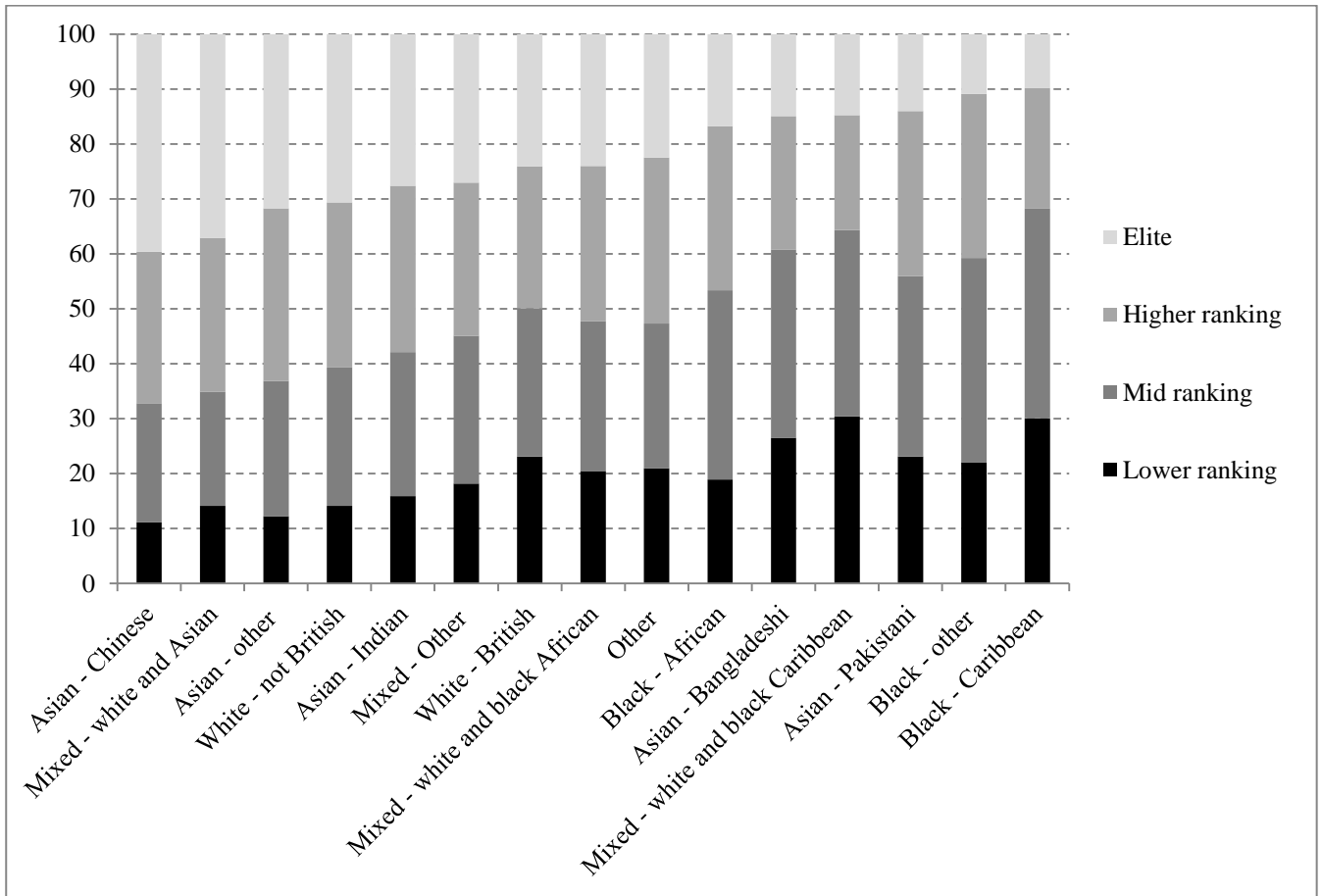


Figure 2 Type of institution targeted by UCAS tariff score (percentages)

