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Cultural capital on the move: ethnic and class distinctions in Asian-Australian academic achievement

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ABSTRACT

Asian migrant students are typically considered as educational paragons in the West. They have been shown to surpass other students in standard indicators of educational success. However, viewing this success with a purely ethnic framework is inadequate and essentialising. It conflates the experiences of various groups into a homogenised 'Asian' category and ignores the crucial role played by other properties and processes, such as social class and engagement with hierarchical education systems. This paper incorporates these multiple dimensions to provide a fuller account of 'Asian' success. Using large scale longitudinal survey data from Australia, we demonstrate the internal differences in the educational outcomes of Asian groups, and outline the stratifying role played by parental cultural capital. Most importantly, we show how unequal engagement with schools and the curriculum produces unequal outcomes. This intersectional approach enables a more theoretically integrated understanding of the factors that produce educational inequality in diverse societies.

Introduction

Alongside studies of social class inequality, the colour line of educational achievement has become a central question for sociologists of education. In a context of growth in the migrant student population and persistently poorer outcomes for ethnic minority and migrant students overall in most affluent countries (OECD, 2015), the distinctive educational trajectories of Asian background students have garnered researchers' interest. Most of the scholarship exploring this 'achievement paradox' (Lee & Zhou, 2015) in Western countries has been conducted in the Anglosphere, where long

histories of Asian migration have reconfigured educational institutions and cultures (Watkins et al., 2017).

In the Australian context, one of the few OECD countries where immigrant students tend to overachieve relative to non-immigrant students (OECD, 2015), Asian Australians are regularly portrayed as an ethnic model of educational success. Their accomplishments are usually explained by arguments about the culturally distinctive educational dispositions and practices of Asian migrant families. In this paper, we argue that a more systematic consideration of the intersection of social class and ethnicity, on one hand, and of the relation between social structures and education system structures on the other, helps develop a more robust theory of the educational trajectories of Asian Australians, one that seeks to explain *specific* trajectories using *general* principles of sociological analysis. We argue that taking class seriously helps overcome the limitations of explanations resorting to coarse and homogenising ethnic categories and to cultural essentialism, and that considering the education system as a stratified opportunity structure rather than as a blank slate recognises the structural constraints under which social groups vie for educational distinction.

To do so, we draw on Bourdieu's theory of class and bring an intersectional perspective to his theory of cultural inequality in education. Bourdieu's theory of class constructs hierarchies between individuals and groups based on their possession of various kinds of resources termed 'capitals', most prominently cultural resources (e.g. knowledge and qualifications) and economic resources (e.g. material and financial assets) (Bourdieu, 2010). Cultural capital and its embodiment in relatively durable and internalised habits, outlooks and dispositions, collectively termed 'habitus', are at the core of his theory of class inequality in education, based on the unequal distance between the culture of the education system and different class cultures (Bourdieu, 2018). Based on the results presented in this paper, we argue for the need to theorise these cultural relations in intersectional terms, that is, to approach them as made through both ethnic and class cultures and relations (Collins, 2015), as opposed to defining them in class terms alone.

To examine the intersections of class and ethnicity among Asian Australians and their relation to education system structures, we analyse academic achievement patterns using survey data from six cohorts of nationally representative samples of high school students collected between 1995 and 2015. Our results inflect the mainstream narrative of Asian educational advantage in three significant ways. First, Asian students' social class background is important to their overall level of academic success. This highlights the need for 'classing' the ethnic story of educational achievement. Second, important differences exist between Asian students with different countries of origin. This challenges the homogenising narrative

of Asian educational success. Third, differences in outcomes between groups are linked to differentiated forms of investment in the structures of the education system. This emphasises the role played by schools and the curriculum in the production of inequality. Together, our findings highlight the importance of intersectionality in sociological analyses of ethnicity and education, as well as the significance of education system hierarchies in the production of inequality.

Asian educational achievement in the Anglosphere

Associating Asian identity with educational success has become a widespread intellectual and popular representation in the Anglosphere (Watkins et al., 2017). In the Anglosphere in particular (i.e. in North America, the United Kingdom, Australia and New Zealand), Asian identity as an ethnic category tends to conjure representations of academic ability, educational diligence, examination prowess and scholarly ease. This has led to the production of a growing body of research on ethnicised *representations* of educational habits, practices and outcomes among families, students, schools and media outlets (see Ho, 2019; Watkins, 2017 for Australian examples).

Alongside this literature has developed research comparing the educational *cultures, practices and outcomes* of Asian students to that of their peers. It is to this second body of literature that this paper contributes. In this section, we review current research on the educational practices and trajectories of Asian students in the Anglosphere to orient the analysis presented in the rest of the paper. We then take a brief detour through analyses of class inequality in education to examine research that has explicitly considered the intersections of class and ethnicity in analyses of Asian families' educational practices and outcomes.

Early sociological analyses explained Asian Americans' comparative success through the trajectories of specific Asian migrant groups and the transformations of the American social structure in the post-war decades (Hirschman & Wong, 1986). A twenty-first century version of this model is Lee and Zhou's (2015) 'hyper selection' theory that highlights the importance of immigration policy in selecting highly educated Asian migrants. In Australia, Ho (2020) has adapted Lee and Zhou's theory, identifying the specific migration trajectories of Asian Australians, which create high educational aspirations and highly strategic approaches to their children's education. Meanwhile, Jerrim (2015) has found that mathematics test scores are superior overall for second generation Asian Australian students compared to students with no recent history of family immigration. His results point to the importance of educational dispositions and outlooks, out-of-school educational activities and strategic investment in the school system.

Family aspirations and educational values have long held a central role in sociological theories of East Asian academic success in the Anglosphere (Schneider & Lee, 1990). Lee and Zhou (2015) argue that Asian Americans' aspirations are shaped by 'success frames' that are reinforced by ethnic stereotypes, as well as expectations and interactions within schools, both with teachers and fellow students. Similarly, Aris (2017) documents a 'credentialist' mindset among Indian Australians, who are commonly heavily focussed on examinations and academic results.

