

School segregation in multi-ethnic England

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Abstract

Aspects of both educational development and multi-cultural inter-relationships are frequently related to school ethnic composition, with arguments that ethnically segregated schools both retard the development of multi-ethnic understanding and influence educational performance. In this paper, we employ data on their ethnic composition to portray the extent of segregation in English secondary schools in 2001, using a novel graphical method to explore its nature and spatial variation. We find substantial segregation on ethnic criteria in some places. Nevertheless, over the country as a whole, attendance at substantially mono-ethnic schools is not the norm for members of the non-white groups (though it is for whites in many areas). Half of all non-white secondary students in England attended schools where more than 75 per cent of the total enrolment comprised whites.

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1. Introduction

The integration of people from various cultural backgrounds is an issue of considerable debate in contemporary Britain. In an increasingly multi-ethnic and multi-cultural society, concerns are expressed regarding the degree to which members of the various groups should be assimilated with their host society. Other concerns relate to the extent to which members of minority groups should retain their own cultural identity and operate separately from their host society. The degree of contact between the hosts and their minority ethnic neighbours is crucial in shaping this balance. The issue is multi-dimensional, one aspect of what *The Economist* (10 May, 2003, p. 23) identified as ‘a wide-ranging question with no easy answers: can Europe integrate its mainly new, and growing, minorities?’.

An underlying issue relating to this question is the degree to which members of various ethnic groups operate separately from each other and from their host society in their day-to-day lives. One of the constraints on this is the extent to which members of the various groups are separated from each other – particularly in their residential milieux. Although by no means as extreme as the situation in the United States, there is considerable residential isolation for several of the groups, particularly those from South Asia (Johnston, Forrest and Poulsen 2002; Johnston, Poulsen and Forrest 2002). This comes about because of a combination of: (residual) discrimination in labour and housing markets; low incomes, restricting group members to certain areas within the housing market; plus their own desire to live among members of their own communities, both to sustain (and sometimes promote) their cultural identity and to insulate them from (perceived or real) threats from others. As Dorsett (1998) states, both choices and constraints may be important in determining residential location.

One consequence of the residential separation of members of cultural minority ethnic groups is that – given that most schools draw their students from local catchment areas – many of their children attend schools in which they form a large component of the total population. For those wishing to promote integration and assimilation, this is a further constraint, since such relatively segregated schools limit students’ contacts with members of both the host society and other ethnic groups – thereby potentially promoting a cultural of separate identity and a feeling of ‘them-and-us’ based on relative ignorance produced by distance. (This applies also to members of the host society, whose children are similarly kept apart from those with different cultural norms and practices from themselves.) For some of those wishing to sustain aspects of their cultural identity, however, separate schooling is viewed as a positive asset. There are strong echoes of both these views in the Ouseley Report on ethnicity and community in Bradford (Ouseley 2001). One issue that then arises is whether those schools are ‘separate but equal’ in terms of the quality of the education provided¹: if not, and members of the minority ethnic group suffer, then the cultural gains derived from relative separation may be outweighed by the economic disadvantages of a low quality education.

¹ In the *Brown vs. Board of Education* decision in May 1954, Chief Justice Earl Warren famously stated that “separate educational facilities are inherently unequal” (quoted in Woodward 2002, p. 147).

Before this issue can be debated fully, however, information is needed on the degree to which members of various ethnic groups and their host society are separated out into different school milieux. Are there high levels of spatial isolation/segregation for the school students from some at least of the minority groups? To address this question, as an initial stage of an exploration of the wider issues relating to educational context and its impact on attainment, we look at the pattern of secondary school ethnic isolation in England using data on their ethnic composition. In this, we deploy a recently developed methodology for identifying the degree of isolation within a group to compare the experience of each of eight ethnic groups, plus the majority, white, host society.

2. Previous literature

The focus of our analysis is ethnic segregation in England's secondary schools. There are various ways of measuring segregation: in an earlier paper we use the indices of dissimilarity and isolation and discuss the strengths and weaknesses of both (Burgess and Wilson 2003). Here, we employ an alternative graphical technique which we describe in detail below. We concentrate on the measurement of the degree of segregation across schools in specific geographical areas and leave analysis of the impact of such segregation to future work.

Previous research on school segregation in the UK has focused primarily on income segregation, and in particular whether the introduction of the education quasi-market has increased or decreased such segregation. Eligibility for free school meals is generally employed in such studies as an indicator of low income. Gorard and Fitz (1998a, b) use a variant of the isolation index on Welsh and English data and conclude in both cases that income segregation has decreased since the quasi-market was introduced as part of the Education Reform Act of 1988. Noden's (2000) results contradict these findings. Using both the widely-used dissimilarity and isolation indices, he finds that there has been a consistent rise in the average level of income segregation across secondary schools in England. Goldstein and Noden (2003) also find evidence of such a rise between 1994 and 1999. These last two results concur with other studies, which suggest that the quasi-market reforms gradually introduced ways of disadvantaging minorities (Tomlinson 2001).

There is more evidence on both the levels of and changes in the degree of ethnic segregation in schools from the US. This has been an issue since the *Brown vs. Board of Education* decision in 1954 introduced mandatory desegregation policies such as 'bussing' in certain school districts (Johnston 1984; Woodward 2002), the aim being to "dismantle the system of apartheid schools" with a view to improving educational outcomes for minority ethnic students (Rivkin 2000, p. 333). Levels of ethnic segregation decreased until the 1980s, but recent evidence from the Civil Rights Project at Harvard University suggests that this trend has been in reverse through the 1990s, partly due to changes in, or relaxations of, desegregation law made through more recent Supreme Court decisions. Using 2000/2001 data, Frankenberg et al (2003) find that whites are the most segregated group in US public schools: the average white student attends a school which is 80 per cent white. Latinos are the most segregated minority group; Asians the most integrated.² So-called apartheid

² Minority ethnic group categorisations as reported in Frankenberg et al (2003).

schools (those whose pupils are 99-100 per cent non-white) have re-emerged: in 2000/2001 they educated one-sixth of Black and one ninth of Latino students. The trend towards resegregation is not only an urban phenomenon: while the largest city school systems are almost exclusively non-white, there are also resegregation patterns emerging in suburban areas. Is such extreme segregation characteristic of English schools as well?

The reasons for the levels of and the changes in ethnic segregation in schools are many and complex. School segregation incorporates the influence of both the geographical location of pupils and their families and the attendance policies employed by school districts (Rivkin 1994). Rivkin attempts to separate these two influences using US data from 1968 to 1988. He concludes that the high level of ethnic segregation in US schools is primarily due to continued high levels of residential segregation; Reardon et al (2000) and Clotfelter (1998) concur with this conclusion. Segregated housing patterns are a significant barrier to the potential success of any school district integrative action. Other explanatory factors to changing patterns of school segregation in metropolitan areas include demographic change, ongoing suburbanisation and changes in attitude and race relations (Clotfelter 2001). Again, if – as many studies have shown (e.g. Peach 1996; Ratcliffe 1996) there is substantial residential segregation in English cities, is this similarly reflected in school segregation?

The impact of ethnic segregation in schools may be felt across various spheres. As Clotfelter (2001, p. 199) states: “racial contact in schools may affect such things as the level and distribution of academic achievement in the population, racial attitudes, subsequent social and economic outcomes of students, and patterns of residential integration”. The *Equality of Educational Opportunity* Report in the US (Coleman 1966) provided evidence that racial isolation harms academic achievement (Rivkin 2000). The racial achievement gap in the US declined in the 1970s and 1980s (the “desegregation era”) but began to grow again in the 1990s (Frankenberg et al 2003). Rivkin (2000) investigates the impact of school desegregation on academic attainment and earnings. He finds that raising the quality of education in schools that Black students attend has more impact on their outcomes than reallocating students across schools. Short term outcomes of schooling such as test scores may provide too narrow a focus when we consider the impact of segregation on pupils’ education, however (Frankenberg et al 2003). They identify three areas of student outcomes strengthened by an integrated school environment: “enhanced learning, higher educational and occupational aspirations, and positive social interaction among members of different racial and ethnic backgrounds” (Frankenberg et al 2003, p. 12; see also references therein).

The impact of school segregation on social interaction between different ethnic groups has certainly been identified in the UK as cause for concern. In a previous paper (Burgess and Wilson 2003) we identify areas of particularly high segregation for Asian pupils and find that these coincide almost exactly with the locations of severe public disorder in 2001 (in Bradford, Oldham and Burnley). This suggests that either school segregation plays a direct role in the underlying causes of discontent (as suggested by the Cantle Report on the riots (Cantle 2001)), or is related through a correlation with housing segregation. Both the Cantle Report and Ouseley’s (2001) report on the aftermath of the riots in Bradford highlight the importance of schools,

among other factors. Ouseley sets out the dysfunctional consequences of school segregation. He notes the role of both all-white and all-moslem schools in preventing social and racial integration (Ouseley, 2001, p. 1), and reports the victimisation of minorities in largely mono-cultural schools, whether Asian, white or Black. The report also proposes as its first recommendation that the ignorance of other groups deriving from polarisation and self-segregation must be ended.

But how segregated are English schools? In particular, to what extent are students drawn from each of the main – self-identified – ethnic groups isolated from both their ‘host society’ (the whites, who predominate in the distribution of economic, political and social power within the country) and from members of other ethnic groups? In this paper, we use data on the ethnic composition of the country’s state-maintained secondary schools to address that question, as a preface to tackling the consequent questions regarding student educational performance and multi-cultural integration.

3. Dataset

We use data from the Annual Schools Census (ASC), which covers all schools. Returning these data is a mandatory requirement for schools. We focus on state-maintained secondary schools in England in 2001 (the pupils are aged from 11 to either 16 or 18). We use data on the ethnic composition of schools. Data on ethnic identity for each individual pupil are now becoming available in PLASC (the Pupil Level Annual Schools Census) and are the subject of ongoing research.

One important question in this field concerns the definition of ethnicity. Often, groups are rather aggregated, whereas evidence and casual empiricism suggests a diversity of experience within such broad ethnic groups (e.g. within the general category of ‘Asian’). Data separately identifying important sub-groups within such categories are better, but still not very disaggregate. Nevertheless, we can only deploy the available data, which in the case of the Annual Schools Census give the number of pupils in each school classified as one of:

- Black Caribbean heritage,
- Black African heritage,
- Black other heritage,
- Indian ethnic origin,
- Pakistani ethnic origin,
- Bangladeshi ethnic origin,
- Chinese ethnic origin,
- any other minority ethnic origin, and
- white ethnic origin.

For some of the analyses we combine the first three into the ‘Black’ minorities and the next four into an Asian group.

In these analyses we omit independent schools, special schools and other academic centres such as hospital schools and detention centres. We also drop a small number of schools that could not be matched using school number plus the nine schools with missing ethnicity data, and – because we are interested in variations within as well as between Local Education Authorities (LEAs) – schools in the five LEAs with five or

less state-maintained secondary schools.³ Our final dataset comprises 3060 secondary schools in 144 separate LEAs. Most of our analyses are conducted at the level of the individual school.

In England as a whole, over 87 per cent of pupils are of white ethnic origin, with about 3 per cent claiming either Black African, Black Caribbean or other Black heritage, and 6.6 per cent claiming Asian ethnicity. However, there is substantial variation in the presence of non-whites across areas of England. Some LEAs are over 99 per cent white, with the median being 95 per cent. There is very substantial spatial variation in the presence of different minority groups. For example, the median percentage of students of Bangladeshi origin across all LEAs is less than 0.2 per cent, but there is one LEA (Tower Hamlets) in which over 50 per cent of students are Bangladeshi. Similarly, if less dramatically, the median percentage of Black students over all LEAs is 0.75 per cent, but the 95th percentile is 18 per cent and the highest is 55 per cent (this is Southwark); for students with Pakistani ethnicity the respective figures are 0.6 per cent (median) and 24.4 per cent (maximum (Bradford)), and for students with Indian ethnicity 0.7 per cent and 32.5 per cent (Leicester).

Given this unevenness, after presenting the picture for the country as a whole we look in greater detail at a small number of individual LEAs, selected because they are areas with relatively high percentages of non-white students (Table I). Of these, Southwark has a majority of Black students, with white students the next most numerous; Tower Hamlets has a majority of Bangladeshi students, but also significant numbers of Black students. Bradford has the highest percentage of Pakistani students in England, although they make up only around a quarter of the LEA total, whereas in Leicester a third of students are of Indian ethnic origin. Slough is the only LEA with a major three-way split of students: about 20 per cent are of Indian ethnicity, 20 per cent Pakistani, and almost 50 per cent white.

4. Method of analysis

Most analyses of the degree of spatial concentration of a group within a larger population use one or more of a wide range of available indices, such as those of dissimilarity (unevenness) and isolation (exposure) (see, for example, Massey and Denton 1988). Although these have their merits in summarising particular aspects of the relationship between two or more population distributions in a single index, they also have considerable disadvantages. First, by reducing a distribution (such as that of students over more than 3000 schools) to a single number they reduce what may be a complex pattern to one indicator – usually the situation of the average individual – and thereby lose much of the available information regarding variations from the average situation. Secondly, many of these indices are difficult to interpret in a relevant way to the issue at hand. Rather than use any of the available indices, therefore, in this discussion we use an alternative, graphical procedure, modified from earlier studies of ethnic residential segregation (Poulsen, Johnston and Forrest 2002).

