Elite Higher Education admissions in the Arts and Sciences: Is cultural capital the key?

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Abstract

This article examines the extent to which cultural capital helps to explain the link between social background and gaining an offer for study at the University of Oxford. We find that cultural knowledge, rather than participation in the beaux arts, is related to admissions decisions. This effect is particularly pronounced in arts subjects. We only partly support Bourdieu's postulation of cultural capital as the main differentiator between fractions of the middle class. Measures of cultural capital do not account for the gender gap in admission and only explain a small part of the disadvantage faced by South-Asian applicants.

Keywords

Cultural capital; cultural knowledge; higher education admission; private schools; selective education; social stratification; quantitative methods.

Introduction

The British ruling elite has traditionally been dominated by graduates of the universities of Oxford and Cambridge (2002; Soares 1999, p. 5). Oxford's dominance is reflected in the fact that the majority of British Prime Ministers have passed through Oxford, and Oxford graduates continue to secure leading positions in public life, the judiciary and the media (Boyd 1973; Oxford University Careers Service 2006). Thus, Oxford has played a unique role in the social reproduction of British society.

In an era of rapid expansion and stratification of the higher education system (Shavit et al. 2007), growing competition for credentials in the reproduction of elites (Bottomore 1964; Collins 1979), and competition between universities for

'reputational capital' (Brown 2000), Oxford admissions tutors have retained a role as gatekeepers to the elite. For this reason, the Oxbridge admissions process is politically controversial, and is subject to a level of debate and public interest which is not applied to any other British university. Central to this is the question of the extent to which Oxbridge admissions are based on social class prejudice, and a corresponding bias against state school applicants. The Oxford colleges have a long history of strong connections with particular private schools, and the belief that this leads to continuing discrimination against state-school applicants is strong. Politicians and the media have been far less interested in the roles of gender and race or ethnicity in the admissions process. They have presented the question of the fairness of Oxford admissions in simple terms of meritocracy (entrance based on academic ability) versus class prejudice and the 'old school tie'. The private school lobby, in turn, rails against 'social engineering', and what it sees as private school pupils being unfairly rejected by universities despite good exam results. The questions of what counts as ability, how we determine whether someone is 'able' or not, and what resources are needed to cultivate a particular ideal of ability, have been largely absent from this debate.

Given the enormous expansion of educational credentials in the last 50 years, the value of school-level credentials has fallen, and a degree no longer guarantees access to jobs of the sort that were once seen as 'graduate level' posts. Thus, access, not just to higher education, but to elite institutions and/or fields of study, has become increasingly important. Social class inequalities in academic attainment and access to Higher Education have persisted during this period (Shavit and Blossfeld 1993), but women's access to HE has increased dramatically. At Oxford, the men's colleges opened their doors to women students between 1974-1984, and the women's colleges have now all gone mixed. Women have increased their share of undergraduate places from about a third in the early 1990s, to 47 per cent in 2007 (University of Oxford Gazette 1991-2008). No ethnic minority group is under-represented in British Higher Education compared to whites, and people of Indian, Chinese and African ethnicity are the most likely to be in HE. However, ethnic minorities tend to cluster in big cities, and at less selective institutions (Bhattacharyya et al. 2003).

There is ongoing anxiety about 'falling standards' in public examinations such as GCSE and A level (Goldstein and Heath 2001). Whether or not standards in these

exams have fallen in any absolute sense, the enormous increase in the number of students achieving high grades makes them less useful as a way of differentiating between university applicants. Thus, a few years after having abolished its entrance exams, Oxford, alongside other elite institutions, is considering reinstituting entrance tests, in order to distinguish between applicants who are almost uniformly highly qualified in terms of A-level grades. For the admissions round in 2006, for example, Medicine, History and Law used pre-admissions tests in the short-listing of candidates for interview. English and Philosophy, Politics and Economics intend to follow suit in the near future and many other subjects – including Mathematics, Psychology and Languages – administer tests after the short-listing stage. Oxford and Cambridge remain exceptional within the British higher education system in interviewing all European applicants for undergraduate admission.

Bourdieu's theory of cultural reproduction seeks to explain the link between social class of origin and social class of destination in terms of the impact of cultural capital on educational attainment. For Bourdieu, cultural capital consists of familiarity with the dominant culture in a society. He argues that the possession of cultural capital varies with social class, yet the education system assumes the possession of cultural capital. This makes it very difficult for lower class pupils to succeed in the education system.