On the home front, high aspirations among Asian migrants are manifested in parenting practices resembling 'concerted cultivation'(Lareau, 2011; Vincent & Maxwell, 2016), albeit taking a differentiated form across ethnic groups (Cheadle & Amato, 2011; Mukherjee & Barn, 2021). For example, Chinese Australian parents cultivate a 'scholarly habitus' within children (i.e. academic skills, knowledge and behaviours) that enable educational success (Watkins & Noble, 2013). Outside of home, a key aspect of Asian migrant families' educational practices is their widespread use of supplementary education in the form of private tutoring (Park et al., 2016). This tutoring is typically geared towards acceleration and test preparation, contributing to the distinctive educational outcomes of East Asian students (e.g. Byun & Park, 2012 for an American study).

Less systematically examined, at least in Australia, are the comparative schooling practices of Asian migrant families. In England, Asian families have been found to be more likely to actively choose schools other than their local school (Burgess et al., 2019). In Australia, alongside the study by Jerrim (2015) mentioned above, researchers have documented the over-representation of Asian students in academically selective public schools (Ho, 2020; Tham, 2021). These strategic practices of school choice take place in a system with a high proportion of private schools and where comprehensive public schools tend to be more socio-culturally and academically diverse than private schools, including through enrolment of the majority of disadvantaged students in the country (Gonski et al., 2018).

The literature reviewed so far points to important logics of Asian education success in the Anglosphere, as well as to tentative social processes to consider the intersections of class and ethnicity. Yet, it does not tell the whole story, at least in two respects. First, class analyses and ethnic studies are not sufficiently integrated. For example, while ethnic concentration in Australian selective schools has been widely commented upon, there is less acknowledgement of the high levels of socio-educational advantage of these cohorts (Ho, 2018). As a result, social class needs to be used more systematically as a lens to refine the overly generic 'Asian' category. Analyses that take both class and ethnicity seriously also tend to use coarse measures of class, ethnicity, or both. Marks (2010), for instance, shows how class mediates immigrant academic results in high school English and mathematics in

Australia, but his sample size for immigrant groups does not enable an understanding of the diversity of experiences of Asian-Australian students. These limitations prevent researchers from examining systematically how the intersection of class and ethnicity may vary for different ethnic groups. Potential differences in class position and trajectories between Asian migrant groups thus need to be considered anew, because class differentials are critical to understanding educational inequality even within a more narrowly defined ethnic group (e.g. Chinese Americans) (Louie, 2004).

Second, and perhaps more importantly, most studies tend to take the structures of the education system as a given rather than as a driver of the educational dispositions, aspirations and practices being scrutinised. The coexistence of affluent and poor schools (Lamb, 2007); the social and academic segregation of students into more or less homogeneous learning environments (Perry et al., 2022); the hierarchy of worth ascribed to different subjects in the curriculum (Feniger, 2015; Teese et al., 2009); the organisation of entry into the hierarchised space of higher education based on academic competition (Maire, 2021): these educational structures are too often glossed over when analysing the educational trajectories of Asian migrant students. In doing so, researchers stunt their ability to grasp how the educational aspirations and practices of specific students, families, and ethnic groups are fashioned under *structural constraints* that vary across countries and education systems. There is thus a need to repatriate education system structures into the causal narrative of Asian academic success.

Materials and methods

This paper uses longitudinal survey data to comparatively analyse the educational outcomes of Asian Australian students. The Longitudinal Surveys of Australian Youth (LSAY) follow nationally representative samples of Australian students for 10 years, starting from the end of the lower secondary schooling years (grades 9–10). Data is available for six successive LSAY cohorts covering a 20-year period, with the first survey waves collected in 1995 (cohort 1), 1998 (cohort 2), 2003 (cohort 3), 2006 (cohort 4), 2009 (cohort 5) and 2015 (cohort 6), respectively. Each cohort starts with a sample of over 10,000 participants and, since cohort 3, LSAY builds off the Australian sample for the Programme for International Student Assessment (PISA).

Our analysis focusses on students' academic achievement in the first survey wave (grades 9 for the first two cohorts and grade 10 for the other four cohorts) and in their final year of high school (grade 12). We examine achievement at grade 9–10 in reading and mathematics, and overall academic achievement at grade 12. The mathematics and reading achievement data is constructed from standardised tests administered in the first survey

wave as part of LSAY/PISA. To ensure consistent scaling of the outcome variables across cohorts, the distribution of test scores in mathematics and reading is standardised within cohorts. For the senior years, the overall academic achievement variable is the Australian Tertiary Admission Rank (ATAR), a score ranging from 0 (lowest) to 99.95 (highest) indicating students' position in the state-wide academic achievement distribution in their age group. Only students who complete their senior secondary certificate receive an ATAR, but ATAR scores indicate students' position relative to their entire age cohort, including those who did not reach or complete grade 12. As a result, the mean ATAR for a given year and state is usually around 70 (rather than 50). Before the ATAR was adopted nationally, each state and territory had its own measure of overall achievement at the end of high school (e.g. ENTER scores in Victoria and Overall Positions in Queensland). To ensure comparability across LSAY cohorts, for earlier cohorts, state-specific scores were converted into ATAR equivalents using conversion scales provided by states' tertiary admission centres (the Queensland Tertiary Admissions Centre for the Overall Positions data, for instance).

The main advantage of combining data from the six successive LSAY cohorts is that it supports analysing Asian Australian students' educational outcomes at a more granular level than hitherto. We are able to examine separately the outcomes of 11 different groups of Asian Australian students: Filipino, Vietnamese, Chinese, Indian, Hong Konger, Sri Lankan, Singaporean, Indonesian, Korean and Thai students (see Table 1). These categories were constructed using students' and parents' country of birth. All students born in the listed country or with at least one parent born in the listed country are included in the relevant category, whereas students born in Australia with both parents born in Australia are categorised as 'Australian' without additional qualifier (other recent immigrant groups are excluded from the analysis). It must be noted that the latter category is itself internally diverse: although Anglo Australians make up the majority, the category also includes Indigenous Australians and families with earlier histories of immigration to Australia.