This approach is based on the argument (derived from Philpott (1978) and Peach (1996; 1999)) that ethnic residential segregation involves three main components: the *degree of residential concentration* of the group, or the extent to which a group

³ The five are Hartlepool, Isle of Wight, Isles of Scilly, Kensington & Chelsea, and Rutland.

dominates certain areas; the group's *degree of assimilation*, or the extent to which its residential space is shared with the 'host society';⁴ and its *degree of encapsulation*, that is, the extent to which any one group is isolated residentially from both the 'host society' and other ethnic groups. Marcuse (1997) uses a similar approach, at least in terms of the extent and intensity of ethnic segregation, when he talks about enclaves and ghettos in the post-Fordist American city. We translate these concepts to schools: the degree of school concentration is the extent to which one ethnic group dominates in individual schools; the degree of school assimilation refers to the volume of ethnic mixing in individual schools; and the degree of school encapsulation measures the extent to which individual ethnic groups are isolated from each other across the universe of schools. The methodology used here allows us to investigate all three of these through the interpretation of a particular form of cumulative graph (or ogive).

The procedure uses what are termed *concentration profiles* to illustrate the degree of spatial separation of one or more groups within a population – in this case ethnic groups. They are compiled by using a series of threshold values ranging between 0 and 100 per cent which relate to a group's percentage of the population of a single spatial unit within the overall set of such units being studied – schools in the analyses here. For each threshold value, the percentage of the group total attending schools with that or a higher value is calculated. The number of thresholds can be as fine-grained as necessary to identify the amount of variation: we use every 10 percentage points from 0 to 100. The profile can then be graphed and comparison of different profiles indicates how much the relevant groups vary in their degree of spatial separation across schools within a specified geographical area.

To illustrate this procedure, Table II gives data for two of the ethnic groups in our population – whites and non-whites (i.e. all of the other eight groups combined) – across the 3060 schools. For white students, the relevant column shows, for example, that 96 per cent of them went to schools in 2001 that were at least 60 per cent white in their ethnic composition, and that just over 80 per cent of them were in schools that were at least 90 per cent white. By contrast, only 38 per cent of non-white students were in schools that were at least 60 per cent non-white in their ethnic composition, and only 11.2 per cent were in schools that were at least 90 per cent non-white. Each group had only a small proportion – 1.6 and 0.7 per cent respectively – in schools that were exclusively composed of members of their own ethnic group.

One implication to be drawn from Table II is that whites are much more segregated into all-white schools than are non-whites into all-non-white schools. This is clearly displayed by the concentration profiles associated with those data (Figure 1). In these, the profile for whites is closer to the top-right corner than is that for non-whites: in general, greater concentration is shown by profiles that are both concave-downwards and have their apices close to the top-right-hand corner of the graph.

White students, according to Figure 1, are much more likely to go to schools that are predominantly white than non-whites are to go to schools that are predominantly non-

⁴ Throughout we use the term 'host society' as a shorthand for the dominant group in the relevant geographical area, whether or not it is a majority or even the original settlers. An alternative term for the dominant group within a society, employed in Canadian studies but not widely elsewhere, is 'charter group'.

white. As in the United States, whites are spatially more isolated. In part, this finding is not totally surprising: whites make up 87 per cent of the total population of 2,970,354 students for whom we have data, so that if there was an even distribution of whites and non-whites across all schools, each would have 87 per cent of its students white and 13 per cent non-white. The two profiles in Figure 1 would be vertical, at the 87 per cent point on the horizontal axis for whites and the 13 per cent point for non-whites. Alternatively, if the distribution of the two groups was random across all schools, then half of all white students would be in schools that were 87 per cent or more white, and half would be in schools that were below that threshold; for non-whites, half would be in schools that were more than 13 per cent non-white in their composition and half in schools where the percentage was below that threshold.

The degree of concentration is not independent of group size, therefore – as analysts of the various segregation indices have realised (Noden 2000). To appreciate how concentrated a group is, its profile has to be compared to the random expectation. For non-whites, the degree of concentration over-and-above that expected from a random distribution across all schools is very substantial: rather than half of them being in schools where non-whites form 13 per cent or more of the total, the figure (which can be read off the graph) is actually about 82 per cent: their concentration is at least six times greater than would be expected from a random allocation of non-whites across all schools. For whites, instead of half being in schools above the 87 per cent threshold, about 85 per cent are: the absolute degree of concentration is approximately the same for the two, although whereas the ratio between expected and actual is over 6.0 for non-whites, it is only 1.7 for whites.

5. Results

Concentration profiles for various ethnic groups

Both whites and non-whites are more concentrated into schools with their co-ethnics than predicted by a random allocation model, therefore, with their degrees of concentration clearly demonstrated by the profiles in Figure 1. Non-white is a heterogeneous category, however: what is the situation for the various non-white ethnic groups for which school composition data are available?

Figures 2-4 show the profiles for the various groups, over England as a whole, separately and in different combinations. For the three Black groups – Caribbean, African and other – Figure 2 indicates relatively little spatial concentration into schools where their co-ethnics form a large proportion of the total, a situation that remains the case when all three groups are combined (which suggests that relatively few Black Caribbean, African and other students attend schools with substantial numbers drawn from all three Black groups). Only 20 per cent of Black students were in schools that were at least 40 per cent Black in their composition, and 40 per cent were in schools that were at least 25 per cent Black. Black students comprise only 3.5 per cent of the total number of recorded students according to their chosen ethnic identity, however, so they are much more concentrated into a relatively small number of schools than would be the case if a random allocation process were in operation: most Black students are in schools with much larger proportions of Blacks than such a

process suggests. Nevertheless, comparison of Figures 1 and 2 suggests that Blacks are much less concentrated than other non-whites.

This conclusion is sustained by the concentration profiles for the four Asian ethnic groups (Figure 3). Among them, the Chinese are by far the least concentrated: almost none of them are in schools where they form even 10 per cent of the total. (They form only 0.4 per cent of the total number of students.) Those claiming Indian, Pakistani or Bangladeshi ethnic identity are much more concentrated, even when their larger size is taken into account (Indians form 2.7 per cent of the student total, Pakistanis 2.5 per cent and Bangladeshis 1.0). For each, about 20 per cent are in schools where their co-ethnics form at least 50 per cent of the total, and some 15 per cent of Bangladeshis are in schools that are 80 per cent or more Bangladeshi. When the groups are combined into Pakistani-with-Bangladeshi, all South Asian (Pakistani, Bangladeshi and Indian), and All Asian, the three patterns are very similar (Figure 4); the lack of a higher curve for all South Asians than just for Pakistani and Bangladeshi ethnic groups suggests little clustering of all three South Asian groups in the same schools. About 40 per cent of Pakistani and Bangladeshi students (most of whom are likely to be of the Moslem faith) are to be found in schools where 40 per cent or more of the population claim allegiance to those two groups.

The exposure of groups to others

In absolute terms, therefore, whites are the most concentrated ethnic group across English secondary schools, whereas in relative terms Asians, especially Bangladeshis and Pakistanis, are more concentrated than Blacks: those claiming identity with another minority ethnic group than those separately identified (2.5 per cent of the total) are in general least concentrated, although a small proportion – about 12 per cent – of them are in schools where they predominate (Figure 5). The implication is that whites are less likely to encounter many non-whites in their schools than vice-versa.

The extent of inter-group exposure (or exposure to others) can also be evaluated using concentration profiles by graphing the profile for one group against the thresholds for another. The horizontal axis displays the thresholds for one group and the vertical axis the percentage of members of another who attend schools at or above the relevant thresholds. Figure 6, for example, shows the profiles for white students at various non-white thresholds: the upper curve shows that about 10 per cent of white students are in schools where all non-whites together comprise 20 per cent of the total (i.e. for that curve the threshold on the horizontal refers to all-non-whites and the percentages on the vertical axis refer to whites).

Whereas few white students are in schools with a substantial non-white presence, however, the reverse is not also the case. Figure 7 contains the concentration profiles for the three main non-white ethnic groups using white thresholds, as well as that for all non-whites. The four profiles have very similar trajectories. Approximately half of all members of the various non-white groups attend schools where whites form 50 per cent or more of the students – i.e. the non-whites are at schools with white majorities – and some 30-40 per cent of them are at schools where whites form at least 70 per

cent of the total. Exposure to others is thus asymmetric: white students are much less exposed to substantial numbers of non-white than vice versa.

Patterns of concentration in different places

The general patterns of ethnic group concentration in English schools shown in Figures 1-7 present a national situation that may vary considerably across the country. As is well known, the various non-white ethnic groups are spatially very concentrated in relatively few places. In 2001, over 25 per cent of all Pakistani students in England lived in just two LEAs – Birmingham and Bradford; 26 per cent of Bangladeshis were in one LEA alone – Tower Hamlets; and one-quarter of all Indians were in just four – Leicester, Birmingham, Brent and Hounslow, with further concentrations (just under 5 per cent of the total) in Ealing and Redbridge. Blacks were more widely dispersed, however: the majority were in London LEAs, but the largest concentration was only 5 per cent of the total, in Southwark, with another 7.5 per cent in neighbouring Lambeth and Lewisham combined.

LEAs where whites predominate will have schools that are almost exclusively white in their ethnic composition, but what about those places where there is an ethnic mix? Are the schools segregated, or is there considerable inter-ethnic mixing? In order to address this question, Figures 8-12 give the concentration profiles for five selected LEAs.⁵ In Slough (Figure 8), which has a very mixed student population (Table I), the whites and Pakistanis are much more concentrated into certain schools than are the Indians – none of whom attend schools that are more than 40 per cent Indian, although 60 per cent of them are in schools where more than 30 per cent of the students are their co-ethnics. Even in such a mixed LEA with only 11 secondary schools, over 60 per cent of whites are in schools that are at least 60 per cent white in their composition, and nearly 50 per cent of Pakistanis are in schools where Pakistanis form 60 per cent of the total enrolment. Asians as a whole are slightly more concentrated than Pakistanis, with the clear implication that there is little mixture of Pakistanis and Indians in the same schools (undoubtedly reflecting the relative separation of the various groups into different parts of Slough's residential mosaic). Indeed, only one-third of Indians in Slough were at schools where more than 30 per cent of the students were Pakistani, and 25 per cent of Pakistanis were at schools where the Indian proportion of the school roll exceeded 30 per cent. The two South Indian groups are largely separated from each other, as well as from whites, in that multi-ethnic town's schools.

Leicester and Bradford LEAs each have just one large non-white ethnic group – Indians and Pakistanis respectively – and in both cases there is very considerable separation of them from whites in the secondary schools (Figures 9-10). In Leicester, nearly 90 per cent of white students were at schools that were at least 60 per cent white in their composition (although the proportion fell off rapidly across the higher thresholds: Figure 9), and 60 per cent of the Indians (who made up 33 per cent of the LEA's total enrolment) were in schools that were more than 60 per cent Indian in their composition. In Bradford, the separation was even greater (Figure 10): 80 per cent of

⁵ In these five figures, the concentration profiles are much less smooth than those for the national pattern because they refer to LEAs with relatively small numbers of secondary schools.

white students were in schools that were 80 per cent or more white, and 80 per cent of Pakistanis were in schools where their co-ethnics formed a majority, though only a quarter were in schools that were 80 per cent or more Pakistani in their composition.

Tower Hamlets has the largest concentration of Bangladeshi students in England, and these – who are twice as numerous there as the whites – are very concentrated across the borough's 15 secondary schools. Over 80 per cent were at schools where Bangladeshis formed a majority and 40 per cent were in schools where they formed over 90 per cent of the student population (Figure 11). None of the white students, on the other hand, were at schools where whites formed more than 70 per cent of the total, although 60 per cent were in schools with a white majority. This small borough's 15 secondary schools are highly segregated.

Finally, Southwark has the country's largest population of Black students: 20 per cent of the total there claimed a Black Caribbean ethnic identity; 29 per cent claimed Black African identity; and a further 2 per cent were classified as 'Black Other'. As in Tower Hamlets, the Blacks are more concentrated across Southwark's 12 secondary schools than are the whites (who form only 36 per cent of the total roll). Indeed, less than one-third of whites there are at schools with a white majority, compared to nearly 70 per cent of Blacks in schools with Black majorities (Figure 12).

In each of the five selected places studied, therefore, segregation of the main ethnic groups was much greater than would be expected according to a random allocation of the various groups across the LEAs' schools. Indeed, in both Southwark and Tower Hamlets, members of the main non-white group (Blacks and Bangladeshis respectively) were more segregated than their white counterparts – who were not the largest group in either case – and whites were not substantially more segregated than the relevant other groups in the three other LEAs. Whereas over the country as a whole whites were the most segregated, in the three places where they formed less than half of the population they were less segregated. The asymmetry noted above is reversed in the small number of English LEAs where whites do not predominate.

Ethnic concentration by type of LEA

The clear implication of these data for individual LEAs is that where a non-white ethnic group forms a substantial proportion of the total secondary school enrolment, its members are very substantially concentrated into schools where they comprise a considerable majority of the total – even though in almost all cases they form only a minority of the LEA total. Whites in those LEAs are less concentrated into virtually all-white schools than is the case nationally, but nevertheless are still much more concentrated than their proportion of the LEA enrolment might suggest (if each school's ethnic composition reflected that of the LEA as a whole). Concentration processes, it seems, are operating within as well as between LEAs – which undoubtedly reflects, in considerable part, residential concentration within those LEAs.

To inquire further into differences between LEAs according to their ethnic composition, we have classified each LEA according to the percentage of its students who are white: any selection of boundaries for such a task is somewhat arbitrary, of course – we have chosen dividing lines at 75, 50 and 30 per cent white. Table III

shows the distribution of white, Black, Asian and all non-white students across the four categories. The rows indicate the percentage of the LEA's students who are white, and the columns give the number of students in each ethnic group living in those areas (plus their percentage of the ethnic group total). Thus, for example, the table's first cell shows that 2,369,991 white students (9.13 per cent of the total number of white students across all schools) lived in LEAs where 75-100 per cent of all students were white.