> *'By doing away with giving explicitly to everyone what it implicitly demands of everyone, the educational system demands of everyone alike that they have what it does not give. This consists mainly of linguistic and cultural competence and that relationship of familiarity with culture which can only be produced by family upbringing when it transmits the dominant culture.'* (Bourdieu 1977: 494)

Bourdieu describes the ways in which the criteria of university examiners reflect the values of the dominant classes, and argues that the more vague the demands of the examiners are, the less chance students from the lower classes will have of meeting these demands (Bourdieu and Saint-Martin 1974). He identifies *"...a tendency to prefer eloquence to truth, style to content."* (Bourdieu 1967: 335). A similar argument has been made for non-attainment based criteria in employment selection (Jackson 2003), and the same can be argued of university entrance criteria. For example, Karabel (1984) describes the way that US Ivy League colleges introduced diffuse entrance criteria, based on 'character' rather than just academic attainment, in order to solve the 'Jewish problem' (i.e. the problem that too many Jews were passing the entrance exam). However, few studies examine the link between cultural capital and university admissions (but see (Kaufman and Gabler 2004).

Operationalisation

Whereas most of the empirical research on cultural capital focuses on schools, Bourdieu himself devotes a great deal of discussion to the link between cultural capital and performance in examinations in the French grandes écoles. He claims that the link between cultural capital and academic success is demonstrated:

> *'...by the fact that, among the pupils of the grandes écoles, a very pronounced correlation may be observed between academic success and the family's cultural capital measured by the academic level of the forbears over two generations on both sides of the family...'* (Bourdieu 1977: 497).

In fact, Bourdieu's use of parental educational credentials as a measure of cultural capital begs the question of whether educational credentials simply constitute '*...embodied cultural capital that has received school sanctioning.'* (Bourdieu and Boltanski 1981:145). In addition, the use of bivariate analyses is crude. Clearly, a simple association between two variables is not convincing evidence of a causal relationship. Bourdieu appears to reject multivariate analysis, on the basis that all elements of class reproduction are interconnected:

> *'It is the system of factors, acting as a system, which exerts the indivisible action of a structural causality on behaviour and attitudes and hence on success and elimination, so that it would be absurd to try to isolate the influence of any one factor, or, a fortiori, to credit it with a uniform, univocal influence at the different moments of the process or in the different structures of factors.'* (Bourdieu and Passeron [1977] 1990: 87)

The characteristic opacity of Bourdieu's prose does not help us here; but to infer from the fact that we are dealing with a system of inter-related factors that we cannot isolate the influence of particular factors is clearly fallacious. Take for example the question of the impact of social class and private schooling on admission to Oxford. Of course, social class and private schooling are associated, but rather than being a reason for rejecting multivariate analysis, this is precisely the reason why such analyses are essential. Multivariate analysis would only be ruled out if the variables were not just associated, but completely confounded. Simply looking at the bivariate association between private schooling and acceptance at Oxford would merely tell us that there is a link between the two, but does not allow us to assess whether private schooling increases the chance of admission to Oxford for children of the same social class background. The relationship between social class, private schooling, and Oxford entrance, is something which is likely to change over time. Refusal to use multivariate analysis would severely restrict the extent to which we could analyse this relationship. This sort of blanket rejection of a particular research method is unfortunate, acting as a barrier to informed critical engagement across research traditions.

The role of 'cultural capital' in the transmission of educational inequalities within the school system has been discussed extensively. Bourdieu's theory has been interpreted and operationalised in various ways. Some authors have used 'beaux arts' participation, such as attendance at galleries, museums and concerts as a measure of cultural capital (Katsillis and Rubinson 1990; Lamb 1989). However, reading behaviour and book ownership have generally been found to be better predictors of academic success (Crook 1997; De Graaf et al. 2000; De Graaf 1988; Graetz 1988;

Sullivan 2001). Other measures, such as TV viewing habits and topics of discussion with parents have also been used (Barone 2006; Sullivan 2001). However, measures of cultural and linguistic knowledge or competence have only rarely been included in studies (Dimaggio 1982; Dimaggio and Mohr 1985; Mohr and Dimaggio 1995; Sullivan 2001).