The main drawback of the cross-cohort analysis as conducted here is the lack of comparability for a range of variables that could be relevant to explain class and ethnic differences in academic achievement. Several important variables were not collected consistently across the six cohorts, including variables relating to parental and student aspirations and out of school education (homework, home study practices and supplementary education). As a result, these variables cannot be included in the analysis. In the same vein, LSAY data does not differentiate between selective and non-selective public schools, a distinction that future research should explore more fully.

Students' social class background is measured using parental education and parental occupation variables. This approach to measuring class background is grounded in Bourdieu's theory of class, where class position is based on the possession of cultural capital – measured here using parental education – and economic capital – measured here using parental occupation (Bourdieu, 2010). Parental education is measured by the highest level of education attained using four categories: secondary education, postsecondary nontertiary education, non-degree tertiary education, and university degree. Regarding parental occupation, we use the International Socio-Economic Index (ISEI) of Occupational Status developed by Ganzeboom and colleagues (Ganzeboom, 2010; Ganzeboom & Treiman, 1996) to measure the earnings potential of occupations. Parental occupation scores for the first five cohorts were coded using the ISEI-88 scale; for the sixth cohort, the more recent ISEI-08 scale was used. To ensure cross-cohort comparability, ISEI scores are standardised within cohorts.

We use hierarchical linear regression models (four models for the grades 9–10 analyses and five models for the grade 12 analysis) to first explore ethnic differences in academic achievement (model 1), followed by the addition of social class variables (model 2). The following student variables are then included as covariates in model 3: a first generation dummy variable to ascertain differences between second- and first-generation immigrants; a dummy variable for the main language spoken at home (English or other); a gender variable (male versus female); and four dummy variables measuring the socio-economic status of the students' area of residence across five quintiles, using the Australian Bureau of Statistics' Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) (Australian Bureau of Statistics, 2018). In model 4, two school type variables are included as covariates: dummy variables identifying whether students' school is public, private Catholic or private non-Catholic; and dummy variables identifying the geographical location of the school (urban, inner regional or rural). For the grade 12 analysis, model 5 adds 11 curriculum area variables (one per curriculum area) counting how many subjects student take in: English; languages other than English (LOTE); mathematics; science; business; humanities and social sciences (HASS); arts; health and physical education (HPE); information and communication technology (ICT); industry; and technology. In all models, we also control from cohort membership to ensure cohort effects are neutralised. The cohort controls are not included in the output tables for readability. When reporting the results of the reading achievement and ATAR regression models, we include robust standard errors given the observed heteroscedasticity. Given that the majority of variables

in the model are dummy coded and that continuous variables are standardised, we report unstandardised coefficients (B).

Results

Table 2 presents the four successive regression models fitted to analyse the role of ethnicity and class for Australian students' mathematics achievement in grades 9–10. The first model only considers ethnic differences in achievement. Overall, Asian Australian students do better than their peers without a recent immigrant background. Thai and Filipino students perform at a similar level as non-immigrants, whereas the other nine Asian groups score significantly higher. The highest scoring ethnic group in mathematics is Chinese students, followed by Hong Konger and Singaporean students. However, ethnicity alone is a weak predictor of achievement level, with model 1 accounting for only 2.6% of the variation in mathematics achievement between students.

Model 2 adds social class variables to the equation to examine the intersection of ethnicity and class. After controlling for class differences between ethnic groups, Chinese, Hong Konger and Vietnamese students are those with the highest level of mathematics achievement at grades 9–10. All Asian background students except those from Thai and Filipino

Table 1. Sample description (n and %).

		Grades 9–10	Grade 12
Ethnic background (n)			
	Australian	41,313	11,287
	Filipino	901	239
	Vietnamese	752	282
	Chinese	704	258
	Indian	622	241
	Malaysian	560	213
	Hong Konger	366	173
	Sri Lankan	340	160
	Singaporean	296	101
	Indonesian	237	70
	Korean	251	70
	Thai	186	53
Total		46,528	13,147
Descriptives (%)			
Class: highest parental education	Secondary	21.4	18.3
	Postsecondary nontertiary	28.1	20.9
	Short (non-degree) tertiary	12.5	10.0
	University degree	38.0	50.7
Immigrant status	2nd gen.	7.3	8.9
	1st gen.	4.3	5.2
Language spoken at home	LOTE	5.5	6.1
Gender	Male	49.3	44.5
School location	City	57.7	63.7
	Regional	24.6	23.5
	Rural	17.7	12.8
School sector	Public	60.6	50.2
	Private Catholic	23.0	27.4
	Private non-Catholic	16.3	22.4

Table 2. Hierarchical OLS regression estimates for Australian students' mathematics achievement (grades 9–10).

Variables		Model 1 B	Model 1 SE	Model 2 B	Model 2 SE	Model 3 B	Model 3 SE	Model 4 B	Model 4 SE
Ethnicity (ref=Australian)	Filipino	−0.04	0.03	−0.07*	0.03	−0.01	0.03	0.01	0.03
	Vietnamese	0.39***	0.04	0.55***	0.03	0.74***	0.04	0.73***	0.04
	Chinese	0.73***	0.04	0.66***	0.04	0.79***	0.04	0.79***	0.04
	Indian	0.38***	0.04	0.19***	0.04	0.24***	0.04	0.24***	0.04
	Malaysian	0.59***	0.04	0.42***	0.04	0.40***	0.04	0.40***	0.04
	Hong Konger	0.69***	0.05	0.60***	0.05	0.72***	0.05	0.68***	0.05
	Sri Lankan	0.41***	0.05	0.20***	0.05	0.23***	0.05	0.22***	0.05
	Singaporean	0.62***	0.06	0.44***	0.05	0.39***	0.05	0.36***	0.05
	Indonesian	0.35***	0.06	0.28***	0.06	0.35***	0.06	0.34***	0.06
	Korean	0.46***	0.06	0.30***	0.06	0.46***	0.06	0.45***	0.06
	Thai	−0.10	0.07	−0.07	0.07	0.04	0.07	0.03	0.07
Class: highest parental education (ref=secondary)	Postsecondary nontertiary			0.16***	0.01	0.14***	0.01	0.13***	0.01
	Short (non-degree) tertiary			0.15***	0.02	0.14***	0.02	0.13***	0.02
	University degree			0.44***	0.01	0.39***	0.01	0.36***	0.01
Class: highest parental occupation score				0.21***	0.01	0.18***	0.01	0.17***	0.01
Immigrant status (ref=2nd gen)	1st gen.					0.02	0.03	0.04	0.03
Language spoken at home (ref=English)	LOTE					−0.34***	0.03	−0.33***	0.03
Gender (ref=female)	Male					0.13***	0.01	0.13***	0.01
Socio-economic area of residence (ref=1st quintile (poorest))	2nd quintile					0.07***	0.02	0.05***	0.02
	3rd quintile					0.11***	0.01	0.08***	0.01
	4th quintile					0.13***	0.01	0.10***	0.02
	5th quintile (most affluent)					0.30***	0.01	0.24***	0.02
School location (ref=city)	Regional							0.02	0.01
	Rural							−0.05***	0.01
School sector (ref=public)	Private Catholic							0.10***	0.01
	Private non-Catholic							0.30***	0.01
Constant		0.11***	0.01	−0.07***	0.01	−0.26***	0.02	−0.28***	0.02
Adjusted R Square		0.026		0.133		0.150		0.162	