LEAs which are more than 75 per cent white (the first row of Table III) contain 2649 of the 3060 secondary schools studied, and 91.3 per cent of all white students. They also contain over half of all non-white students, with nearly 55 per cent of all Asian students living there but only one-third of all Blacks. In other words, a majority of all non-white students at English secondary schools lived in LEAs where white students predominated. Most of the individual schools in those LEAs are predominantly white, and fully 94 per cent of the white students there attend schools that are 80 per cent or more white. Alongside them, 44 per cent of all non-white students are at schools that are 80 per cent or more white.

Much of England is predominantly white ethnically, with over 75 per cent of its secondary school students identifying themselves ethnically as white. Even within those large swathes of the country, however, there is some spatial concentration of non-white students (especially Asians) into schools with non-white majorities, certainly much more than their small proportion of the population total suggests. Some 30 per cent of their non-white students are in schools with non-white majorities, suggesting some spatial concentration of non-whites into a small number of non-white majority schools, even in those predominantly white areas. Nearly 30 per cent of Asians are in schools with an Asian majority, but no Blacks are in schools with Black majorities.

What is the situation in the remainder of the country, where whites form a smaller proportion of the total? Of the 144 LEAs, 111 fell in the first type, with 75 per cent or more of their students white (the first row of Table III): the other three groups (rows 2-4 of the table) comprise 16, 12 and 3 LEAs respectively, containing 238, 146 and 27 schools. What levels of ethnic concentration are found in their schools?

Concentration profiles for the main ethnic groups in each of these three types show considerable ethnic concentration across those schools. Figure 13 relates to the 16 LEAs where whites form 50-75 per cent of the total: 80 per cent of whites there were at schools that were at least 60 per cent white. Non-whites were also substantially concentrated, even though they were in a minority: approximately half of them were at schools with a non-white majority, a situation almost entirely due to the distribution of Asian students across the schools, since few Blacks were at schools that were more than 40 per cent Black.

Turning to the LEAs with non-white majorities, Figure 14 shows that in those that were 30-50 per cent white (eleven of those authorities were in Greater London; the twelfth was Slough) non-whites were more concentrated across the 146 schools than were whites, with nearly half of the former at schools that were at least 70 per cent non-white; half of the whites were in schools that were at least 50 per cent white. Again, among the major ethnic groups Asians were much more concentrated than

Blacks (the two groups were of approximately the same size overall: Table III); whereas over 40 per cent of all Asian students were at schools where Asians formed a majority of the total, less than 30 per cent of Black students were at Black majority schools.

In the three LEAs where whites formed less than 30 per cent of the school roll (Brent, Newham and Tower Hamlets), whites were much less concentrated than non-whites, although more so than Blacks (Figure 15). In these three boroughs, over 80 per cent of non-whites were in schools where non-whites formed 70 per cent or more of the total enrolment, with 60 per cent of Asians in schools with Asian majorities. Only just over a third of whites were in schools with white majorities, however – though this compared with less than ten per cent of Blacks being in Black-majority schools. Even where they are in a minority, whites are more concentrated into certain schools within the relevant LEAs than is the case with Blacks. Predominantly Asian schools are the norm there.

This final conclusion is borne out by concentration profiles for the various groups across the four types of LEA identified in Table III. In this last sequence of concentration profiles we give the profiles for the various ethnic groups in the four LEA types identified in Table III. For whites (Figure 16), as their percentage of the total school population declines from over 75 to under 30, so does their concentration into predominantly white schools, with massive gaps between the profiles at the higher levels. In the majority of LEAs, where whites are 75 per cent or more of the total, some 95 per cent of them are in schools that are 75 per cent or more white, for example, compared with a figure of only 10 per cent for the small number of whites in the LEAs where they form a small minority. The smaller the white proportion of the LEA school enrolment, the greater the percentage of whites in schools where they form a minority of the total enrolment – but this applies to a few parts of the country only.

Turning to the aggregate ethnic groupings – Black and Asian – Figures 17 and 18 show much less variation across the three LEA types included (the profiles for the LEAs with 75 per cent or more white are excluded since they show no concentration at all). For Blacks, the greatest concentration into schools with large Black percentages is in the LEAs that are 30-50 per cent white – almost all of which are in London but exclude those boroughs with the largest Asian concentrations. (Blacks form 37 per cent of the total enrolment in the three LEAs in the fourth type, however, compared with 24 per cent in the third.) The profiles for Asian concentration are also very similar across all three types (Figure 18), suggesting that in all parts of the country where they form a not-insubstantial proportion of the total enrolment their degree of concentration into particular schools remains constant – with just under half in schools with an Asian majority. For all non-whites aggregated together, however, the pattern of profiles is – as expected – the reverse of that for whites: the smaller the white percentage of the LEA school population, the greater the concentration of non-whites into schools with non-white majorities. At the 50 per cent threshold, the gap between the LEAs in types 2 and 4 is some 50 percentage points (Figure 19); it is even wider at the 70 per cent threshold, and only narrows substantially above the 80 per cent threshold.

6. Conclusion

This paper has provided a first analysis of the contemporary ethnic composition of English secondary schools, using a new procedure for analysing and portraying patterns of segregation which gives a synoptic view of the total situation. With it, we have been able to identify differences between ethnic groups in their degree of concentration into schools with varying ethnic composition, not only nationally but according to the overall composition in groups of similar LEAs and in a selected group of individual LEAs with large non-white populations. The graphical presentation of the concentration profiles brings these differences into clear focus.

Overall, the findings of these analyses combine expected patterns with the unexpected. With regard to the former, not surprisingly our graphs show that the larger the white population in an LEA the more that its white students are concentrated in predominantly white schools and, conversely, the smaller the white population the more members of non-white ethnic groups to be found in schools where their co-ethnics form a large component of the total. Even so, whatever the ethnic composition of the LEA, all groups are more segregated into schools within which they form a substantial proportion of the total than one would expect from a random allocation procedure – although this is less the case with Blacks and, especially, Chinese than with Bangladeshis, Indians and Pakistanis, and indeed with the white host society. The implication is that the residential segregation that results from economic disadvantage combined with the desire in some cultural groups to live close to one's co-ethnics promotes school ethnic segregation: what cannot be identified from this study, however, is the degree to which there are additional sorting processes separating members of the various groups into different schools.

England's secondary schools are substantially segregated on ethnic criteria. But it must not be concluded that attendance at substantially mono-ethnic schools is the norm for members of the various groups analysed here – other than for the whites, who are substantially concentrated into predominantly white schools in most parts of the country. Half of all non-white secondary students in England attended schools where more than 75 per cent of the total enrolment comprised whites – and 55 per cent of Asians attended the same schools. Relatively few Blacks and Asians across the country as a whole attended schools where whites were in a minority, and no more than 7 per cent of them were in schools where whites were a small minority (less than 30 per cent of the total). Some Blacks and Asians went to schools with few whites: but most didn't. The reverse was not true of whites, however: the great majority of them were in schools with very few non-whites.

These latter findings are important for addressing research questions in which school composition is an important independent variable. Is educational performance related to school ethnic composition? Do members of the various ethnic minority groups perform better in schools where whites form a majority than in those where their own co-ethnics are numerous? Is multi-cultural appreciation more common in 'mixed' than segregated schools? And depending on the answers to such questions, what are the implications for the management of schools within LEAs – in drawing-up their catchment area boundaries, for example? Or, is it that until the disadvantages and other influences that promote ethnic residential segregation are removed, school segregation and its consequences are bound to follow? In this paper, we have laid the

groundwork for addressing such questions, setting out a comprehensive outline of the ethnic composition of contemporary English secondary schools.

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Table I: Pupils by selected ethnic groups in selected LEAs (per cent of the total).

| LEA | Bangladeshi | Black | Indian | Pakistani | White |
|----------------|-------------|-------|--------|-----------|-------|
| Southwark | 2.72 | 51.67 | 0.97 | 0.61 | 35.92 |
| Tower Hamlets | 54.88 | 11.92 | 0.93 | 0.71 | 28.47 |
| Bradford | 1.83 | 0.92 | 2.77 | 24.42 | 69.17 |
| Leicester City | 1.20 | 4.49 | 32.50 | 1.87 | 53.00 |
| Slough | 0.28 | 4.69 | 19.76 | 22.58 | 48.44 |

Source: Department for Education and Skills

Table II. The creation of concentration profiles: the distribution of white and non-white secondary school students across schools in England.

| Threshold | White | Non-White |
|-----------|-------|-----------|
| 0 | 100.0 | 100.0 |
| 10 | 99.9 | 86.0 |
| 20 | 99.7 | 75.4 |
| 30 | 99.3 | 65.9 |
| 40 | 98.6 | 56.5 |
| 50 | 97.3 | 49.2 |
| 60 | 96.0 | 38.1 |
| 70 | 93.5 | 28.9 |
| 80 | 89.2 | 19.9 |
| 90 | 80.2 | 11.2 |
| 100 | 1.6 | 0.7 |

Source: Department for Education and Skills

Table III. The distribution of secondary school students by major ethnic group, according to the percentage of white students in each LEA

| Distribution of Students by Ethnic Group | | | | |
|--|---------------------|------------------|-------------------|-------------------|
| LEA Per Cent White | White | Black | Asian | All Non-White |
| 75-100 | 2 369 991 (91.3) | 34 341 (33.1) | 100 405 (54.8) | 188 568 (50.4) |
| 50-75 | 158 022 (6.1) | 28 083 (27.0) | 39 707 (21.7) | 82 693 (22.1) |
| 30-50 | 59 957 (2.3) | 33 768 (32.5) | 31 458 (17.2) | 79 613 (21.3) |
| 0-30 | 7 916 (0.3) | 7 706 (7.4) | 11 782 (6.4) | 23 594 (6.3) |
| Total | 2 595 886 | 103 898 | 183 352 | 374 468 |

Source: Department for Education and Skills

White and Non-White Concentration Profiles

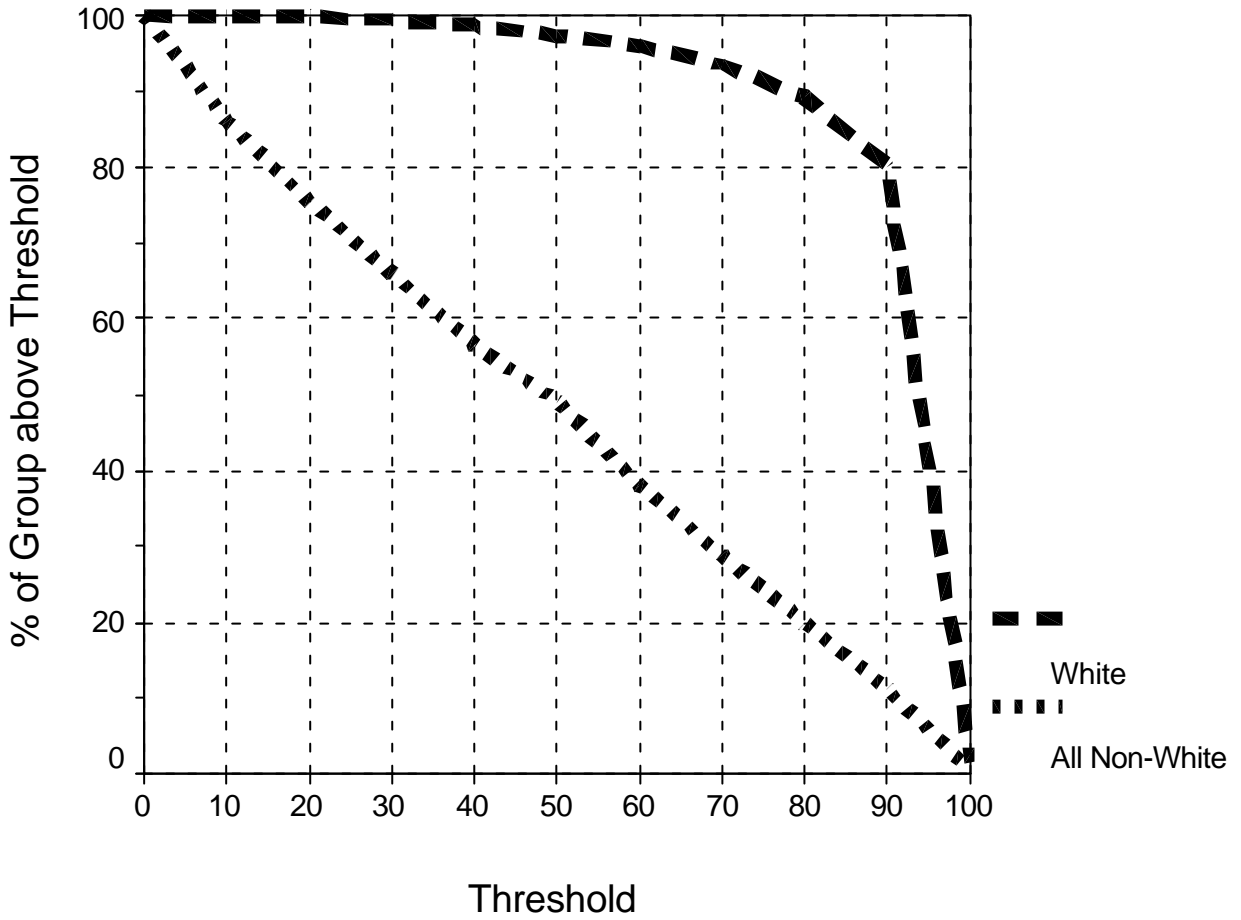


Figure 1. Concentration profiles for white and non-white students across the 3060 English secondary schools studied.