Several authors have criticised an overly narrow interpretation of cultural capital as simply consisting of 'beaux arts' participation, and have suggested that cultural capital should be seen as including certain forms of skill and knowledge which are rewarded in the education system (Crook 1997; De Graaf et al. 2000; Farkas 2003; Ganzeboom 1982; Lareau and Weininger 2003; Sullivan 2001). Thus, cultural capital cannot be readily distinguished from 'cognitive skill' or 'academic ability', but is part and parcel of these concepts. We have argued elsewhere (Sullivan 2002; Sullivan 2007) that cultural participation in itself is likely to be less important than the cultural and linguistic knowledge that it produces, and that certain forms of cultural participation (such as reading) are likely to be more productive than others (such as going to art galleries) in these terms.

We use a broad operationalisation of cultural capital, including beaux arts participation, reading behaviour and books in the home, as well as cultural knowledge, in order to assess which cultural attributes, activities or resources are linked to success in the competition for a place at Oxford. We have developed a test of cultural knowledge which is intended to give an indication of an individual's knowledge of the dominant culture. This test reflects the broader cultural knowledge which is not necessarily transmitted by the school. Familiarity with the dominant culture is central to Bourdieu's conception of cultural capital, but is far less commonly measured in studies than beaux arts participation.

Distinguishing between different forms of cultural capital is important, because there are different theoretical strands within the debate on cultural reproduction. Broadly speaking, some authors emphasize 'information processing' and cultural knowledge, while others emphasize the communication of status (Ganzeboom 1982). By using an operationalisation of cultural capital that includes beaux arts participation, reading, and knowledge, we aim to contribute to the understanding of which forms of cultural

capital matter, at particular moments, in particular institutional contexts, and why. Distinguishing between different forms of cultural participation and cultural resources allows us to investigate which of these actually have currency in the particular institutional context of the Oxford admissions process.

Of course, our measures of cultural capital are limited, and cannot possibly capture every possible facet of this concept. In one sense, this is a limitation of this study, and yet we would also argue that, in order to operationalise a concept, the researcher is forced to impose a degree of clarity and precision on the concept itself. This is essential, because there is always a danger that the concepts used by Bourdieu are amenable to becoming catch-alls, which are too flexible and all encompassing to rule anything out or to tell us anything interesting.

We are not able to consider embodied aspects of social class, such as: physical appearance and demeanour; confidence; styles of speech; and the sports and activities associated with the upper and upper-middle classes. An assessment of these sorts of factors, which are often grouped together under the heading of 'habitus', is unfortunately outside the scope of the current study, since we did not have access to observe interviews. We hope that future research will be able to gain access to the interview process at elite institutions, as this would provide a rich and complementary source of further insights into the ways in which certain groups of students are advantaged or disadvantaged in the competition for a place, producing the patterns of admission which we analyse here.

Bourdieu's analyses of cultural reproduction focus on social class, and neglect issues of gender and ethnicity (Adkins and Skeggs 2004). Nevertheless, it may be that differences in particular cultural resources can help to explain gender and ethnic differentials in educational outcomes, rather than just class differentials.

Research Questions

We aim to assess whether cultural capital is linked to success in gaining admission to Oxford University for those who apply. We acknowledge that the decision to apply to a highly selective institution in the first place is marked by issues of class, gender and

race (Reay et al. 2001), including self-confidence, familiarity with the system, the aspirations of parents (Lareau and Weininger 2003), the support of the school (Stevens 2007) and geographic location (Drewes and Michael 2006). As such, applicants to Oxford are a highly selected sample (Cameron and Heckman 1998) – and applicants from modest social origins can be seen as particularly highly selected, in that simply applying to Oxford puts them in a tiny minority among their peers (Turner 1960). Nevertheless, a great deal of the debate and public interest concerning access to elite universities has concerned admissions rather than applications. Furthermore, perceived prejudice in the admissions system might deter applicants from less privileged backgrounds. The question of what determines acceptance by Oxford for those who have applied is therefore interesting from a policy perspective as well as from a theoretical perspective. Specifically, we address the following questions:

1. How do Oxford applicants vary in their cultural participation and cultural knowledge, according to parents' education, social class, gender and ethnicity?
2. Does cultural capital predict acceptance to Oxford?
3. If so, does its effect remain once we control for examination performance?
4. Is cultural capital more important for admission to the arts and humanities faculties as compared to the sciences?
5. To what extent does cultural capital mediate the effect of social class, parents' education, private schooling, ethnicity and gender?

