

The Numerical Liberation of Dark Areas

Ludi Simpson

Keywords: demography, integration, migration, segregation, statistics

Introduction

Let us start with some simple statistics, which appear to present a conundrum. Table 1 shows that across the 8000 electoral wards of England, just 57 had a minority White population in 1991, but that this number had doubled to 118 during the next decade up to 2001. Further, the percentage of Black and Asian residents (all those counted in categories other than White in the Censuses) who live in those minority White areas had grown from 15 per cent (about one in seven) to 23 per cent (nearly one quarter). This appears to represent rapid and considerable further concentration over a period of 10 years. On the other hand, the second part of the table measures where people have moved during the year before the 2001 Census. It shows that in net terms people were not moving towards the minority White areas. More were leaving them than were arriving from other parts of the UK. And furthermore, Black and Asian residents were leaving those areas in greater numbers than were White residents. So there is neither White flight nor retreat, but dispersal.

Table 1
Minority population groups' concentration and dispersal in England

(a) Concentrations of non-White population	1991	2001
Electoral wards with non-White majority	57	118
Proportion of all non-White residents who live in these areas	15%	23%
<hr/>		
(b) Net effect of migration within UK, 2000–2001	Non-White	White
118 Electoral wards with a non-White majority in 2001	–14,716	–9,747

Source: Censuses 1991 and 2001. Tables L06, ST101, KS24. Electoral wards of England.

These two trends are not in fact contradictory. This essay takes a round-about way, via the current and potential roles of statistics in society, and via a review of segregation indices, before setting out a paradigm in which both these trends are seen as unexceptional and indeed to be expected, and provides the evidence to support that view.

Those who work with numbers are not immune to the accepted ideology of their time. The founders of social statistics and demography in the 19th and 20th centuries confidently adopted the racist eugenic approaches that pervaded the views of most establishment politicians, editorials and headlines. Indeed they used skin-colour classifications to justify the development of their measures of human variation. This is demonstrated in section 1 below.

Nowadays the pervading ideology frowns on open discrimination against *individuals* on grounds of race, but it appears to be OK to damn Black *areas*, as ghettos and breeding grounds for terrorism. The measures of segregation that once indicated apartheid in Chicago, are now in favour in Europe, demanding of social statisticians that they measure the threat of a disintegrating urban fabric by its ethnic composition (section 2).

What would a different statistics look like? Which statistics would best serve democratic, anti-racist, liberating ideals (section 3)? There are in fact many good examples but this essay is not primarily about them. It does suggest a different paradigm within which the dynamically changing demography of UK cities can be understood from a human and historical perspective, liberating it from the negative anxieties that dominate current debates on “segregation”.

Before laying out and measuring that different paradigm, the essay describes the different meanings of “segregation” used in public debate, and how they have been measured (section 4). A criticism of these indices from a technical point of view is damning for their use to compare different cities in Britain, let alone to compare those cities with other countries’ experiences (section 5).

A historical view of the demographic and social consequences of immigration to Britain provides the paradigm of dynamic processes. It tells us to expect bigger concentrations of Black and Asian populations in Britain, at the same time as greater levels of mixing of different origins (section 6). There is plenty of evidence to support this view and its expectations. A review of current evidence provides the most positive and forward-looking part of this essay (section 7).

Geographers, social statisticians and demographers could divert some of the energy of the index industry to spend resources on measuring the class and demographic dynamics of change, and the institutional practises which maintain discrimination and discriminatory views. Such work would be more fruitful to an accurate understanding of the present and future of our

rapidly changing cities and therefore more helpful to social policy as well as to all residents of those cities (section 8).

Section 1: Statistics and Racist Ideology

Francis Galton, one of the founding fathers of both statistics and demography and a cousin of Charles Darwin, built the theory of variation between populations on the belief that “It would be quite practicable to produce a highly gifted race of men by judicious marriages during several consecutive generations” (1869) . . . “as much superior mentally and morally to the modern European, as the modern European is to the lowest of the Negro races” (1869).