Black Ethnic Group Concentration Profiles

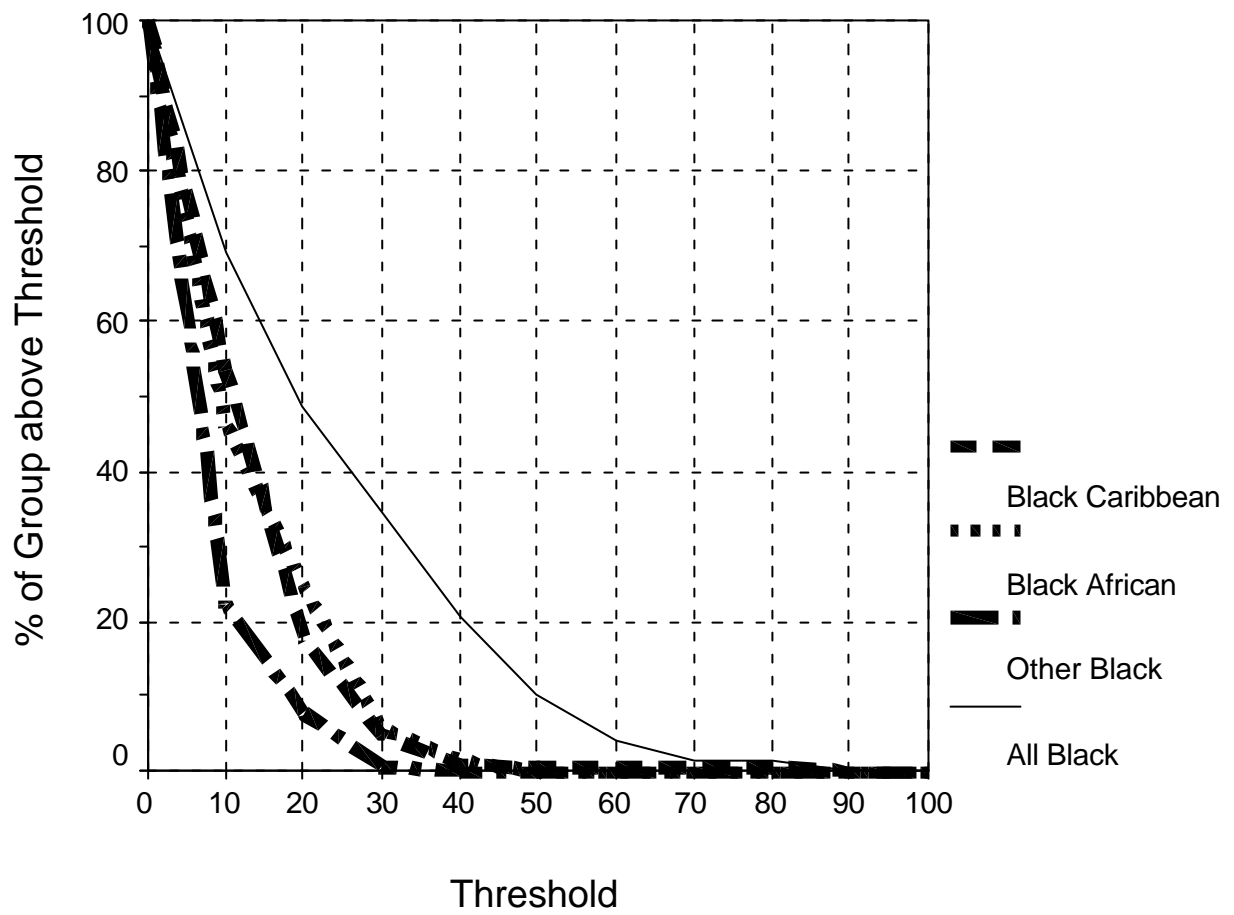


Figure 2. Concentration profiles for Black students across the 3060 English secondary schools studied.

Asian Ethnic Group Concentration Profiles

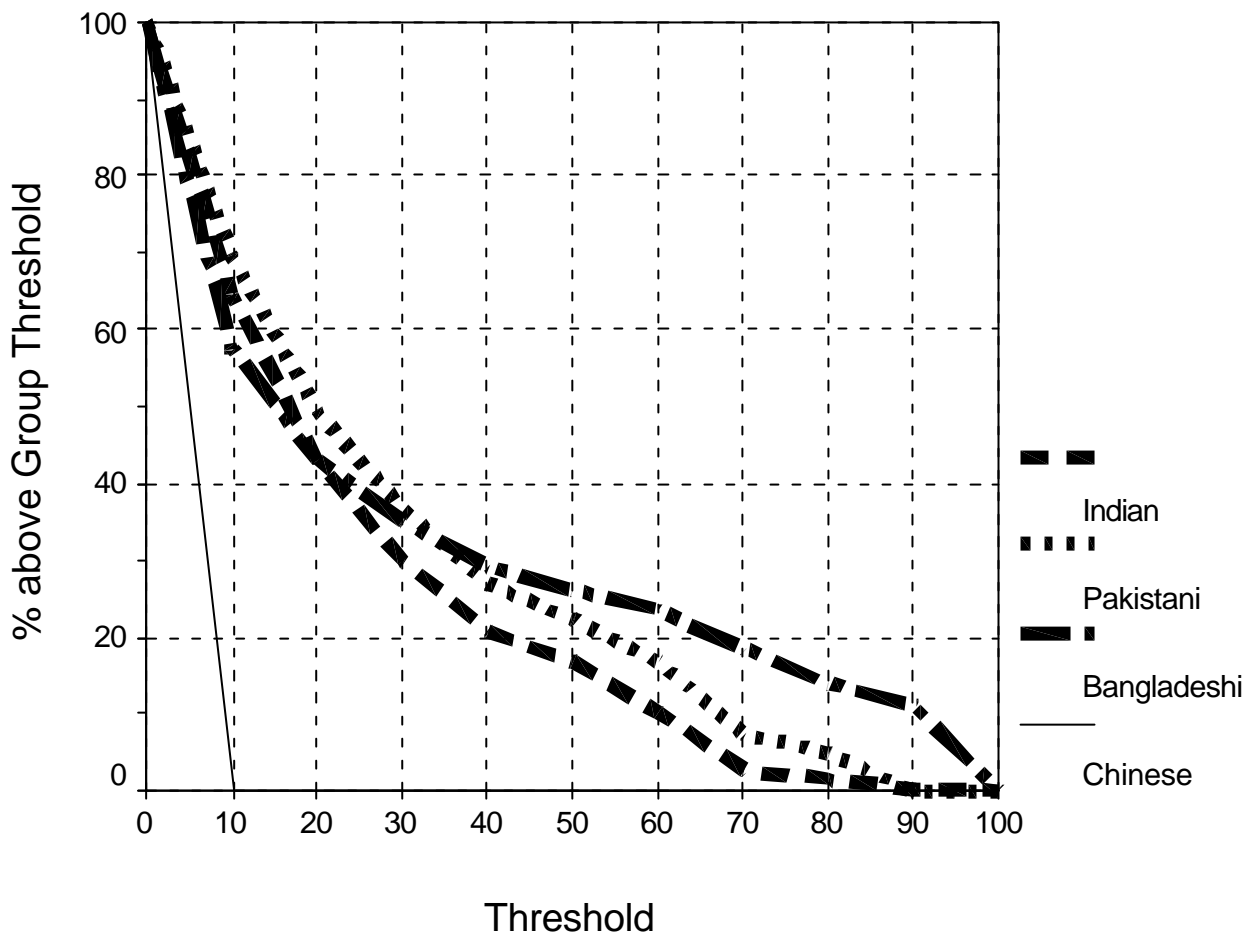


Figure 3. Concentration profiles for Asian students across the 3060 English secondary schools studied.

Combined Asian Group Concentration Profiles

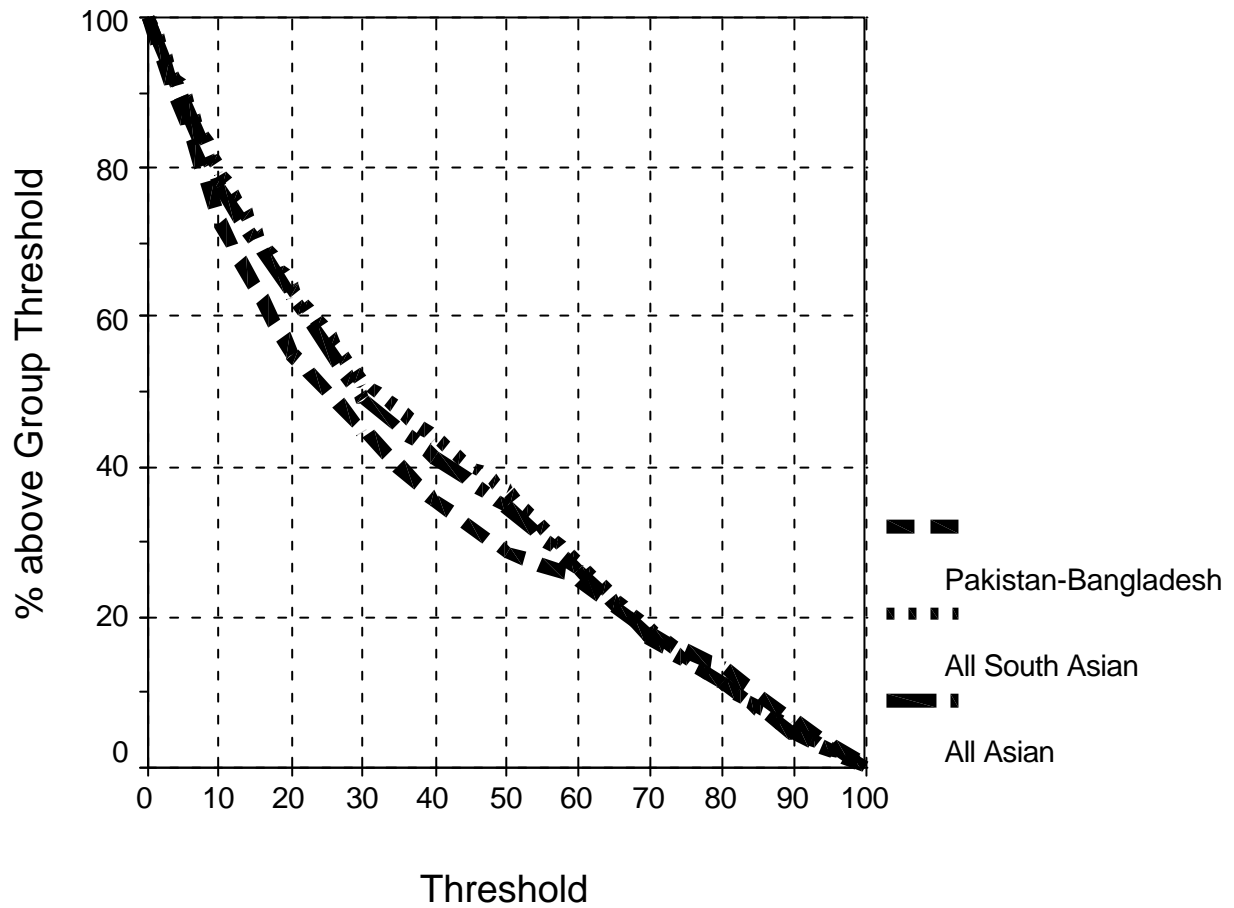


Figure 4. Concentration profiles for combinations of Asian ethnic group students across the 3060 English secondary schools studied.

Ethnic Group Concentration Profiles

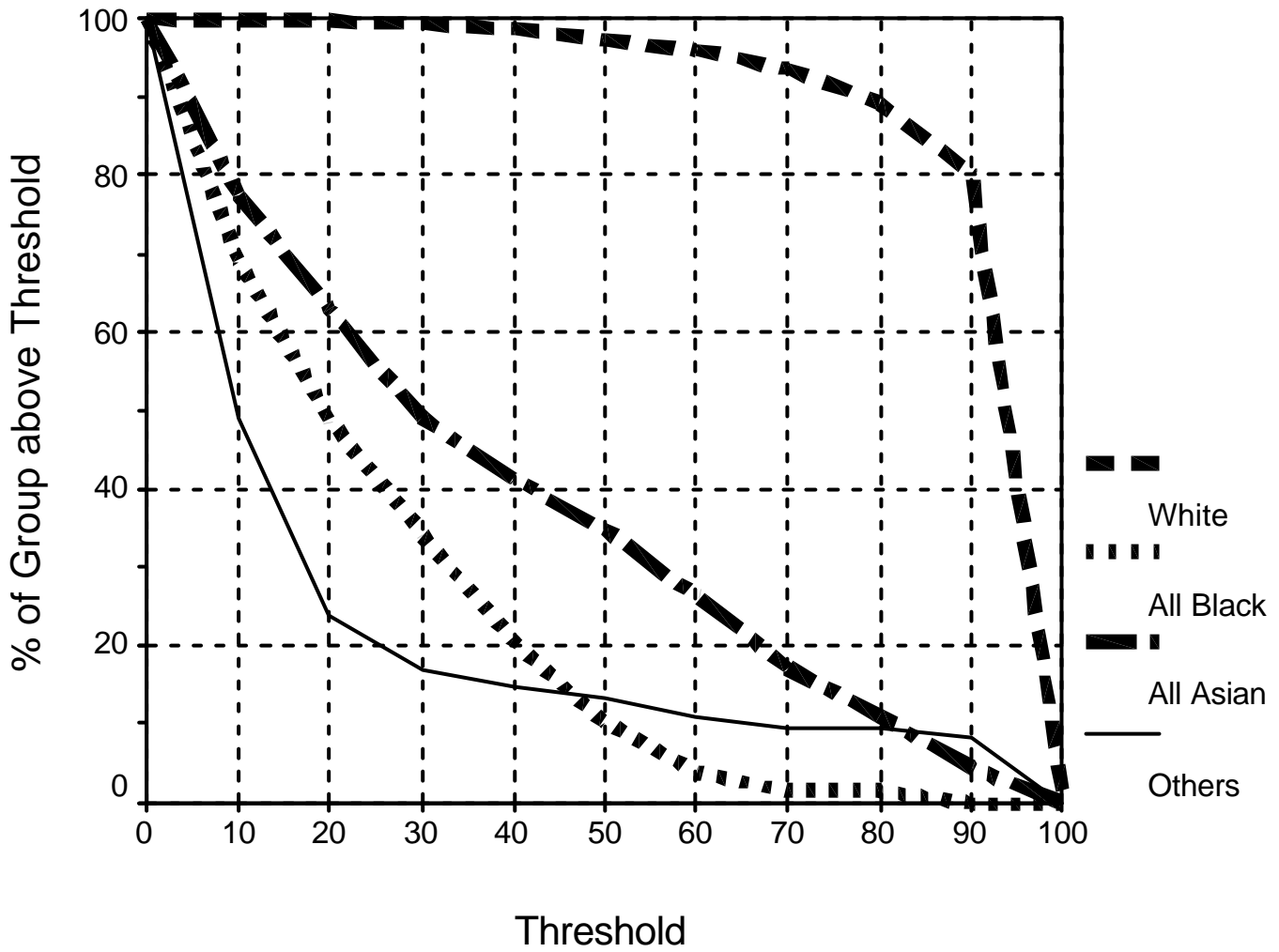


Figure 5. Concentration profiles for students in combined ethnic groups across the 3060 English secondary schools studied.