backgrounds outscore non-immigrants. In this model, alongside ethnicity, students' social class background becomes a strong correlate of mathematics achievement, after controlling for differences in the ethnic composition of different social classes. Students with university educated parents tend to outperform their peers without postsecondary educated parents by 0.44 standard deviations (SD) (i.e. about 40 points in PISA 2018 mathematics scores). Similarly, a one SD increase in students' parental occupation score is associated with a 0.21 SD increase in mathematics achievement (19 points in PISA 2018). Importantly, parental education – as an indicator of family cultural capital – and parental occupation – as an indicator of family economic capital – are both independently associated with an increase in student achievement. Controlling for social class differences between ethnic groups decreases

the achievement gap between Asian and other students, but Asian students still score significantly higher than their non-immigrant peers (e.g. by 60 PISA 2018 mathematics points for Chinese students, 55 points for Hong Konger students and 50 points for Vietnamese students). The overall model now accounts for 13% of the total variation in mathematics achievement.

Model 3 adds a range of student-level controls to identify if they condition the class and ethnic patterns observed in model 2. Overall, after controlling for these new variables, the difference in mathematics scores associated with class background remains strong (0.44 SD higher in test scores for students with university educated parents compared to those without postsecondary education, and 0.21 SD higher in test scores for a one SD increase in parental occupation scores). More than class, however, the strongest correlates of mathematics achievement are students' Chinese, Vietnamese and Hong Konger backgrounds. In this model, the diversity of achievement levels between Asian groups is marked, with the gap between the three aforementioned highest achieving cohorts and other high-achieving cohorts (e.g. students from Indian, Sri Lankan and Indonesian backgrounds) being wider than the gap between these latter cohorts and non-immigrant students. Filipino and Thai students also perform on par with non-immigrant students, after controlling for class differences and other student attributes. Students living in the most socioeconomically privileged quintile of local areas also significantly outscore students living in other areas, net of their own social class background and ethnicity. Model 3 accounts for 15% of the variation in mathematics scores between students.

Model 4 adds school variables. In this final model, the strongest correlates of students' mathematics achievement remain ethnicity, with Chinese, Hong Konger and Vietnamese students significantly outperforming other cohorts of both Asian and non-Asian students. The achievement gap between students with more or less family cultural capital remains wide, comparable in magnitude to the gap between Singaporean background and non-immigrant students (i.e. 0.36 SD in test score points). As in model 3, the socioeconomic profile of students' area of residence remain significantly associated with differences in mathematics test scores, net of students' class background and ethnicity. Model 4 also shows that, after controlling for a broad range of student attributes (including their class and ethnicity), school system differences contribute to the production of mathematics inequality between students. Students in rural schools display lower levels of achievement than their class- and ethnicity-matched peers in city schools. More prominent yet are school sector differences, with both private Catholic and private non-Catholic enrolment associated with higher levels of mathematics achievement. In fact, the gap between public and private non-

Table 3. Hierarchical OLS regression estimates for Australian students' reading achievement (grades 9–10).

		Model 1		Model 2		Model 3		Model 4	
Variables		B	RSE	B	RSE	B	RSE	B	RSE
Ethnicity (ref=Australian)	Filipino	0.01	0.03	−0.01	0.03	0.10***	0.03	0.10***	0.03
	Vietnamese	0.25***	0.03	0.40***	0.03	0.70***	0.04	0.67***	0.04
	Chinese	0.44***	0.04	0.37***	0.04	0.67***	0.04	0.67***	0.04
	Indian	0.27***	0.04	0.09*	0.03	0.23***	0.04	0.21***	0.04
	Malaysian	0.46***	0.04	0.29***	0.04	0.33***	0.04	0.33***	0.04
	Hong Konger	0.34***	0.05	0.25***	0.05	0.52***	0.05	0.48***	0.05
	Sri Lankan	0.40***	0.05	0.20***	0.05	0.30***	0.05	0.28***	0.05
	Singaporean	0.50***	0.05	0.31***	0.05	0.32***	0.05	0.29***	0.05
	Indonesian	0.24***	0.06	0.18**	0.06	0.35***	0.06	0.34***	0.06
	Korean	0.18**	0.07	0.02	0.07	0.32***	0.07	0.31***	0.07
	Thai	−0.17*	0.07	−0.15*	0.07	0.07	0.07	0.06	0.07
Class: highest parental education (ref=secondary)	Postsecondary nontertiary			0.14***	0.01	0.14***	0.01	0.13***	0.01
	Short (non-degree) tertiary			0.17***	0.02	0.16***	0.02	0.15***	0.02
	University degree			0.42***	0.01	0.39***	0.01	0.35***	0.01
Class: highest parental occupation score				0.21***	0.01	0.18***	0.01	0.17***	0.01
Immigrant status (ref=2nd gen)	1st gen.					−0.07*	0.03	−0.06*	0.03
Language spoken at home (ref=English)	LOTE					−0.48***	0.03	−0.47***	0.03
Gender (ref=female)	Male					−0.31***	0.01	−0.31***	0.01
Socio-economic area of residence (ref=1st quintile (poorest))	2nd quintile					0.08***	0.02	0.06***	0.02
	3rd quintile					0.13***	0.01	0.09***	0.01
	4th quintile					0.14***	0.01	0.09***	0.02
	5th quintile (most affluent)					0.29***	0.01	0.21***	0.02
School location (ref=city)	Regional							−0.01	0.01
	Rural							−0.09***	0.01
School sector (ref=public)	Private Catholic							0.15***	0.01
	Private non-Catholic							0.27***	0.01
Constant		0.15***	0.01	−0.03	0.01		0.02	0.00	0.02
Adjusted R Square		0.013		0.117		0.162		0.174	