Ronald Fisher, who laid the foundation of modern statistical theory, was also influenced by the eugenics that pervaded mainstream thinking on class and race:

To increase the birth rate in the professional classes and among the highly skilled artisans would be to solve the great eugenic problem of the present generation and to lay a broad foundation for every kind of social advance. (1917: 206)

Eugenics suggests that intelligence and other conditions are genetically determined and therefore their distribution in the population can be engineered through population policies, leading to predetermined social conditions. Following that argument, the leading official demographer in the USA, P.K. Whelpton, was able to comment approvingly on Nazi plans to sterilize the Jewish population:

By means of eugenic sterilization, it is planned to lower the incidence of certain undesirable qualities in the next generation . . . this plan should be watched carefully by populationists in all parts of the world and such tests of its effectiveness made as are possible. (1938: 183)

This was the very same year in which René Kuczynski was appointed as Reader in Demography at the London School of Economics, five years *after* he had fled Nazi Germany in fear of losing his liberty and his life. Whelpton was likely to have known of Kuczynski, who had previously worked in the USA, but personal knowledge was not enough to warn him against the Nazi regime’s genocidal plans.

There are plenty of other great names in statistics—Spearman, Yule, Edgeworth, Dublin and Thompson—who made similarly enthusiastic statements about the need to breed out disadvantage. The link between statistical development and eugenics is explored for example by Donald MacKenzie (1999), and by Tukufu Zuberi (2001) from whom the quotes above have been taken.

Eugenic anxieties focused on the supposed genetic effect of mixing

between classes and races, and of the lower birth rates of the professional and managerial classes, both of which were seen as threats to those favoured classes' fortunes. Modern day eugenicists make the same mistaken assumption that association between economic and racial characteristics is a sign of causation (for example, Herrnstein and Murray, 1994; and the review of these and other modern eugenicists within Zuberi, 2001). However, the advances of genetic theory and knowledge, and of anti-discriminatory legislation, have stemmed the pressure of eugenic views. More recently it is not the Black individual who is blamed for the influence of their genetic makeup but the Black collective where close approximation of individual Blacks apparently indicates bad news for everyone.

Section 2: Current Ideological Concerns

Geographical patterns of settlement and the rate of residential dispersal from cities to suburban and rural areas are recurring themes in geography. The racial dimension of settlement patterns has been studied in Britain with increased vigour since the national census included a question asking "ethnic group" in 1991. See for example social geographers Ceri Peach (1996, 1998), Deborah Phillips (1998, 2006), Ron Johnston et al. (2002) and Tony Champion (1996). An industry of segregation statistics and indices show Britain to be "polarised" and "remarkably segregated" in a "stubborn" manner. That is the common account in the literature of sociology and geography as well as the common perception created by media and political commentators. In the early 21st century the common account goes further, to suggest that segregation is a chosen isolation, a combination of flight and fear that unhelpfully isolates groups and reinforces their separate development.

This latest interpretation came not from the academic analysts but from official reports issued after the riots of 2001 in English northern cities. The language of these reports was strong and clear:

We have focused on the very worrying drift towards self-segregation, the necessity of arresting and reversing this process . . . The Bradford District has witnessed growing division among its population along race, ethnic, religious and social class lines—and now finds itself in the grip of fear. (Ouseley, 2001: Foreword)

The team was particularly struck by the depth of polarisation of our towns and cities. The extent to which physical divisions were compounded by so many other aspects of our daily lives, was very evident. Separate educational arrangements, community and voluntary bodies, employment, places of worship, language, social and cultural networks means that many communities operate on the basis of parallel lives. These lives often do not seem to touch at any point, let alone overlap and promote meaningful exchanges. (Cantle, 2001: 9)

As a result of these reports, each local authority was asked to develop a

“community cohesion plan” to increase interaction between communities and within communities. Four years later, soon after the London bombings in July 2005, segregation hit the headlines again following reports of an unpublished academic study presented by an Australian geographer Mike Poulsen, and a speech by Trevor Phillips, head of the Commission for Racial Equality. It is appropriate to use the headlines to define the anxieties that were being expressed.