Concentration Profiles: Whites to Other Groups

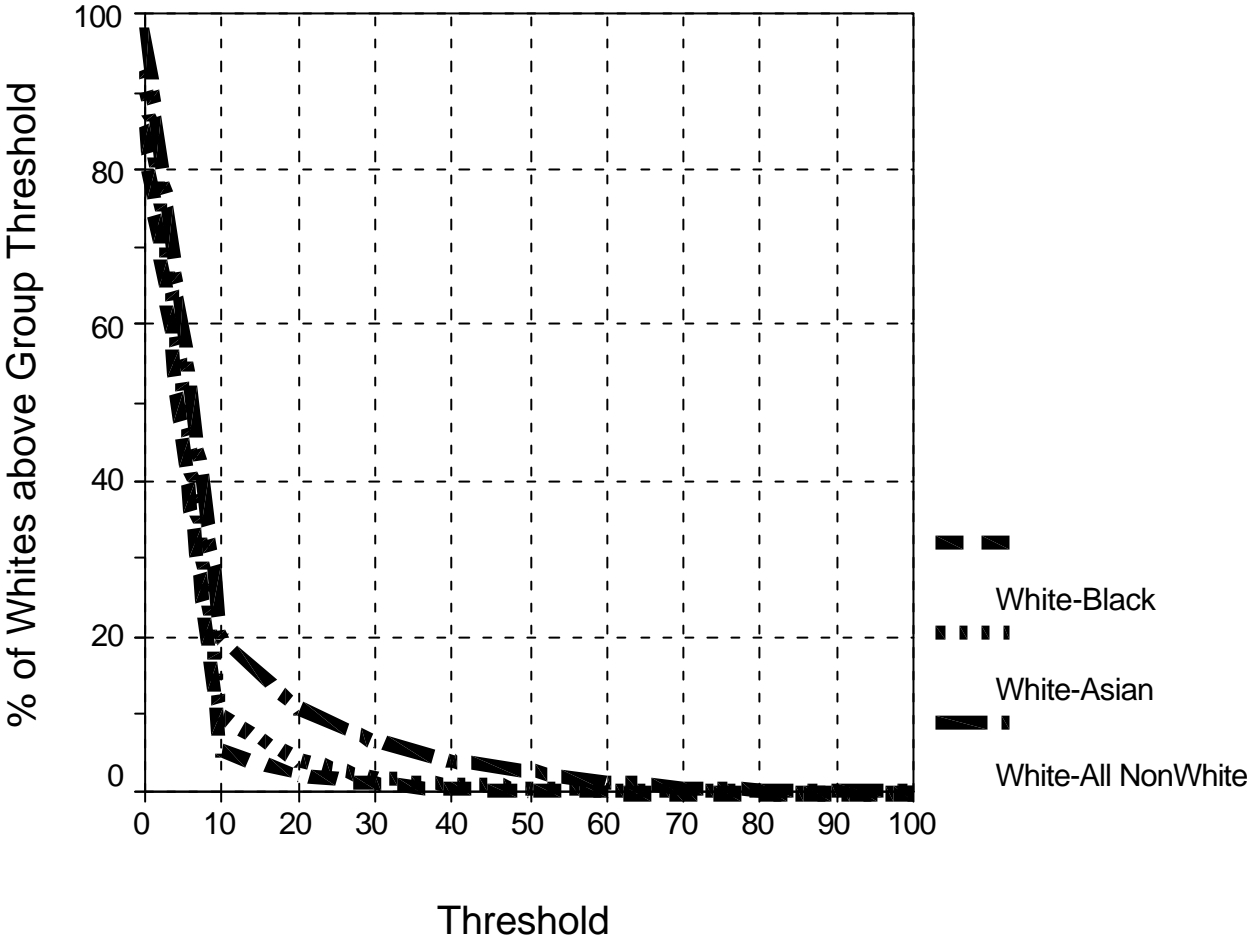


Figure 6. The concentration profiles showing the exposure of white students to members of other ethnic groups across the 3060 English secondary schools.

Concentration Profiles: Other Groups to Whites

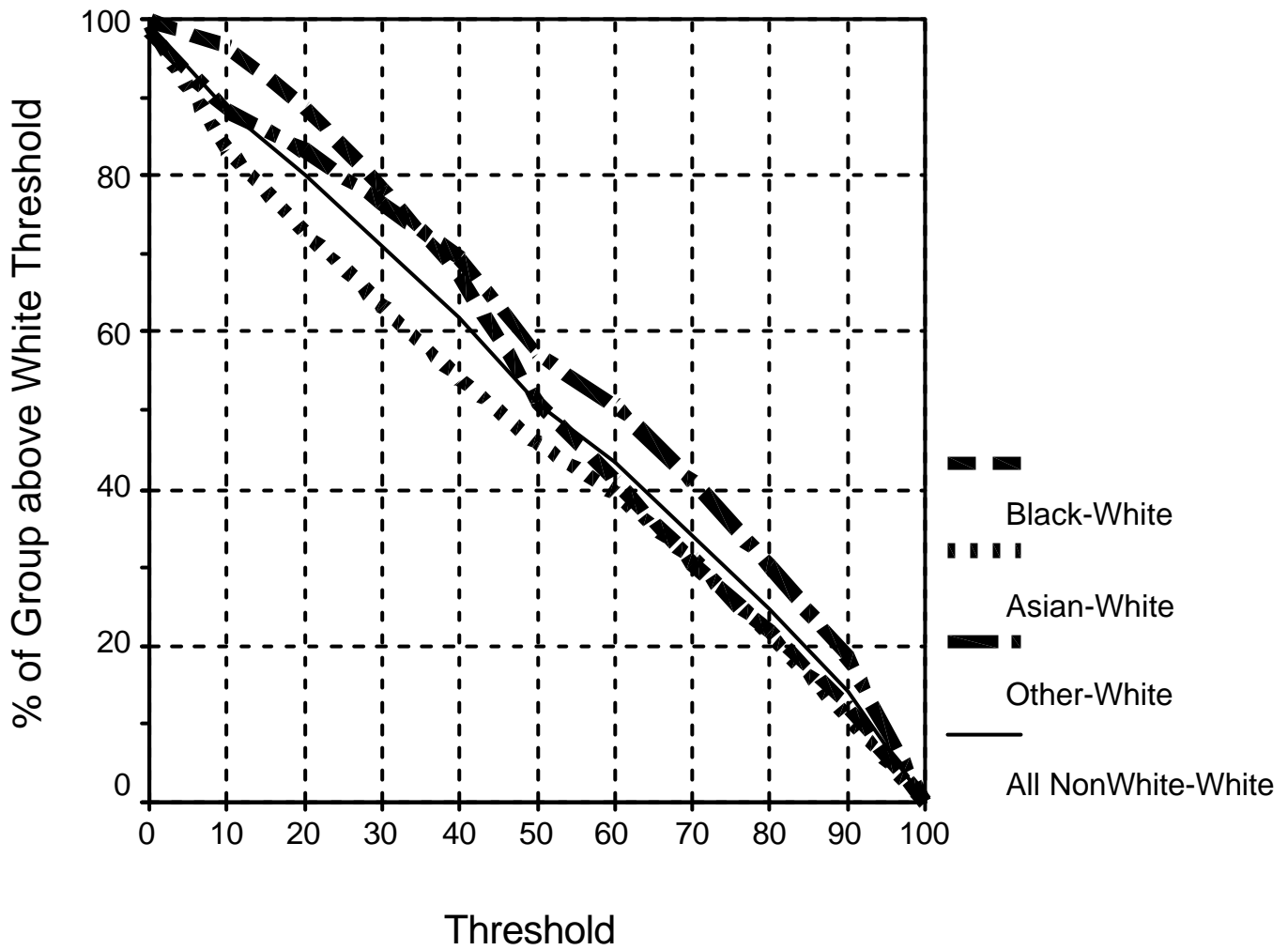


Figure 7. The concentration profiles showing the exposure of members of other ethnic groups to white students across the 3060 English secondary schools

Concentration Profiles: Main Ethnic Groups in Slough

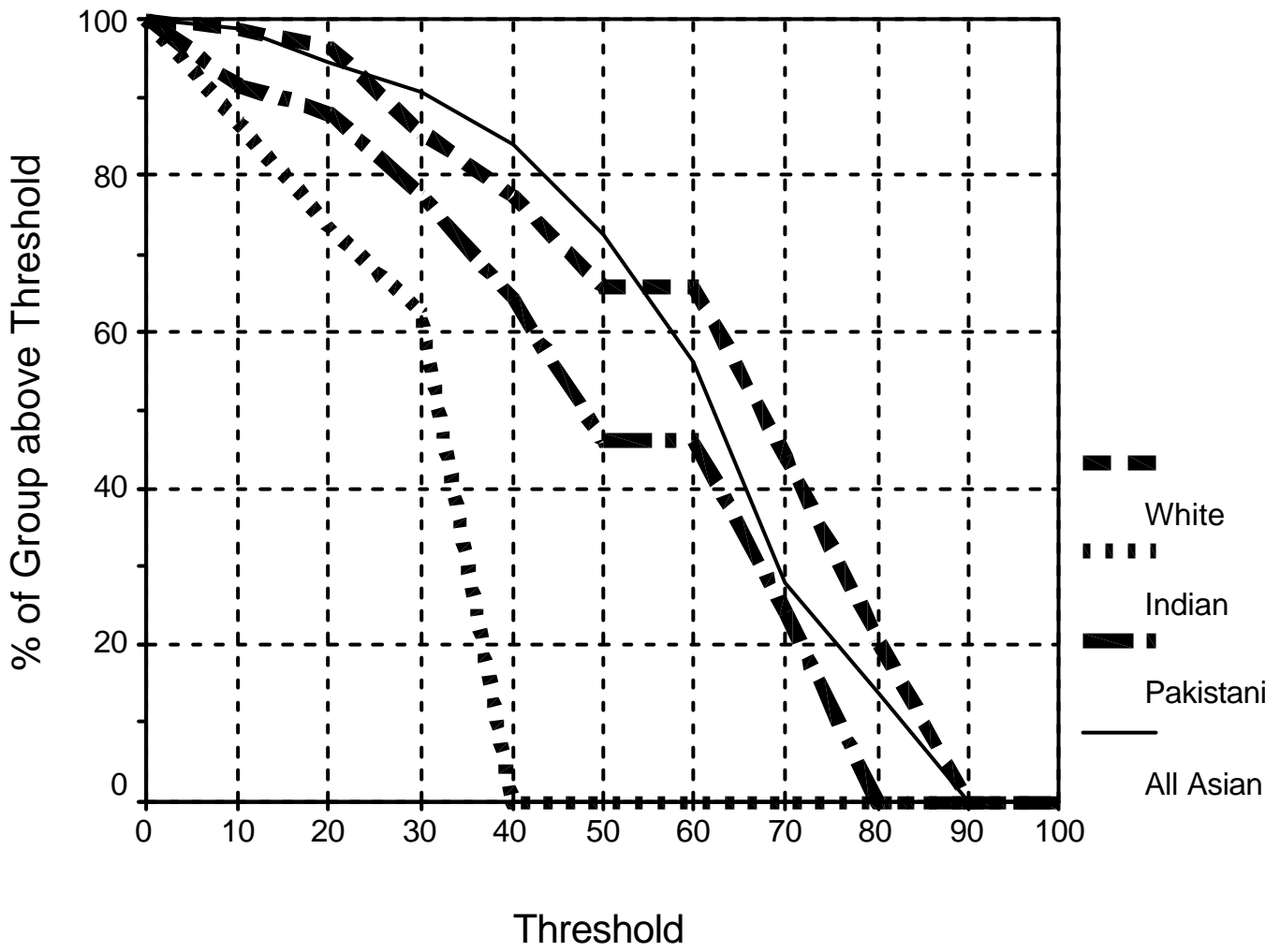


Figure 8. Concentration profiles for the main ethnic groups of students in Slough.