Catholic school students (controlling for the other variables in the model) is larger than the gap between Indian and non-immigrant students, for instance (0.30 SD versus 0.24 SD in test score points). After adding these school variables, the model accounts for 16% of the total variation in mathematics scores.

Are these patterns specific to mathematics, or can they be observed for reading test results as well? Table 3 helps answer this question. In model 1, it is Chinese, Malaysian, Sri Lankan and Singaporean background students who perform the highest in reading, but the goodness of fit of the model is poor (accounting for less than two per cent of the variation in reading test scores). In models 2, 3 and 4, the key patterns observed in mathematics test scores are evident again: class background is a strong positive correlate of student test results (especially for cultural capital, measured using parental

education variables), as are private school attendance and living in a socioeconomically privileged area of Australia. Ethnic comparisons reveal that Asian students tend to outscore non-immigrant students even after accounting for differences in ethnic groups' class composition, but Asian students' reading achievement is highly heterogeneous. On one hand, Chinese and Vietnamese students are the highest achieving, followed by Hong Konger students. On the other hand, the gap between the achievement of other Asian background students and non-immigrant students is smaller than the gap observed between students with university educated versus secondary educated parents. Comparing Tables 2 and 3, the main difference is a gender one: whereas boys do a little better in mathematics, they perform significantly lower than girls in reading tests (controlling for class and ethnic differences). The gender gap is twice as large in reading than in mathematics (0.13 SD in boys' favour in mathematics but 0.31 SD in girls' favour in reading), amounting to the same test score gap as the one observed between Korean background and non-immigrant students (0.31 SD in reading test scores). Model 4 accounts for about 17% of the total variation in reading test scores.

The longitudinal design of LSAY allows for an examination of overall achievement scores at the end of high school for students included in the analyses for Tables 2 and 3. Before examining tertiary admission scores (ATARs) in Table 4, however, it is important to note that a proportion of students who complete school do not receive an ATAR (either because they do not complete their high school certificate or because they do not meet the criteria necessary to be awarded a score). Figure 1 shows that there are class and ethnic differences in the proportion of grade 12 students who receive a tertiary admission score. Overall, three in four grade 12 students without a university educated parent (75.7%) receive an ATAR, but over nine in 10 students with a university educated parent do so (90.9%). Differences between ethnic groups are also evident and large: non-immigrants have the lowest rate of ATAR award (81.0%), whereas almost all Chinese and Hong Konger background students receive an ATAR (97.4% and 97.9% respectively). In other words, class and ethnic differences in tertiary admission scores discussed below must be interpreted in the context of important class and ethnic differences in educational attainment, i.e. in the degree to which students awarded an ATAR are representative of their broader class or ethnic cohort.

Table 4 presents five models fitted to analyse students' tertiary admission scores. To the four models included in Tables 2 and 3 is added a fifth one, which examines students' investment in different areas of the curriculum. In model 1, most Asian background students outscore non-immigrant students, except for Indonesian and Thai students (no difference with their non-immigrant peers) and Filipino students (who receive lower ATARs

Table 4. Hierarchical OLS regression estimates for Australian students' overall academic achievement (grade 12).

Variables		Model 1		Model 2		Model 3		Model 4		Model 5	
		B	RSE	B	RSE	B	RSE	B	RSE	B	RSE
Ethnicity (ref=Australian)	Filipino	−3.8***	1.09	−3.0*	1.08	−3.6***	1.11	−3.3***	1.11	−3.2***	1.03
	Vietnamese	7.7***	0.91	11.7***	0.92	10.6***	1.06	11.3***	1.07	6.3***	0.99
	Chinese	12.1***	0.84	12.7***	0.82	10.5***	1.00	11.2***	1.02	8.4***	0.94
	Indian	8.4***	0.95	6.4***	0.87	5.1***	0.96	5.4***	0.95	3.9***	0.85
	Malaysian	9.9***	1.07	7.9***	1.00	6.5***	1.03	6.8***	1.04	3.5***	0.92
	Hong Konger	10.5***	1.12	10.3***	1.10	7.5***	1.24	7.4***	1.24	5.4***	1.13
	Sri Lankan	6.2***	1.43	4.2***	1.35	3.1*	1.36	3.3*	1.35	0.7	1.16
	Singaporean	10.7***	1.45	8.4***	1.47	7.0***	1.46	6.6***	1.44	5.0***	1.32
	Indonesian	1.9	2.18	3.5	2.06	2.6	2.02	2.9	2.03	0.2	1.90
	Korean	12.5***	1.45	12.0***	1.38	8.9***	1.53	9.7***	1.55	7.6***	1.38
	Thai	−1.6	2.33	−0.3	2.23	−1.8	2.19	−1.3	2.23	−2.4	2.12
Class: highest parental education (ref=secondary)	Postsecondary nontertiary			2.4***	0.51	2.3***	0.51	2.3***	0.50	2.0***	0.47
	Short (non-degree) tertiary			2.4***	0.62	2.5***	0.61	2.5***	0.61	1.7***	0.57
	University degree			7.8***	0.47	7.4***	0.46	7.0***	0.46	5.5***	0.43
Class: highest parental occupation score				3.0***	0.18	2.7***	0.18	2.5***	0.18	2.1***	0.16
Immigrant status (ref=2nd gen)	1st gen.					1.1	0.77	1.7*	0.77	0.0	0.70
Language spoken at home (ref=English)	LOTE					1.1	0.85	1.3	0.85	0.1	0.79
Gender (ref=female)	Male					−2.6***	0.29	−2.7***	0.28	−3.0***	0.28
Socio-economic area of residence (ref=1st quintile (poorest))	2nd quintile					−0.3	0.62	−0.5	0.61	−0.6	0.58
	3rd quintile					0.1	0.60	0.1	0.61	0.0	0.57
	4th quintile					1.6*	0.58	1.8***	0.60	1.6*	0.57
	5th quintile (most affluent)					4.0***	0.56	4.1***	0.60	3.7***	0.57
School location (ref=city)	Regional							0.9*	0.41	1.0*	0.39
	Rural							2.5***	0.51	1.8***	0.47
School sector (ref=public)	Private Catholic							2.3***	0.34	1.8***	0.32
	Private non-Catholic							5.2***	0.36	4.3***	0.33