“Segregation at levels of black ghettos in US cities” ran the *Guardian* headline on 1 September 2005, suggesting that one can measure “segregation” and compare it across different regions and countries. “Ghettos blighting Asian integration” (*The Times*, 1 September 2005) poses residential segregation against integration, something which we shall see is neither necessary nor helpful. In the *Guardian* on 21 September, “Multiculturalism is failing to bring Britain’s races together, says Ted Cantele”; he had headed the Government’s Home Office reviews of community cohesion, and has inspired an Institute for Community Cohesion at Coventry University. He suggests that segregation is partly caused by a policy failure, that of multiculturalism, which in his view has discouraged interaction and integration. The *Sunday Times* heralded Trevor Phillips’ speech with “Are we sleepwalking towards apartheid?” (18 September 2005). There are two points worth noting here. First a sense of separateness, of groups pulling apart and retreating into their own areas. But second, that it would not take much to reverse the process. If only we woke up (something simple to do), we could stop it. Trevor Phillips’ speech took the July bombings as its starting point. Its concern with segregated areas was reported as “Our worry is this is fertile breeding ground for extremists” (*Daily Mirror*, 23 September 2005). Thus segregation (whatever that means, but let us not get ahead of ourselves in this essay) is identified as a contributory cause of fundamentalist bombings, a frightening upgrade to the views that blamed the riots of 2001 on segregation.

It is hardly surprising that this association of Black areas as problematic has reinforced the focus of academic geographers on indices of segregation with an assumption that high levels of measured segregation are a negative phenomenon of great importance to the policy-makers who in the final analysis hold the academic purse-strings.

This common and negative view of segregation is summed up by Joos Fortuijn and colleagues for a special issue of the journal *Urban Studies* (1998, Vol. 35, No. 3). They point to its origins in the USA:

Segregation has become a public debate issue. In this debate, segregation has an outspoken negative connotation and is predominantly focused upon the ethnic dimension. The black ghetto in American cities symbolises the cumulation of the miseries of modern Western societies. So far, in European societies, few ghettos can be found . . . The fear [of ghettoisation] is based on the idea that a sequence of events may happen which is regarded as

unwanted. That sequence is: increasing spatial segregation will lead to increasing separation of different social and ethnic classes and population categories; in its turn, that will produce ghetto-like developments and will finally result in the disintegration of urban society. (Fortuijn et al., 1998: 367)

Labelling Black and in particular Muslim areas as problematic is partly a xenophobic response (highly White areas are not seen as a problem by the prevailing ideology). It is partly a response consistent with global power relations, partly a diversion from real social issues affecting all groups including millions of White families and partly a response to the changing local power relations where old balances are no longer stable. These are all ways in which it becomes easy and expected to highlight areas with a low proportion of Whites, describe segregation and claim to have indicated a social problem. All the more so if those indices of segregation show increases over time.

It is easy to interpret superficially the statistics of part (a) of Table 1 as indicating a growing segregation, and indeed a preference for isolation, a self-imposed ghetto. And so it has been. In the past five years, post-Twin Towers and post-Northern Riots, the statistics of racial segregation have put Britain in the grip of fear, that fear described by Joos Fortuijn of a disintegrating society. However, at the same time there has been a shift from materialist to cultural explanations of inequality, as noted clearly by Claire Alexander (2004). No longer is it discrimination and the housing market that are blamed for the segregation, but the residents themselves: the racial geography of Britain is first labelled a problem and then labelled self-segregation. Apparently, Muslims are choosing to remain in self-segregated ghettos from which Whites are escaping. The outcome is a spiral of poor employment and low self-esteem which results in the violence of Oldham, Burnley and Bradford, for which others have to pay. If only people who live in those innercity mono-racial areas would choose to integrate by living elsewhere; and if only nice Whites could be persuaded to live in innercity areas they would add some semblance of normality.

It will soon be time to describe and review the segregation indices themselves and examine the evidence that contradicts this negative and purely cultural approach, but first it is worth noting the statistical voices that have taken different approaches.

Section 3. Interlude: Radical Statistics?

There is a reinforcing cycle whereby politicians express anxieties, the government demands evidence on perceived problems, and research is designed and disseminated to adopt and feed those same anxieties. Those who work with numbers are no more immune to pervading ideologies than

those who work with words and those who work manually, and often the result is that science takes a conservative role, extending the reach of current views rather than challenging them.