Concentration Profiles: Main Ethnic Groups in Leicester

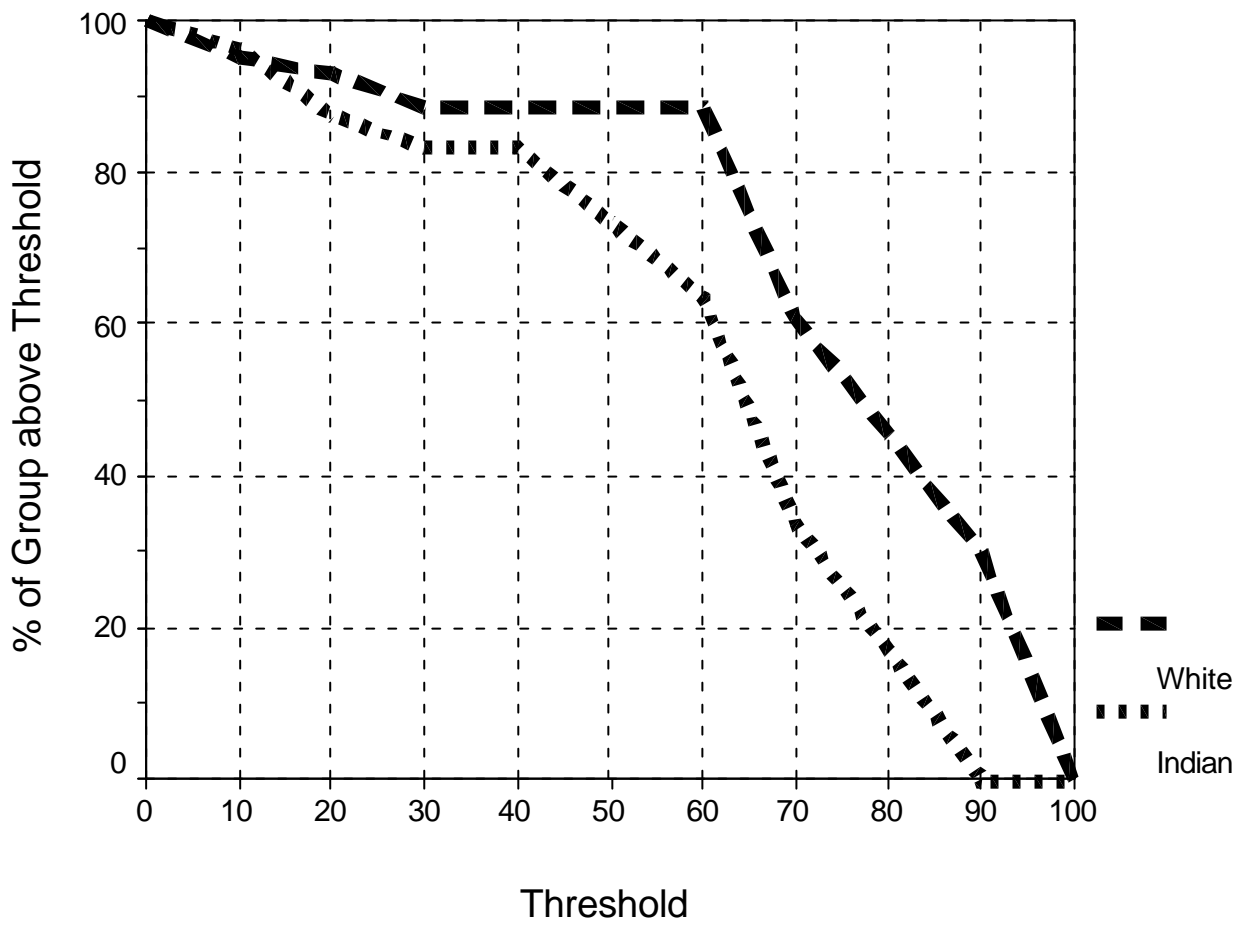


Figure 9. Concentration profiles for the main ethnic groups of students in Leicester.

Concentration Profiles: Main Ethnic Groups in Bradford

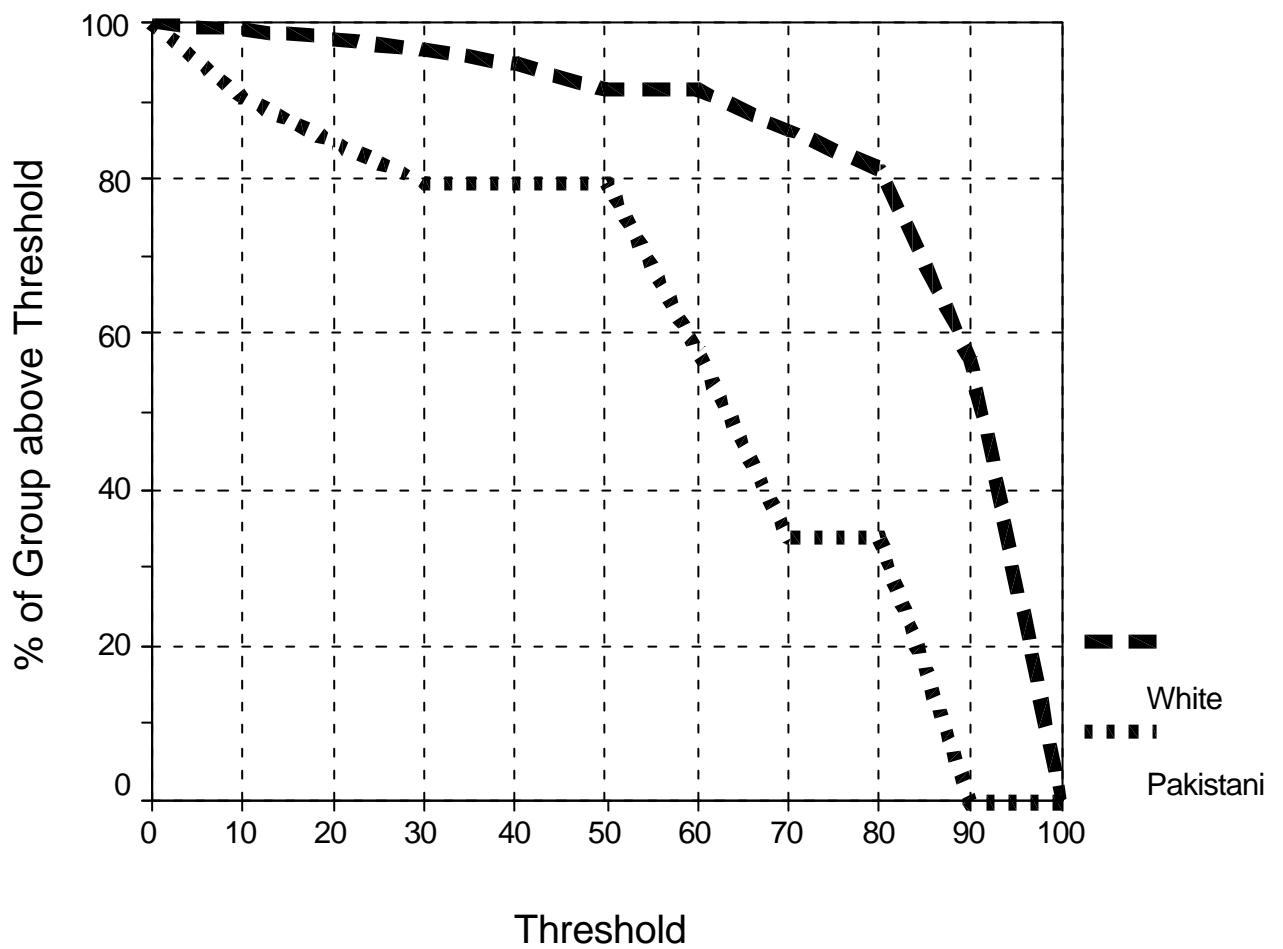


Figure 10. Concentration profiles for the main ethnic groups of students in Bradford.

Concentration Profiles: Main Ethnic Groups in Tower Hamlets

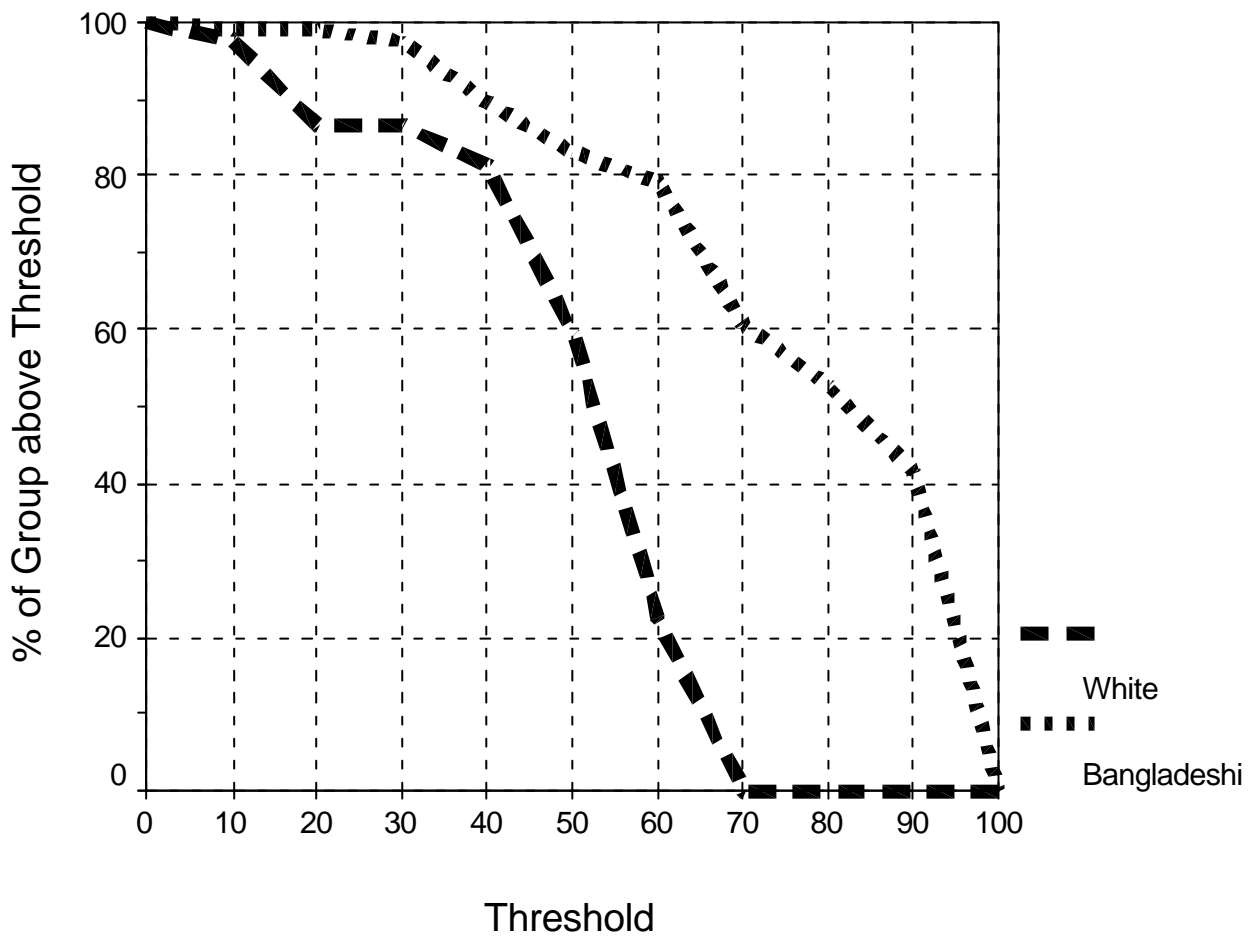


Figure 11. Concentration profiles for the main ethnic groups of students in Tower Hamlets.

Concentration Profiles: Main Ethnic Groups in Southwark

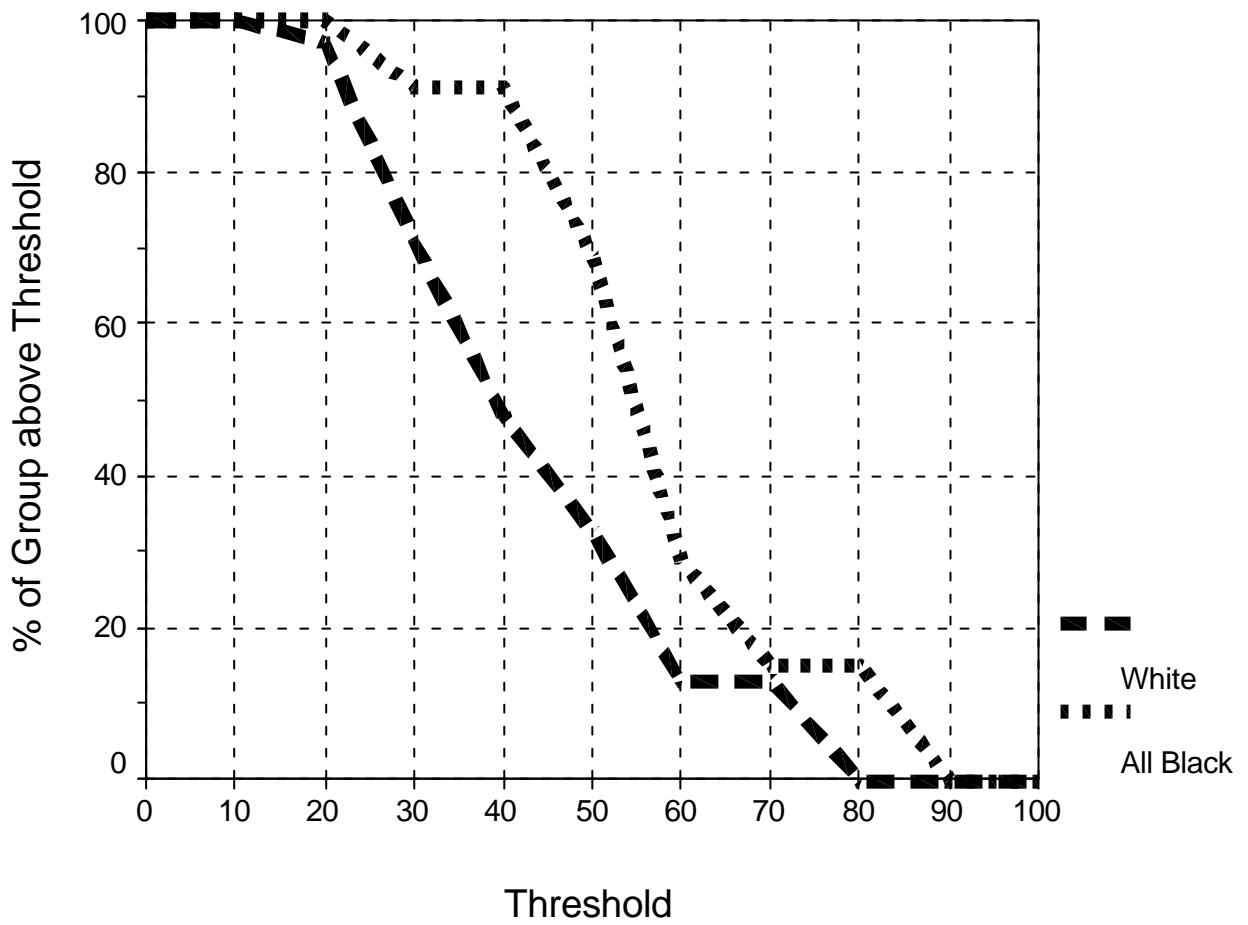


Figure 12. Concentration profiles for the main ethnic groups of students in Southwark.