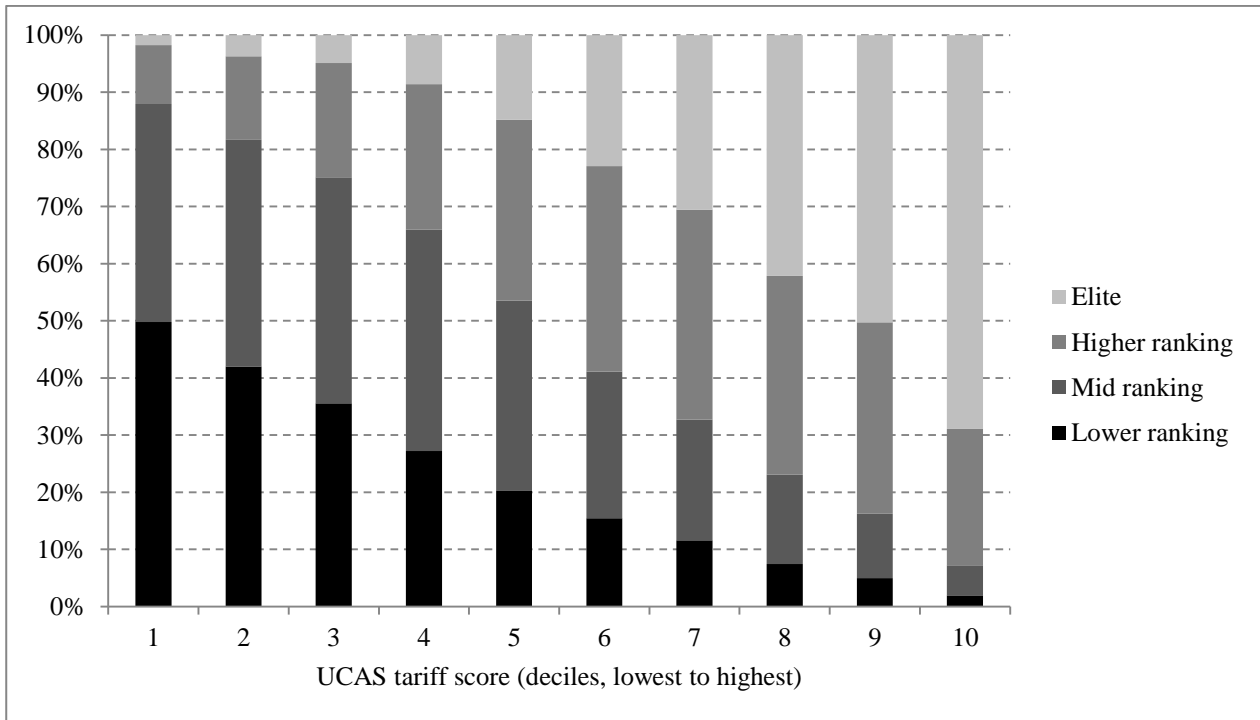


Table 1 Results of multivariate analysis (multinomial logit coefficients, final model)

	Lower ranking v <i>elite</i>	Middle ranking v <i>elite</i>	Higher ranking v <i>elite</i>
<i>Ethnicity (white British)</i>			
White - not British	-0.78**	-0.34**	-0.09
Asian - Bangladeshi	-0.86**	-0.54**	-0.20*
Asian - Pakistani	-0.18	0.09	0.40**
Asian - Indian	-0.91**	-0.49**	-0.09
Asian - Chinese	-0.95**	-0.37**	-0.15
Asian - other	-1.27**	-0.68**	-0.19**
Black - African	-1.22**	-0.59**	-0.10
Black - Caribbean	-0.50**	-0.17	0.02
Black - other	-0.58*	-0.05	0.35
Mixed - white and Asian	-0.70**	-0.47**	-0.22**
Mixed - white and black African	-0.78**	-0.55**	-0.20
Mixed - white and black Caribbean	-0.17	-0.05	-0.07
Mixed - other	-0.82**	-0.46**	-0.14
Other	-0.63**	-0.43**	0.02
<i>Parental occupation (higher managerial and professional)</i>			
Intermediate occupations	0.22**	0.15*	0.03
Lower managerial and professional	0.28**	0.20**	0.10**
Lower supervisory and technical	0.57**	0.55**	0.29**
Routine	0.84**	0.59**	0.28**
Semi-routine	0.69**	0.43**	0.24**
Small employers and own account workers	0.57**	0.51**	0.21**
Unknown	0.41**	0.34**	0.15**
<i>School type (independent)</i>			
Grammar	0.84**	0.85**	0.33**
Maintained	1.89**	1.48**	0.61**
FE	1.76**	1.57**	0.74**
Other	1.45**	1.43**	0.40**
<i>Number of A-levels (four or more)</i>			
Three	-1.25**	-0.82**	-0.29**
Two	-0.85**	-0.58**	-0.35**
<i>Difficulty of A-levels (mainly more difficult subjects)</i>			
Tendency towards more difficult subjects	1.23**	0.93**	0.48**
Neutral	2.17**	1.74**	0.90**
Tendency towards less difficult subjects	2.90**	2.35**	1.22**
Mainly less difficult subjects	3.54**	2.84**	1.46**
<i>Applied previously</i>			
	-0.39**	-0.40**	-0.23**
<i>Applied locally</i>			
	0.98**	0.81**	0.24**
<i>Preferred subject (Law)</i>			
Medicine and dentistry, veterinary science, agriculture etc	-1.71**	1.52**	0.26**
Subjects allied to medicine	1.00**	1.45**	0.98**
Biological sciences	0.19	0.24**	0.21**
Physical science	-1.52**	-1.05**	-0.36**
Engineering and technologies	-1.51**	-0.77**	-0.06
Architecture, building and planning	1.52**	1.49**	0.69**
Social studies	-1.58**	-1.24**	-0.46**
Business and administration	0.80**	0.56**	0.21**
Mass communications and documentation	3.21**	2.51**	0.72
Linguistics, classics and related subjects	-1.34**	-1.08**	-0.53**
Languages and related subjects	-2.89**	-1.56**	-0.34**