Data and Methods

Our analysis draws on the Oxford Admissions Study data-set, which contains information on a representative sample of 1,700 applicants with British qualifications who applied to Oxford during the 2002 admissions cycle (Sullivan, 2007). The survey included measures of cultural knowledge and cultural engagement and detailed information on the applicants' social background, as well as their examination attainments and school type. The study took a mixed-methods approach, but we focus here on the survey data, only occasionally referring to qualitative evidence to help us account for our findings.

Variables

Academic Attainment: Attainment at the end of compulsory schooling is operationalised as the mean GCSE grade achieved. We also include achieved and predicted A-level attainment.

Cultural Capital: Measures include cultural participation (visits to museums, art galleries, classical concerts and ballets) as well as reading habits, the number of books in the home, and a test of cultural knowledge designed to reflect knowledge that goes beyond the school curriculum (Sullivan 2001, 2007, see appendix).

Social Background – parental class, parental education, ethnicity and schooling: We use the self-completion version of the Erikson-Goldthorpe-Portocarero (EGP) social class schema (Heath et al. 1998). Occupations and educational attainment of both parents are taken into account where applicable, and the service class is split along the professional / managerial divide.

Due to small numbers, ethnic minority categories were collapsed into: South-Asian (Indian, Bangladeshi and Pakistani); Other; and Ethnicity missing. It would have been desirable to keep the South-Asian groups separate, especially as Bangladeshi and Pakistani students differ greatly from Indian students in terms of social class and educational attainment. However, the small number of observations rendered such a breakdown uninformative for statistical analysis. Schools are categorised as: grammar, comprehensive (other) and private.

Our parental education variable reflects the highly-educated sample: 'two postgraduate parents', 'one postgraduate parent', 'at least one graduate parent', 'parents with professional qualifications', 'parents with attainment at A-level or below' and 'parental education missing' (4.3 per cent).

Results

Table 1 shows the chances of success in gaining an offer for study at Oxford according to social background characteristics. We see no statistically significant link between the educational level of an applicant's parents and their chances of gaining an offer for undergraduate study. This finding is surprising as previous research on less highly selected samples of higher education applicants has found strong effects of parental education on higher education transitions (Grotsky 2007; Mare and Chang 2006). The lack of a significant effect may reflect a lack of variability in the sample, as the majority of the applicants had graduate parents. In contrast, parental social class is associated with admission decisions - 43.6 per cent of applicants with two professional class parents were admitted compared with 33.9 per cent of applicants from managerial class backgrounds. This finding supports Bourdieu's identification of a distinct professional class stratum within the middle class, which is particularly successful in the education system (see alsoSavage and Egerton 1997). Note the insignificant working class coefficient - this may reflect the small number of observations within this group, but may also illustrate the highly self-selected nature of working class applicants to Oxford. The link between missing class values and educational disadvantage replicates previous studies (Rothon 2008; Rothon forthcoming 2008).

[TABLE 1 ABOUT HERE]

Table 1 also shows large differences in gaining an offer by gender and ethnicity – 40 per cent of male applicants gained a place for study at Oxford compared to 34.1 per cent of female applicants and 38.8 per cent of white applicants gained an offer compared to 22.4 per cent of applicants of South-Asian origin. This finding may seem surprising given that British Higher Education as a whole has seen increasing gender parity, and the disproportionate representation of ethnic minorities (Boliver 2005). Previous research has also emphasised, however, the importance of accounting for the subject choices by male and female higher education applicants and different ethnic groups in order to assess whether these gross effects translate into net disadvantages. It could be, for example, that women applicants and ethnic minority applicants apply disproportionately to the most competitive subjects and that

this drives their lower chances of success (Bickel et al. 1975). Finally, the 2.5 per cent higher success rate of private school students compared to those from comprehensives is not statistically significant.

Table 1 also describes the distribution of cultural capital according to social background. We see a clear divide between respondents with graduate parents and the rest. Except for the number of books an applicant read in the last year, the scores on cultural measures are significantly lower for applicants without graduate parents than for the offspring of graduates. There is an even stronger link, however, between social class and measures of cultural knowledge and participation. The social class gradient reflects differences between the professional and managerial fractions within the salariat, as well as the difference between these groups and the clerical and working class groups. Those with two professional class parents score most highly on all the measures of cultural capital. This group differs significantly even from families with just one professional class parent, thus emphasising the importance of homogamy in consolidating class advantage. (In supplementary analysis we investigated whether this could be accounted for by the single-parent status of some in the 'one professional' category, but this was not the case).