(Continued)

Table 4. (Continued).

Variables	Model 1		Model 2		Model 3		Model 4		Model 5	
	B	RSE	B	RSE	B	RSE	B	RSE	B	RSE
Number of subjects										
English									0.1	0.37
LOTE									4.1***	0.37
Math									3.7***	0.28
Science									3.2***	0.22
Business									0.0	0.27
HASS									0.8***	0.21
Arts									−1.8***	0.26
HPE									−4.2***	0.31
ICT									−4.0***	0.40
Industry									−5.2***	0.42
Technology									−4.5***	0.42
Constant	73.8***	0.35	69.1***	0.43	68.8***	0.64	66.7***	0.72	64.3***	1.12
Adjusted R Square	0.041		0.128		0.142		0.156		0.276	
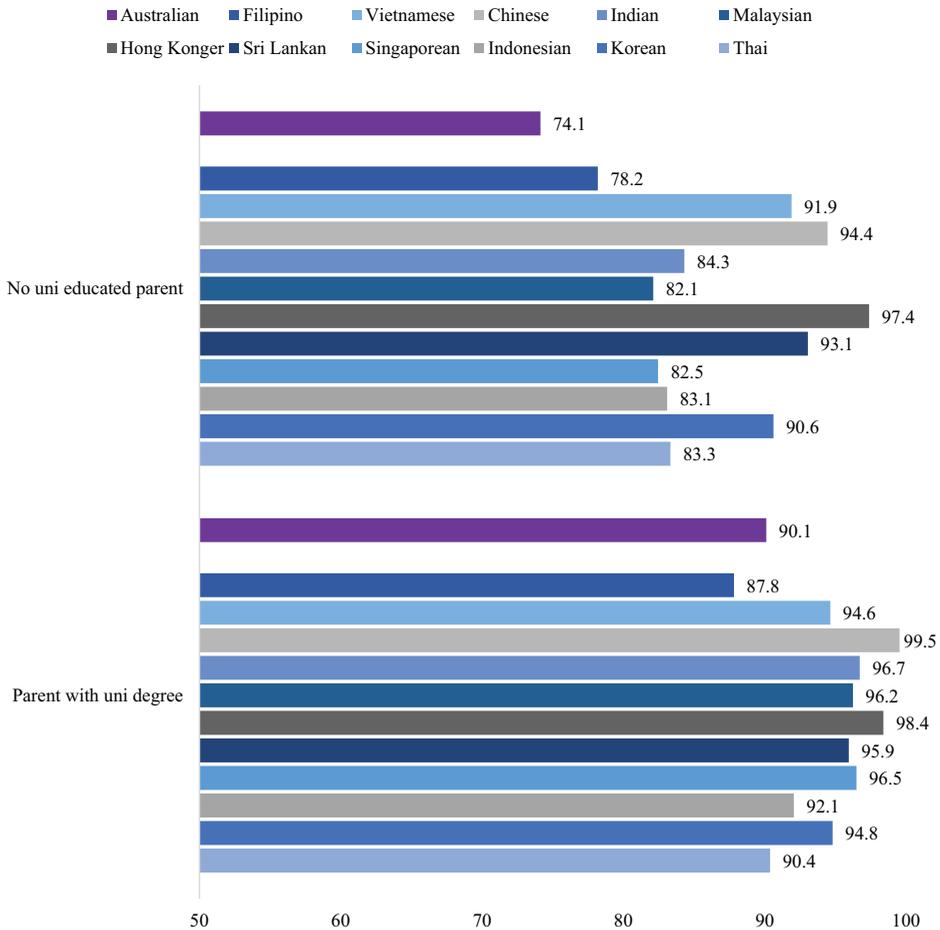
Figure 1. Percentage of grade 12 students receiving a tertiary admission score, by class and ethnicity (%).

than their non-immigrant peers). Chinese background students, the highest achieving Asian cohort, outscore non-immigrant students by around 12 ATAR points on average, and the model accounts for four per cent of the total variation in tertiary admission scores. Model 2 reveals consistent results with those observed in Tables 2 and 3: for some Asian cohorts, ethnicity remains associated with higher ATARs, and social class emerges as a strong correlate of differences in ATAR results. After controlling for students' class background, Chinese, Korean and Vietnamese students outscore their peers by around 12 ATAR points, whereas Filipino students under-achieve by three ATAR points compared to their non-immigrant peers. On the class front, students from university educated families outscore those with parents with secondary schooling as their highest level of education by about eight ATAR points (after controlling for ethnic background differences). Class differences associated with parental occupation

are also significant, although smaller than those observed based on parental education. Students' class and ethnicity here account for about 13% in the variation in students' tertiary admission scores.

With minor differences, models 3 and 4 are also consistent with the results observed for mathematics and reading achievement at grades 9–10: the highest scoring cohorts are Vietnamese and Chinese background students, whereas Filipino students obtain lower scores than their non-immigrant peers; the gap between students from families with high versus low cultural capital (7.4 ATAR points in model 3) is comparable to the gap between Hong Konger background and non-immigrant students (7.5 ATAR points in model 3); and a four ATAR point gap is observed between students living in the most versus least affluent suburbs (after controlling for class and ethnic differences). As is true for reading test scores in grades 9–10, girls significantly outscore boys on average. Regarding school system structures, private school students receive higher ATARs than their public school counterparts (net of class, ethnic and gender differences between school sectors), with private non-Catholic school students outscoring their public school comrades with similar socioeconomic and ethnic profiles by about five ATAR points. Model 4 accounts for close to 16% of the variation in grade 12 scores.