	<i>Lower ranking v elite</i>	<i>Middle ranking v elite</i>	<i>Higher ranking v elite</i>
<i>Preferred subject (law) /cont</i>			
Historical and philosophical studies	-2.29**	-1.59**	-0.64**
Creative arts and design	1.46**	1.10**	0.32**
Education	3.67**	2.82**	0.75*
Combined arts	-0.21	-0.39**	0.15
Combined sciences	0.88**	0.25	0.10
Combined social science	0.33	0.43*	0.81**
Combined sciences with social sciences or arts	0.82**	0.28*	-0.07
combined social sciences with arts	-0.39**	-0.49**	-0.15
General, other combined and unknown	0.35**	0.25**	0.14*
<i>UCAS tariff score (10th decile)</i>			
1st decile	7.19**	5.60**	2.80**
2nd decile	6.43**	5.07**	2.44**
3rd decile	5.92**	4.76**	2.47**
4th decile	5.10**	4.22**	2.17**
5th decile	4.19**	3.45**	1.83**
6th decile	3.46**	2.81**	1.57**
7th decile	2.86**	2.30**	1.30**
8th decile	1.97**	1.71**	0.95**
9th decile	1.17**	1.02**	0.67**
Constant	-6.68**	-4.79**	-1.99**

Pseudo R² = 0.27

** p <.01

* p <.05

Notes

1. Sex, age, and mathematical and computer sciences were excluded from the model as they were not statistically significant.
2. The effects of medicine and dentistry could not be reliably estimated because applications for this subject group were heavily skewed towards elite and higher ranking institutions. Consequently it was combined with veterinary science.
3. According to the final model taking fewer A-level subjects reduced the likelihood of targeting non-elite institutions (reversing the effects that were evident in the previous stage). These effects were an artefact of the modelling process: when the UCAS tariff score is held constant, fewer A-levels signifies higher grades (i.e. the same score is achieved from fewer A-levels). In reality, candidates who took more A-levels tended to have higher tariff scores, but, for the statistical model, this distinction was subsumed within the effects of the tariff score.
4. In terms of explanatory power there was little to choose between including the UCAS tariff score as a series of dummy variables or as a continuous variable with a squared term to take account of any non-linear effects (the pseudo r-squared was the same). The former approach was preferred because it was considered more intuitively meaningful.

Table 2 Effects of school-type and A-level subjects on type of institution targeted (probabilities for an average candidate based on final multinomial logit model)

	<i>Elite institutions</i>	<i>Higher ranking institutions</i>	<i>Middle ranking institutions</i>	<i>Lower ranking institutions</i>
<i>Type of school attended</i>				
Independent school	0.28	0.47	0.19	0.06
Grammar school	0.19	0.43	0.29	0.09
Maintained school	0.12	0.36	0.35	0.16
Further Education college	0.11	0.39	0.36	0.14
Other	0.14	0.35	0.39	0.12
<i>'Difficulty' of A-level subjects</i>				
Mainly difficult subjects	0.35	0.43	0.17	0.05
Tendency towards difficult subjects	0.21	0.42	0.27	0.10
Neutral subjects	0.12	0.38	0.35	0.15
Tendency towards less difficult subjects	0.08	0.32	0.40	0.20
Mainly less difficult subjects	0.05	0.27	0.43	0.25

Table 3 Effects associated with ethnicity (relative probability ratios compared to being white British, results of multinomial logit)