It is unlikely that differences in the stock of cultural capital could account for the gender difference in success in gaining a place at Oxford, as women score higher than men on two of the four measures, which would lead us to expect that they would be advantaged in the competition for a place. Ethnicity and schooling, on the other hand, are linked with our cultural measures, with South-Asians scoring significantly lower than their white peers on all measures of cultural capital, and private school students scoring significantly higher than state school students on all cultural measures except reading. In sum, if measures of cultural participation and knowledge were found to be significant in predicting which students are successful in the competition for a place at Oxford, then these measures might mediate some of the gross effects of social class, ethnicity and schooling.

[TABLE 2 ABOUT HERE]

Table 2 presents the results of binary logistic regression analyses regarding admissions. We split the analysis into arts (by which we mean 'liberal arts', including humanities) and natural science subjects. We might expect cultural measures to be less important in the natural sciences, since displaying evidence of wide reading and cultural knowledge may be seen as more relevant to being a good arts student than to being a good science student.

The first model shows the link between social background and academic attainment and admission to Oxford. (We initially included parental education in this model, but it was not associated with admissions decisions in either Arts or Science subjects and had no impact on the other background coefficients, so we excluded it from subsequent analyses.) We control for academic attainment using both the mean GCSE score and the square of this score (the squared score is included to account for non-linear effects), and we also include predicted A level attainment. Nevertheless, controlling for academic attainment does not account for the social class, ethnic or gender differentials in gaining an offer. In line with the descriptive analysis, we observe a negative effect of not having two professional class parents – this effect is more pronounced in the Arts than in the Science subjects. Female applicants are disadvantaged despite their superior academic qualifications. Perhaps surprisingly, we see that for Arts students, there is a significant negative effect of having attended a private school. This effect is not apparent unless we account for prior academic attainment. In other words, prior academic attainments being equal, selectors for Arts subjects at Oxford exhibit a preference for state school students over private school students.

Our cultural capital measures are introduced in the second model, and those measures which proved statistically significant are shown. The most powerful cultural capital measure for predicting admission to arts subjects at Oxford is the inclusion of applicants' score on the test of cultural knowledge. Measures of cultural participation were not significant. The number of books in the home initially appeared significant, but this effect was entirely mediated by the cultural knowledge score – in other words, books matter because of their link to knowledge. The addition of the cultural knowledge measure to the model decreases the social class effect and the South-Asian effect in other words, cultural capital explains some of the lower success rate of non-

professional class applicants and South Asians. The negative private school effect, however, is further increased, given this group's higher average performance on the test of cultural knowledge.

For Science applicants, we also find negative effects for being from a non-professional class background, female or South Asian, and the effects for gender and ethnicity are stronger for sciences than for arts subjects. There is no significant effect of private schooling. In contrast to arts subjects, there are no significant effects of including applicants' performance on the test of cultural knowledge or books in the home. The number of books read in the last year is significant, but does not substantially mediate the class, gender or South Asian effects..

Overall, it is noteworthy that beaux arts participation plays no role in admissions for either arts or sciences, whereas cultural knowledge helps to predict who gains an offer in arts subjects, and reading is relevant for the sciences.

Discussion

Bourdieu's development of cultural reproduction theory frequently drew on examples from elite French universities, yet most empirical analyses using Bourdieu's theory have focused on secondary schooling rather than Higher Education. Access to elite higher education remains a powerful instrument of social reproduction in Britain, and this paper has addressed the question of the role played by cultural capital in determining access to Oxford University. We have also sought to contribute to efforts to refine the cultural reproduction perspective, by distinguishing between the effects of beaux arts participation, reading, and cultural knowledge.

Even among our highly-selected sample, cultural capital was unequally distributed. High scores were associated with having graduate parents, with two professional class parents, private school attendance and white ethnicity. Female applicants scored more highly than male applicants on our measures of reading and cultural participation, but there was no significant gender difference on tested cultural knowledge.