To understand the role of education system structures more fully, model 5 includes curriculum variables, measuring the number of subjects students choose in each curriculum area. Including these curriculum variables significantly improves the model's ability to account for variation in students' ATAR scores (by about 12% points, i.e. the same amount of variation accounted for by students' social class and ethnicity combined in model 2). The inclusion of these variables highlights the important role played by the curriculum as an educational structure, as well as its polarised nature. Students taking more LOTE, mathematics and science subjects tend to receive significantly higher scores (by 4.1 ATAR points in LOTE and 3.2 ATAR points in science for each additional subject, after controlling for class, ethnicity and school sector enrolment). On the other hand, students taking more HPE, industry, ICT and technology subjects tend to receive significantly lower tertiary admission scores (by 5.2 ATAR points in industry and 4.2 ATAR points in HPE for each additional subject, net of the other variables in the model). In this final model, Chinese, Korean, and Vietnamese students, alongside those from families with more cultural capital, are the groups with the highest ATAR premium. These results highlight the importance of considering both class and ethnicity, and also the hierarchical structure and differential valuing of school subjects, to understand academic inequality in Australian education.

Discussion: ethnicity, class and educational structures

This paper seeks to advance our understanding of Asian educational achievement in the Anglosphere, focussing on the Australian case. By looking at intersections of ethnicity and class, and by including an explicit focus on education system features, our aim has been to refine ethnicised explanations of educational success. The findings support four main arguments. First, Asian Australian students tend to perform better than their non-immigrant peers on average. Ethnicity is thus a relevant dimension to examine educational inequality in Australia. Second, part of the academic inequality between Asian and non-Asian students is driven by differences in class backgrounds between them. Analyses of ethnic differences in educational outcomes thus need to fully consider the class positions of different ethnic groups. Third, the story of Asian educational results in Australia is one of *uneven* outcomes, with significant differences *between* Asian student cohorts. Resorting to overly broad ethnic categories is thus problematic. Fourth, and perhaps most importantly, both class and ethnic inequalities are produced through investment in *stratified* education system structures, starting with schools and the curriculum. Analyses that abstract the educational fortunes of different social groups from the specific education system
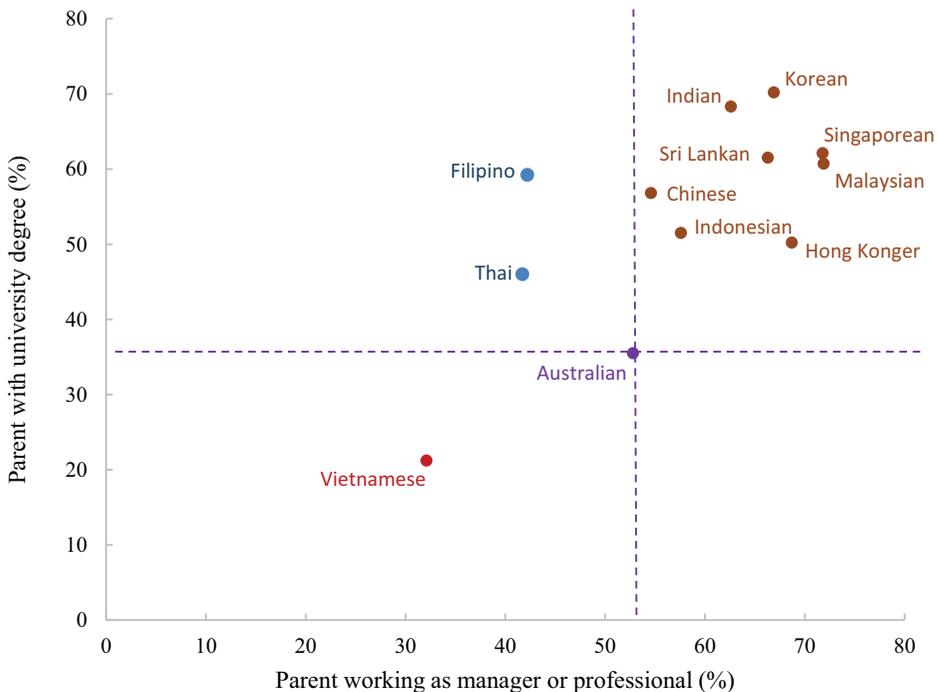
Figure 2. Class background of Asian Australian students compared to students with no recent immigration history (%).

structures through which ethnic and class relations play out are thus unduly decontextualised.

The specific forms that the intersection of class and Asian ethnicity take in Australia are visualised in Figure 2. As a broad group, middle- and upper-class families make up the clear majority of Asian background students in Australia, distinguishing them from non-immigrant Australians. But Filipino, Thai and Vietnamese background students are far less homogeneously concentrated in the upper region of social space. Based on their class background, two of these groups (Thai and Filipino students) obtain academic results in line with those of their non-immigrant peers. By contrast, Vietnamese Australian students significantly outperform the results that would be predicted based on their social class background alone. The academic achievement 'premium' of Vietnamese students is on par with that of Chinese background students, albeit from a modal position of class disadvantage rather than one of class advantage. Researchers interested in the comparative over-achievement of Asian students are thus likely to gather more original insights by researching the educational cultures and practices of Vietnamese families than by focussing on Chinese families, on whom more research has been conducted to date.

In Australia, the distinctive educational success of Vietnamese background students has been noted in relation to their enrolment in higher education (Baldassar et al., 2017; Dobson et al., 1996). In the United States, Feliciano (2006) argues that compared to that of other immigrant groups, Vietnamese students' performance is more markedly shaped by community influences that extend beyond the family. Initial waves of emigration to the Anglosphere after the Vietnam War comprised wealthier, more highly educated Vietnamese nationals (Carruthers, 2008; Ngo, 2006), and subsequent immigrant cohorts with more limited family resources were often able to draw on these broader community resources and institutions established by earlier arrivals, including supplementary education programs (Dorais, 1991; Lee & Zhou, 2014). The specific experiences of Vietnamese minorities highlight the importance of avoiding generalisations about Asian background students as a whole, and the need to consider both individual and collective trajectories in the analysis of educational outcomes.