	<i>Lowest ranking versus elite institutions</i>					<i>Middle ranking versus elite institutions</i>					<i>Higher ranking versus elite institutions</i>				
	M1	M2	M3	M4	M5	M1	M2	M3	M4	M5	M1	M2	M3	M4	M5
Asian – Chinese	0.29**	0.22**	0.57**	0.41**	0.39**	0.49**	0.39**	~	0.70**	0.69**	0.65**	0.58**	~	0.83*	~
Mixed - white and Asian	0.40**	0.40**	0.51**	0.52**	0.50**	0.50**	0.51**	0.64**	0.64**	0.62**	0.70**	0.71**	0.82**	0.82**	0.81**
Asian – other	0.40**	0.32**	0.55**	0.40**	0.28**	0.69**	0.58**		0.69**	0.51**	0.92	0.84**	~	~	0.82**
White - not British	0.48**	0.43**	0.48**	0.47**	0.46**	0.73**	0.67**	0.75**	0.73**	0.71**	~	~	~	~	~
Asian – Indian	0.60**	0.52**	0.72**	0.58**	0.40**	0.85**	0.75**		0.83**	0.61**	~	~	1.19**	~	~
Asian – Bangladeshi	1.85**	1.24*	~	0.66**	0.42**	2.05**	1.48**	1.23*	0.86	0.58**	1.51**	1.26**	~	~	0.82*
Mixed – other	0.70**	0.63**	0.54**	0.49**	0.44**	~	0.81**	0.75**	0.70**	0.63**	~	~	~	~	~
Mixed - white and black African	~	~	0.61**	0.61**	0.46**	~	~	0.76*	0.74*	0.58**	~	~	~	~	~
Other	~	0.84*	~	0.71**	0.53**	~	~	~	~	0.65**	1.25**	1.19*	1.28**	~	~
Black – African	1.18*	~	0.69**	0.61**	0.29**	1.83**	1.61**	1.22**	~	0.56**	1.66**	1.55**	1.39**	1.24**	~
Mixed - white and black Caribbean	2.15**	1.85**	~	~	~	2.05**	1.82**	1.23*	~	~	1.32**	1.24*	~	~	~
Asian – Pakistani	1.72**	1.25**	1.67**	1.30**	~	2.09**	1.59**	2.08**	1.60**	~	2.00**	1.75**	2.06**	1.79**	1.49**
Black – other	2.11**	1.81**	~	~	0.56*	3.04**	2.66**	1.95**	~	~	2.56**	2.39**	2.13**	1.82**	~
Black – Caribbean	3.17**	2.70**	1.29*	~	0.60**	3.45**	3.01**	1.63**	1.38**	~	2.07**	1.92**	1.44**	1.31*	~

** p <.01

* p <.05

~not significant (coefficient not shown)

Effects shown in bold indicate that candidates were significantly more likely to target a given type of university than their white British counterparts.

Model 1 includes ethnicity

Model 2 includes ethnicity, age, sex and family social class

Model 3 includes ethnicity, age, sex, family social class, school type, number and difficulty of A-levels

Model 4 includes ethnicity, age, family social class, school type, number and difficulty of A-levels, preferred degree subject, applied locally and applied previously

Model 5 includes ethnicity, family social class, school type, number and difficulty of A-levels, applied locally, preferred degree subject, applied previously and UCAS tariff score

Table 4 Effects associated with family social class (relative probability ratios compared to having parents in higher managerial or professional occupations, results of multinomial logit)

	<i>Lowest ranking versus elite</i>					<i>Middle ranking versus elite</i>					<i>Higher ranking versus elite</i>				
	M1	M2	M3	M4	M5	M1	M2	M3	M4	M5	M1	M2	M3	M4	M5
Lower managerial and professional	2.21**	2.10**	1.55**	1.48**	1.34**	1.94**	1.83**	1.40**	1.34**	1.23**	1.42**	1.37**	1.20**	1.17**	1.11**
Intermediate	2.10**	2.03**	1.48**	1.44**	1.23**	1.88**	1.80**	1.37**	1.33**	1.16*	1.30**	1.27**	1.11*	1.11*	~
Small employers and own account workers	3.75**	3.77**	2.43**	2.16**	1.77**	3.30**	3.18**	2.17**	1.97**	1.66**	1.85**	1.76**	1.45**	1.38**	1.24**
Lower supervisory and technical	4.68**	4.38**	2.58**	2.41**	1.75**	4.04**	3.85**	2.42**	2.24**	1.75**	2.11**	2.05**	1.60**	1.53**	1.37**
Semi-routine	4.36**	4.34**	2.66**	2.56**	1.99**	3.24**	3.08**	2.00**	1.93**	1.54**	1.90**	1.86**	1.47**	1.46**	1.34**
Routine	5.61**	5.40**	3.12**	2.89**	2.33**	4.20**	3.90**	2.40**	2.19**	1.81**	2.23**	2.10**	1.61**	1.51**	1.33**
Unknown	3.58**	3.50**	2.13**	1.97**	1.51**	3.12**	2.90**	1.89**	1.76**	1.40**	1.76**	1.67**	1.35**	1.32**	1.17**

** p <.01 * p <.05 ~not significant

Effects shown in bold indicate that candidates were significantly more likely to target a given type of university than their white British counterparts.

Model 1 includes family social class

Model 2 includes ethnicity, age, sex, and family social class

Model 3 includes ethnicity, age, sex, family social class, school type, number and difficulty of A-levels taken

Model 4 includes ethnicity, age, family social class, school type, number and difficulty of A-levels, preferred degree subject, applied locally and applied previously

Model 5 includes ethnicity, family social class, school type, number and difficulty of A-levels, applied locally, preferred degree subject, applied previously and UCAS tariff score