We found that beaux arts participation was not related to success in gaining an Oxford place, cultural knowledge was a significant predictor of admission in Arts subjects and reading habits for Science subjects. This finding lends some support to Bourdieu's analysis that the more vague the demands of gate-keepers in the educational system, the more important the role of cultural knowledge in meeting them (Bourdieu and Saint-Martin 1974). However, it is also interesting that the negative effects for South-Asians and women were stronger in science admissions than in arts admissions, suggesting that direct discrimination may be more prevalent in science admissions.

Both wide reading and wide cultural knowledge might help applicants in entrance tests as well as at interview, whereas beaux arts participation is not so relevant here. In the qualitative interviews carried out as part of this study (Sullivan), tutors were clear on the desirability of a love of reading: *'...you* have *to be able to read. I mean you get* enormously *long reading lists.'* In contrast, tutors did not mention beaux arts participation as especially desirable, and one mentioned that he did not take into account extra-curricular achievements such as '*...playing the flute to grade eight…'.* Although tutors stressed the importance of reasoning skills, some recognised that these skills do not develop in a vacuum:

> *'Ability's not something that develops in utter independence of everything else you know…* Yes*, students who've come from educated backgrounds, who've been exposed more to in breadth literature or whatever have possibly a better* chance *of proving themselves more* able *for entry into a course where that's what they'll be doing. Not that that is necessarily a good indication of* motivation*, or indeed of* ability*, but certainly of a certain kind of acculturation of training, yes, for sure. And I think that's in a sense what is very difficult to assess in interviews - to see* through *the training.'*

The tutor acknowledges the importance of 'acculturation', and yet still suggests that there is some underlying 'ability' which could in principle be separated from this. While this tutor implicitly recognises the potential importance of cultural capital, none of the tutors interviewed were willing to entertain the possibility that social class, gender or ethnicity might have some direct impact on admissions decisions.

We investigated whether cultural capital mediated the direct effects of social background on gaining an offer. We were surprised to find that, while cultural capital was related to the parental education, parental education had no impact on the chances of gaining an offer for study at Oxford. This is in contrast to other research on less selected samples of students (Mare and Chang 2006). While for Arts applicants, cultural capital accounted for much of the social class differential in favour of two-professional families, this was not the case in science admissions.

The effects of gender and race on admissions were striking. While 54.2 per cent of our sample were female, and 6.6 per cent from South-Asian backgrounds, the representation of these groups dropped to 49.8 per cent and 4.0 per cent of the admitted students respectively. Neither subject choice nor educational attainment explain these differences. The inclusion of cultural capital measures largely explain the South-Asian disadvantage in Arts but not in Science subjects, and cannot explain the female disadvantage. It has often been noted that Oxford finals examiners (especially in subjects such as History and English) reward a highly self-confident, quintessentially upper-class and masculine, style of argument (Mccrum 1994), which might have led us to expect less bias against female applicants in the sciences than in the arts. The direct ethnic and gender effects may be due to the overwhelmingly white, and 80 per cent male academic staff at Oxford tending to recruit in their own image (Kanter 1977).

The issue of state and private schooling has dominated debate on Oxford admissions, and it is often assumed that private school applicants are favoured. We found that, taking prior academic attainment into account, private schooling was actually negatively linked to the chances of gaining an offer. Qualitative research on admission to Oxford has shown that this is due to the discounting of private school performance by selectors (Sullivan 2007). This reflects a clear change, as, during the 1990s, successful applicants from state schools still had superior A level results to successful applicants from private schools (Mccrum et al. 2003). This change has been partly driven by a desire to comply with government targets of state school intake (University of Oxford 2004), but can also be justified by the fact that private school students actually perform less highly at university than state school students with the same secondary school attainment levels. As Karabel (2005) argues in his history of admissions at the US ‘big three’ (Harvard, Yale and Princeton), changing

admissions policies must be understood in terms of the institutions' pursuit of their own interests in the face of both competition between institutions, and the need to maintain the system's perceived legitimacy externally.

For those who apply to Oxford, academic attainment is of course a crucial predictor of success in gaining a place, and cultural knowledge is also relevant, perhaps because it allows the applicant to persuade the admissions tutors that they have the right sort of intellectual breadth and potential, which may not be adequately assessed by examination results. However, it is also plausible that other factors that we have not been able to consider here, which are also linked to class and gender, such as self-confidence at interview, sporting participation (especially for men) and physical appearance (especially for women) may also sway admissions decisions, and a knowledge of the rules of the game, such as tactical considerations regarding which college to apply to, must also play a part.