If both class and ethnicity are relevant to making sense of academic inequality in Australian education, it follows that it is important for the general concepts we use to analyse inequality to be forged not in relation to class or ethnicity separately, but in relation to *simultaneously* classed and ethnicised educational dispositions and practices. This can be illustrated by discussing Bourdieu's theory of cultural goodwill, but it equally applies to notions of concerted cultivation, success frames or scholarly habitus. Bourdieu sought to explain class differentials in education with his theory of cultural capital, and he identified cultural goodwill as an important

dimension of embodied cultural capital (Bourdieu, 2018). In *Distinction*, Bourdieu defines cultural goodwill as a set of ascetic dispositions and practices, such as 'seriousness' and 'hard work', that orient action toward the opportunity of realising future profits through present renunciations. He claims that these dispositions are typical of a specific fraction of the middle classes, i.e. the 'petty bourgeoisie', and that such dispositions make their bearers 'the ideal clientele of the bank or the school' (Bourdieu, 2010, p. 334).

The ethnic stratification of academic achievement in Australia suggests that we need to move beyond characterising cultural goodwill – at least in its educational form – as a petit bourgeois morality (Bourdieu, 2010), i.e. as an attribute defined solely in *class* terms, and toward a more multi-dimensional characterisation of cultural goodwill as a socially constituted property. Such an expansion helps bridge class and ethnic analyses, since concepts developed to account for ethnic differences in education (e.g. Lee and Zhou's (2015) 'success frames') have important commonalities with class-based concepts, such as cultural goodwill or concerted cultivation. Enriching these concepts by paying explicit attention to the intersection of class and ethnicity helps develop theoretical accounts that explain findings such as those of ethnic differences in practices of 'concerted cultivation' after controlling for class (Cheadle & Amato, 2011). Indeed, for immigrant groups with high levels of cultural capital but facing opportunities structurally hindered by racism, investment in the most recognised and legitimate markers of academic distinction, and in forms of knowledge (e.g. science and mathematics) perceived as least susceptible to discrimination (e.g. in the labour market), may appear as the most reasonable form of cultural goodwill (see Xie and Goyette's (2003) concept of 'strategic adaptation' for a related argument). Taking the intersection of class and ethnicity seriously at a *conceptual* level, as in Feliciano and Lanuza's (2017) 'contextual attainment' model, helps sociology progress toward more context sensitive theories of educational inequality.

Differences in forms of educational investment based on class and ethnic lines also mean that analytical models that disregard the structures of the education system are fatally one-sided. The results presented in this paper highlight that school sector (public or private) and the kinds of subjects students select both matter to explain educational inequality. On the school front, the Australian school system is highly stratified, segregated and unequal, with exposed and residualised schools coexisting with fortified and over-resourced schools (Lamb, 2007; Windle, 2015). On the curriculum front, Australian and international researchers have shown that the curriculum is a stratified space of strong and weak options, with subjects hierarchically organised and where social composition is closely linked to academic standing (Feniger, 2015; Lucas, 2001; Teese, 2000).

Only through successful engagement with the education system structures can all the other aspects given attention in the Asian educational achievement literature – home practices, educational effort and goodwill, high parental expectations, diligent homework, supplementary education etc.—be converted into recognised educational distinction. Both class and ethnic educational inequalities are produced through investment in a stratified and hierarchical education system. In Australia, the two main structures are schools and the curriculum (Teese & Polesel, 2003). And, on both fronts, these are stratified spaces through which rewards accrue to those committed to strategic and ascetic investment. Research on ethnic educational inequality would thus benefit from considering more closely the causal role of education system structures.

The role of schools and curricula in producing ethnic inequality in education have not been ignored altogether in *empirical analyses*. In the United States, for instance, ethnic differences in curricular engagement have been found to be important to make sense of educational inequality (Lucas et al., 2020), including with respect to Asian American achievement (Klugman, 2013). This result is also observed in countries such as England (Henderson et al., 2018) and Israel (Feniger, 2015; Mizrachi et al., 2009). Still, even the more multi-dimensional *theories* of Asian educational success in Anglo-American countries tend to focus primarily on the specific attributes and practices of Asian families and students (e.g. Hsin & Xie, 2014), rather than on the *relation* between these properties and specific education system structures. In their detailed analyses of the 'Asian American achievement paradox', Lee and Zhou (2015) seek to distinguish cultural from structural explanations. They define structural theories as explanatory models focussed on ethnoracial constraints in access to and navigation through the 'stratification system'. Yet, the kinds of 'structures' they describe are labour market structures rather than educational structures. We thus need a more structural sociology of ethnic differences in educational experiences and trajectories, one that returns to educational structures their explanatory role (e.g. Maire, 2021).

Conclusion

This paper has argued for a more thoroughly intersectional approach to understanding the comparative educational success of Asian migrant students, focussing on Australia. Our research, echoing other studies, shows that Asian migrant students are high achievers in school. However, ethnicity alone is insufficient for explaining why. Indeed, disaggregating results more thoroughly shows sometimes large gaps *between* different Asian groups. For example, the lower levels of performance of students from Filipino and Thai backgrounds is often unrecognised when the experiences of Chinese

students are overly generalised. Understanding the internal differences within the category of 'Asian' requires more attention to social class and engagement with school and subject choice within an unequal and hierarchized system. Indeed, in addition to framing educational practices as simultaneously ethnicised and classed, our analysis has also demonstrated the need to include the contribution of education system structures, and to consider social groups' differentiated engagement with and investment in the education system. We incorporate these multiple dimensions to provide a more accurate account of what is usually seen as simply 'Asian' achievement, and to invite future research to hold these dimensions together in renewed analyses across school systems, countries, ethnic groups and social classes.

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