Concentration Profiles for Main Ethnic Groups:

LEAs where Whites 50-75% of Students

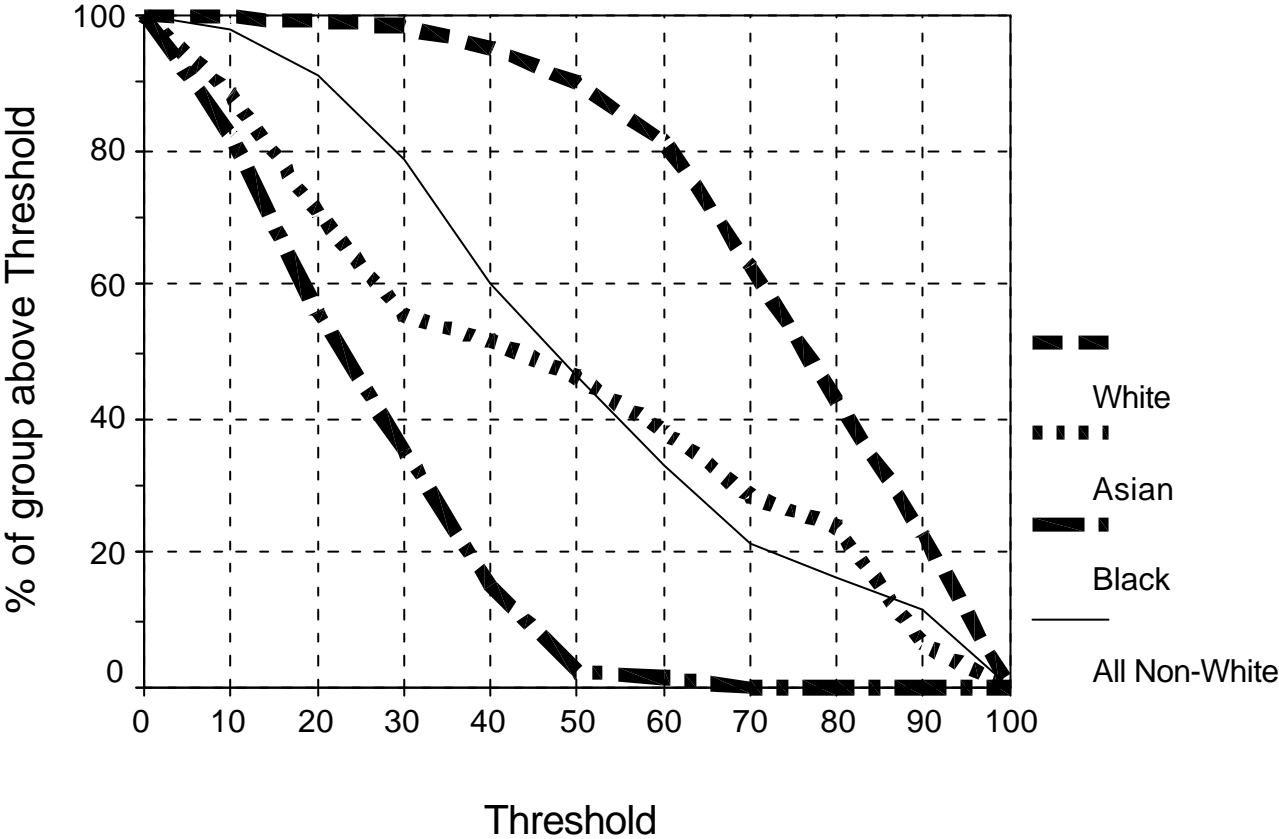


Figure 13. Concentration profiles for the main ethnic groups in LEAs where 50-75 per cent of the students are white.

Concentration Profiles for Main Ethnic Groups:

LEAs where Whites 30-50% of Students

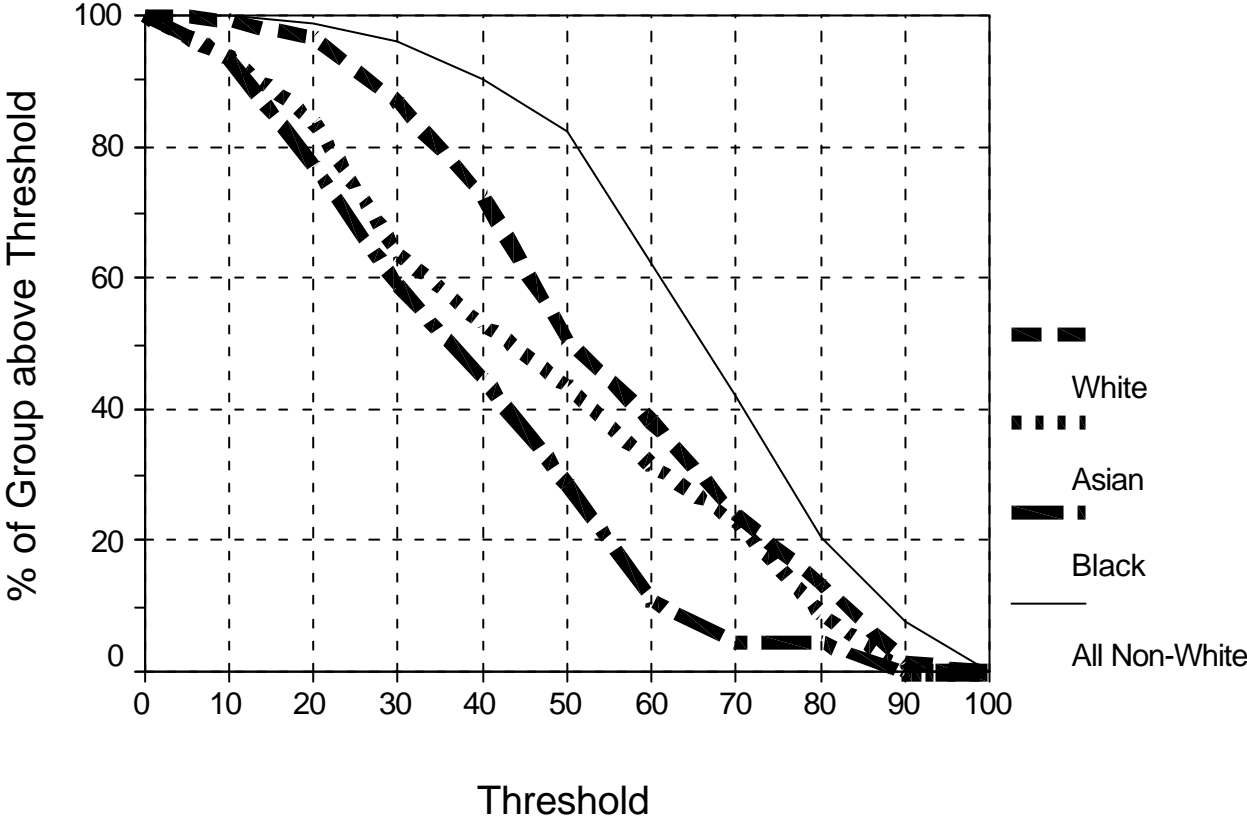


Figure 14. Concentration profiles for the main ethnic groups in LEAs where 30-50 per cent of the students are white.

Concentration Profiles for Main Ethnic Groups:

LEAs where Whites 0-30% of Students

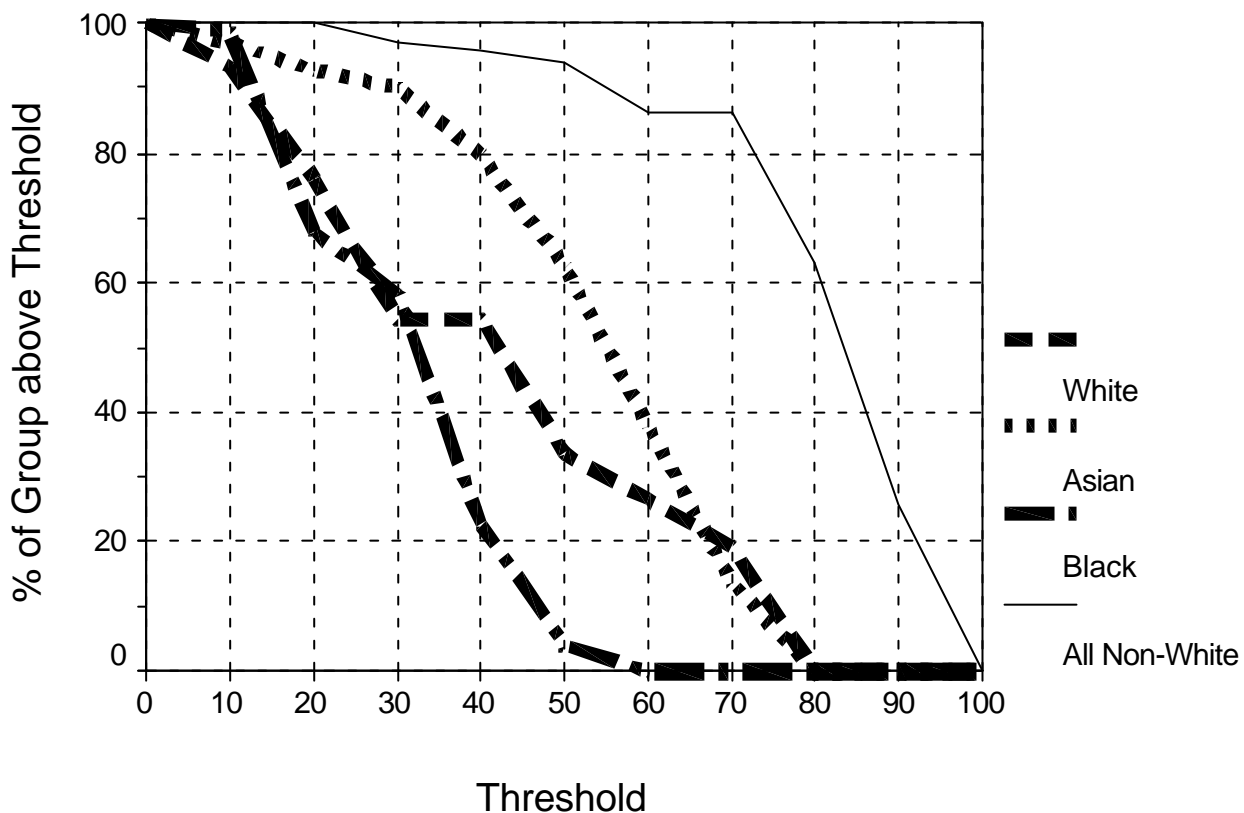


Figure 15. Concentration profiles for the main ethnic groups in LEAs where less than 30 per cent of the students are white.