To sum up, this article has illustrated the possibility of quantifying Boudieu's concept of cultural capital in order to examine its role in social and institutional processes such as Higher Education admissions. We have also suggested the need for care in choosing the most appropriate cultural capital measures for the context under study. In particular, for this research, we have tailored the test of cultural knowledge previously developed by Sullivan (2001) to suit the context of a highly competitive educational transition. This study also contributes to the literature suggesting that beaux-arts participation is not the most relevant form of cultural capital when examining educational outcomes. Instead, we have supported the case for using measures of cultural knowledge. What matters is a relationship of familiarity with culture, rather than just participation in culture. In other words, is not enough for parents to simply take their children to the museum, or send them to learn the flute, but children who read and understand high culture, and accumulate the cultural knowledge rewarded by the education system, fare particularly well in the competition for a place at Oxford.

Appendix – Cultural Capital Survey Questions

1) **How many books are there in your home?** There are usually about 40 books per metre of shelving. Do not include magazines. *(Please tick only one box.)*

None (1)
1-10 books (2)
11-50 books (3)
51-100 books (4)
101-250 books (5)
251-500 books (6)
More than 500 books (7)

2) **During the last year, how often have you participated in these activities?** *(Please tick one box on each line.)*

	Not in the past year	Once or twice	About 3 or 4 times	More than 4 times
(1)Visited a museum or art gallery	( )	( )	( )	( )
(2)Attended an opera, ballet or classical concert	( )	( )	( )	( )
(3) Watched live theatre	( )	( )	( )	( )
(4) Played a musical instrument	( )	( )	( )	( )
(5) Read a book for pleasure	( )	( )	( )	( )

Responses 1 to 4 were combined to form the cultural participation index. Response 5 was used to construct the reading habit measure.

3) Cultural Knowledge Test (Sullivan, 2001)

Each of the following people has been distinguished in one of the fields of politics, music, literature, art or science. For each person, please say which category you associate him or her with. If you do not know, do not guess, just tick "don't know". *(Please tick one box on each line.)*

	Politics	**Music**	Literature	**Art**	**Science**	**Don't Know**
Albert Einstein	( )	( )	( )	( )	( )	( )
Graham Greene	( )	( )	( )	( )	( )	( )
Clara Schumann	( )	( )	( )	( )	( )	( )
Andy Warhol	( )	( )	( )	( )	( )	( )
George Eliot	( )	( )	( )	( )	( )	( )
Martin Luther King Junior	( )	( )	( )	( )	( )	( )
Sergei Rachmaninov	( )	( )	( )	( )	( )	( )
Galileo Galilei	( )	( )	( )	( )	( )	( )
Georges Braque	( )	( )	( )	( )	( )	( )
Tracey Emin	( )	( )	( )	( )	( )	( )
Miles Davis	( )	( )	( )	( )	( )	( )
Gabriel Garcia Marquez	( )	( )	( )	( )	( )	( )
Louis Pasteur	( )	( )	( )	( )	( )	( )
Mahatma Gandhi	( )	( )	( )	( )	( )	( )
Marie Curie	( )	( )	( )	( )	( )	( )
Akira Kurosawa	( )	( )	( )	( )	( )	( )
Sirima Bandaranaike	( )	( )	( )	( )	( )	( )
Olivier Messiaen	( )	( )	( )	( )	( )	( )
Lloyd George	( )	( )	( )	( )	( )	( )
Aleksander Solzhenitsyn	( )	( )	( )	( )	( )	( )

Table 1: Gross Chances of gaining an offer by social background characteristics and Distribution of Cultural Capital by social background