Cocentration Profiles for Whites:

LEAs with Different White Percentages

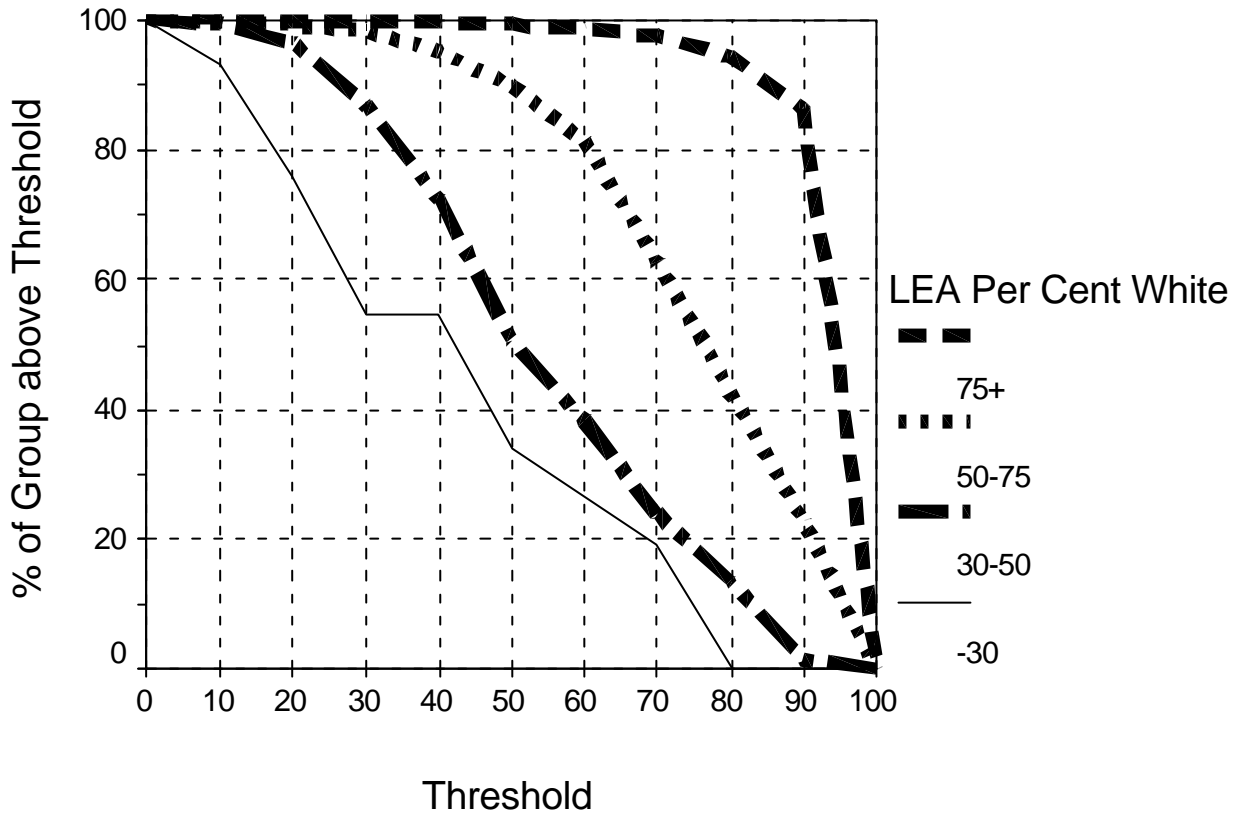


Figure 16. Concentration profiles for whites in groups of LEAs with different white percentages of their total secondary school enrolment.

Concentration Profiles for Blacks:

LEAs with Different White Percentages

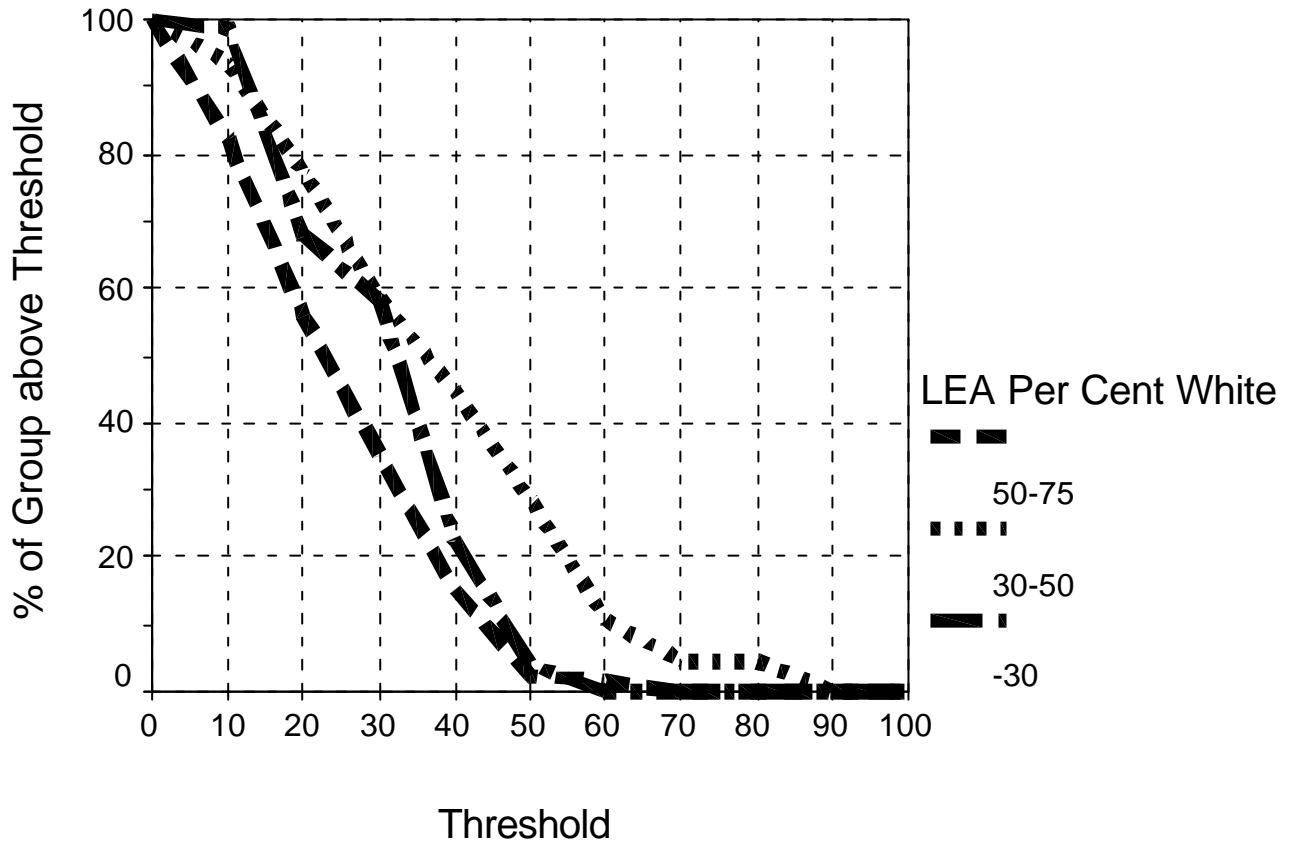


Figure 17. Concentration profiles for Blacks in groups of LEAs with different white percentages of their total secondary school enrolment.

Concentration Profiles for Asians

LEAs with Different White Percentages

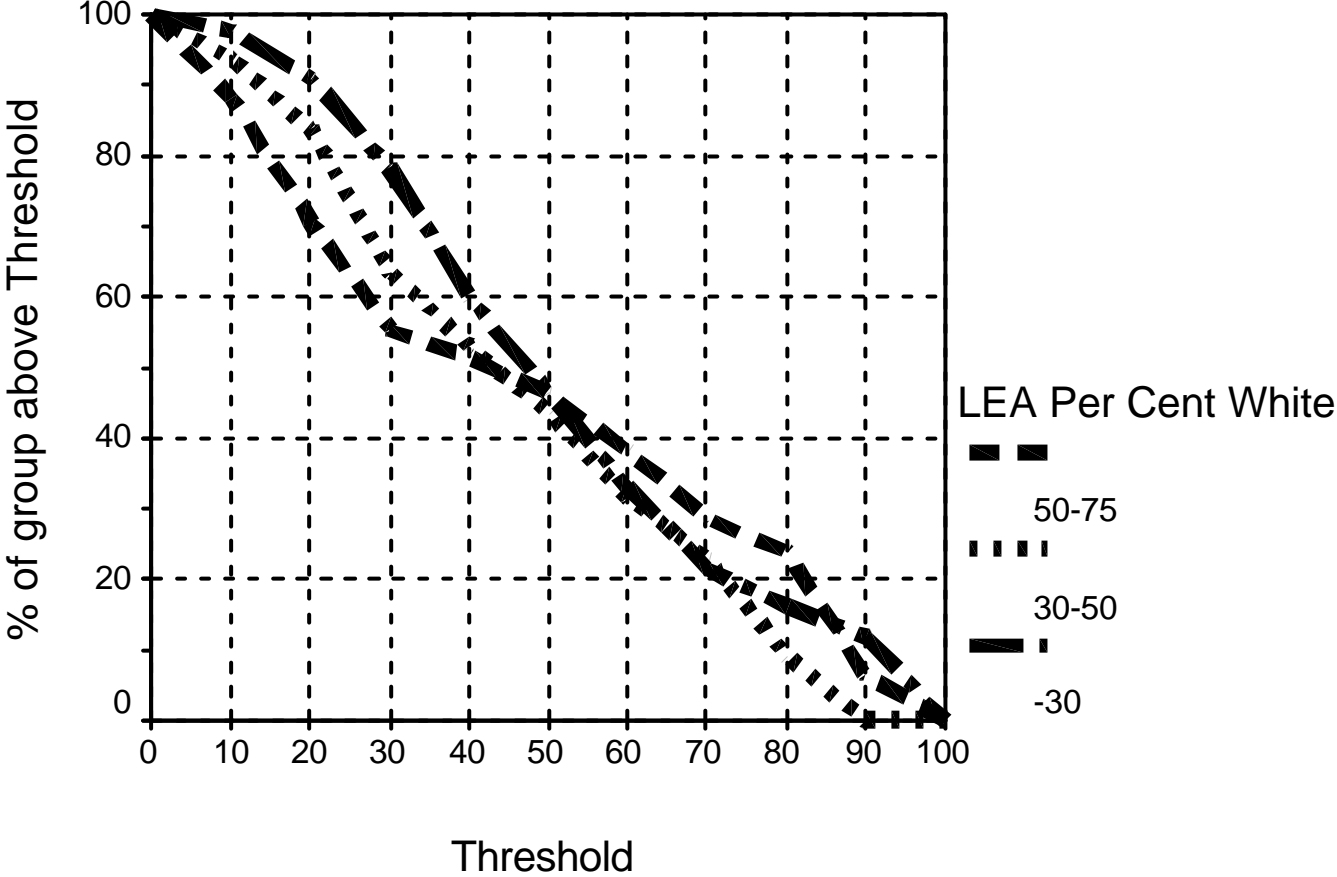


Figure 18. Concentration profiles for Asians in groups of LEAs with different white percentages of their total secondary school enrolment.

Concentration Profiles for All Non-Whites

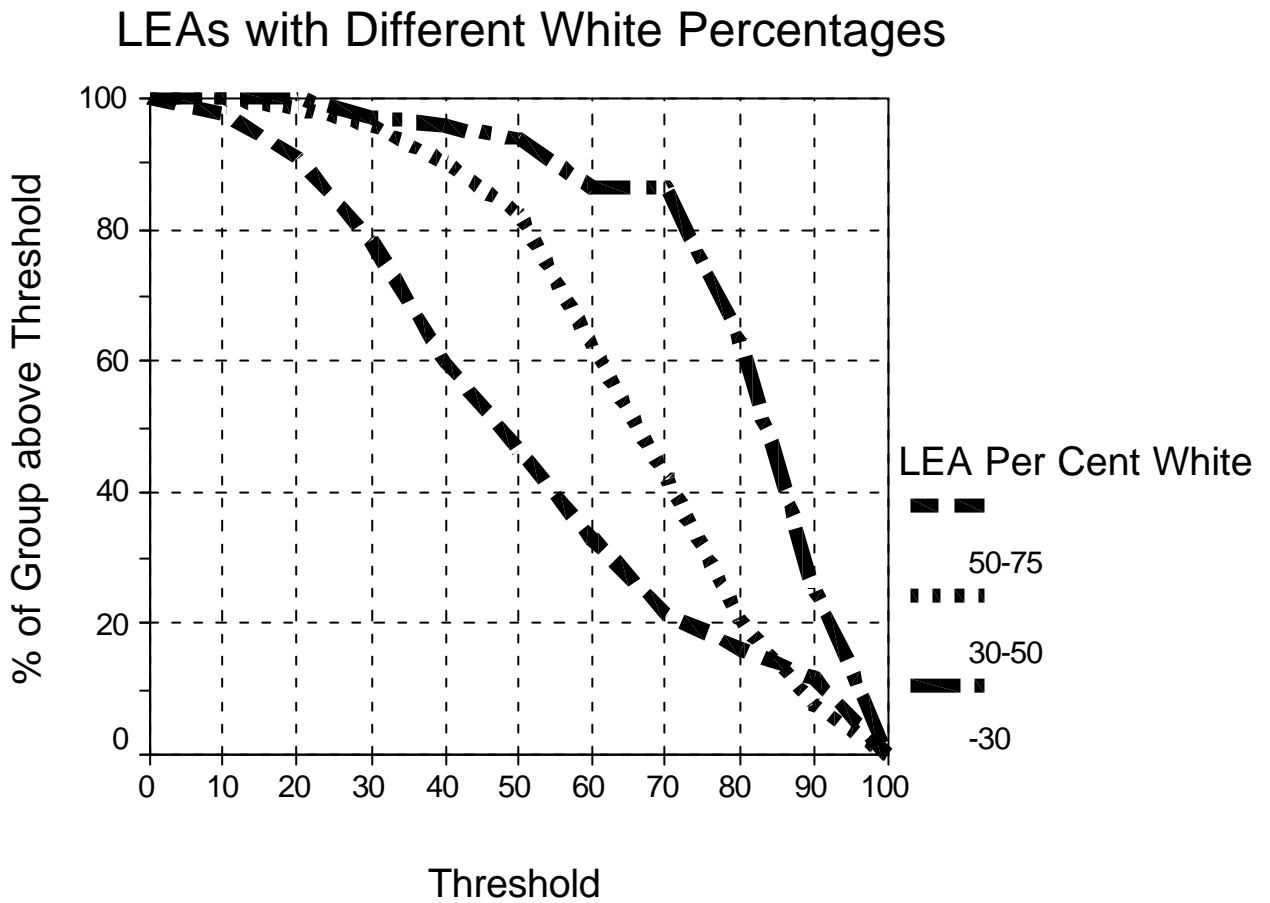


Figure 19. Concentration profiles for all non-whites in groups of LEAs with different white percentages of their total secondary school enrolment.