	Gross Chances of gaining an offer			Distribution of Cultural capital by social background			
	Per cent of observations (column per cent)	Number of observations	% gained an offer (row per cent)	Mean on culture test	Mean number of books read in last year	Mean number of books at home (I)	Mean cultural participation
Possible range				0 – 20	1 – 4	1 – 7	4 – 16
Observed range				0 – 19	1 – 4	1 – 7	4 – 16
Parental Education							
Two postgraduates	8.6	165	39.4	10.7	3.75	6.10	10.19
One postgraduate	20.4	394	38.1	10.58	3.66	6.04	9.61
At least one graduate	36.8	710	38.7	10.24	3.66	5.89	9.53
Professional qualification	13.2	254	32.7	**9.23***	3.61	**5.46***	**8.86***
A-levels or below	16.4	316	35.1	**9.21***	**3.47***	**5.05***	**8.35***
Missing	4.7	90	27.8^	**8.39***	**3.38***	**4.83***	**8.77***
Social Class							
Two professionals	28.6	551	**43.6***	10.74	3.69	6.09	9.71
One professional	37.3	720	36.4	**10.03***	3.64	**5.80***	9.43
Managerial class	20.4	394	**33.9^**	**9.50***	3.64	**5.49***	**9.11***
Clerical class	5.2	101	34.7	**9.53***	**3.38***	**5.00***	**8.31***
Working class	5.1	99	30.3	**8.53***	**3.37***	**4.60***	**7.80***
Class Missing	3.3	64	**18.8***	**8.28***	3.47	**5.35***	**8.96***
Sex							
Male	44.9	867	**40.0***	10.07	**3.52**	5.70	**8.72**
Female	55.1	1062	**34.1***	9.88	**3.70***	5.70	**9.76***
Ethnic Group							
White	78.0	1504	**38.8^**	10.21	3.64	5.80	9.40
South-Asian	6.0	116	**22.4***	**8.57***	**3.41***	**4.80***	**7.57***
Other ethnicity	16.0	309	33.6	**9.34***	3.59	**5.56***	9.47
School							
Comprehensive	55.8	1077	35.7	9.64	3.60	5.61	8.90
Private	37.8	730	38.2	**10.52***	3.65	**5.84***	**9.93***
Grammar School	6.3	122	36.9	9.52	3.61	5.64	8.92
Total	100	1929	**37.0**	9.96	3.62	5.70	9.29

^difference almost statistically significant, * difference statistically significant. Statistical significance based on adjusted residuals.

(I) A mean of 4 on the number of books measure means the applicant has got 51 to 100 books in the home. A mean of 5 means the applicant has between 101 and 250 books in the home and a mean of 6 means the applicant has between 251 and 500 books in the home.

Table 2: Logistic Regression Model of gaining an offer (coded as 1) for Arts and Science candidates

	Arts (n =913)				**Sciences** (n=643)			
	Model 1 Background and qualifications		Model 2 Cultural Capital		Model 1 Background and qualifications		Model 2 Cultural Capital	
	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Class								
One professional	-0.48***	0.19	-0.41**	0.19	-0.07	0.23	-0.09	0.24
Managerial class	-0.45**	0.22	-0.35	0.23	-0.45*	0.27	-0.47*	0.28
Clerical class	-0.08	0.36	0.09	0.36	-1.23**	0.59	-1.13*	0.61
Working class	-0.13	0.36	-0.02	0.37	-0.30	0.42	-0.20	0.43
Class Missing	-1.04*	0.63	-0.74	0.63	-1.73**	0.81	-1.80**	0.83
Other background								
Female	-0.38**	0.16	-0.33**	0.16	-0.62***	0.20	-0.68***	0.20
South-Asian	-0.72*	0.43	-0.51	0.43	-1.66***	0.52	-1.62***	0.52
Other ethnicity	0.88***	0.34	0.88***	0.34	-0.54	0.36	-0.52	0.37
Private	-0.39**	0.17	-0.51***	0.18	-0.07	0.21	-0.06	0.21
Grammar	0.17	0.28	0.16	0.29	-0.59	0.38	-0.59	0.39
Structural Controls								
Post qualification candidate	0.63	1.22	0.48	1.22	-0.49	1.16	-0.33	1.17
Meritocratic controls								
GCSE	2.05***	0.22	1.99***	0.22	1.82***	0.28	1.86***	0.28
GCSE squared	0.71***	0.27	0.75***	0.28	0.25	0.51	0.28	0.51
Fewer than 4As predicted at A-level	-0.39**	0.17	-0.41**	0.17	-0.59***	0.20	-0.60***	0.20
Fewer than 3 As predicted at A-level	-0.60*	0.34	-0.68**	0.34	-1.45***	0.46	-1.55***	0.47
Cultural Capital Measures								
Cultural participation								
More than 500 books in the home							-0.02	0.03
Read more than four books per year							0.78***	0.22
culture test Score			0.10***	0.03				
Constant	0.02	0.22	-1.16***	0.38	0.44*	0.25	-0.05	0.31
DF	15		16		15		17	
chi square	145.48***		160.4		137.23***		151.18***	

* p < .10, ** p < .05, *** p < .001

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