Nonetheless, when the assumptions behind pervading anxieties appear to be narrowly focused and to make sense of only a part of the available evidence, there is room for dissenting voices and new paradigms for research. There are also many strands and conflicts within prevailing ideas. Additionally, social movements with ideas determinedly in contrast to the prevailing ones, are capable of encouraging new research approaches and new views of the evidence, quantitative as well as qualitative.

University-based researchers including Danny Dorling, Ceri Peach and Tariq Modood were quick to point out that Trevor Phillips' doom-laden descriptions in 2005 were neither accurate nor helpful to the achievement of peaceful and diverse cities.

The Greater London Authority (2005: 1) went further, rejecting an assumption in the research itself, saying "The debate has been based upon a type of analysis that suggests that too many Black people or too many Asians living together is a problem, while the same dominance by White people is acceptable. We find this suggestion offensive to the people of London". The GLA report presented analysis and found no ghettos in Britain using the measures adopted by Mike Poulsen, and increasing diversity in London when using an index of diversity rather than an index of segregation.

It would be useful to explore more generally the nature of the statistics that provide support for social change. If statistical practice, with its conceptual categories and instruments of measurement, is specific to the society it is found in, one can go on to ask what kind of statistics would arise in a different society. Or more practically, what kind of statistics should critical social movements demand now for their own purposes, or indeed collect and make themselves? Out of anti-racist politics, what demands come for statistics that are not yet collected, involving new conceptual categories and new measurements?

Britain has a proud tradition of the use of scientific research to expose false claims and to follow the agendas of those who do not have power. The Radical Statistics Group has since 1975 attempted to lay bare the influence of those who provide the resources on every stage of research, from commission and design through to analysis, interpretation and dissemination. Its sub-groups and its publications have attempted to demystify research methods so that they are no longer unintelligible mantra that must be taken or left without challenge and without democratic involvement (Irvine et al., 1979; Dorling and Simpson, 1999; Kerrison and Macfarlane, 2000; *Radical Statistics*, serial). Its work is no more than the tip of an iceberg made up from the work of many individuals who do not allow their

scientific objectivity to obscure their passion for human improvement on a social scale. All this is within a tradition that in Britain includes the socialist scientists of the 1930s and the later radical science movement (Werskey, 1988; *Radical Science Journal* c.1975–c.1997, followed by the journal *Science as Culture*).

This essay can simply flag up the potential to engage research on the side of anti-racism. In itself it does no more than perhaps provide an example of relatively simple approaches which, informed by a critical view of the assumptions embodied in current research and prevailing ideology, can provide a more helpful framework of evidence.

Section 4: Segregation Indices

“And then, when the young punks start kicking up a fuss for whatever reason, in comes some smart fucker who tells the world that a place like Bradford suffers from self segregation. No fucking shit Einstein. The whole world is segregated in a million different ways so why should Bradford be any different?” claims Kilo in Yunis Alam’s (2002: 301) dramatic novel. But what does it mean to say that a city is segregated and how has research measured the phenomenon? There are four different ideas that have been expressed by the word “segregation” in recent public debates. Each is measured in a different way.

Segregation 1: A High Proportion of Particular Ethnic Groups in a Locality

This is the simplest concept, often used in the phrase “a segregated area”. It may refer to a specific group—the proportion of Muslims, the proportion of Bangladeshis—or to all groups other than White taken together. For a single area, a high proportion may be termed an enclave, and if this is mainly of a single non-White group, it may be termed a “polarized enclave” rather than a “mixed enclave” (Johnston et al., 2002). Measured across a city or local authority or a whole country, the proportion of a group in the population varies across neighbourhoods. The Index of Isolation measures the local proportion of a group, averaged across all the members of that group (Lieberson, 1963). It can be usefully thought of as the probability that a member of that group will meet someone of their own group locally. It is this index and versions of it that have been used in the research by Mike Poulsen and others. All its versions, are related to the proportion that the group makes up of the whole population. A value of 1 for the isolation index means such high segregation that all members of the group are in areas where no other groups live.

Segregation 2: An Unequal Geographical Spread

Here segregation is seen as how “dispersed” a group is, relative to the rest of the population. It is only applied as an average across all localities in a city or local authority or country, and is usually measured by the Index of Dissimilarity. It is often known simply as the Segregation Index. Like the index of isolation, any value of the index of dissimilarity has a simple interpretation: it is the proportion of the group’s population that would have to move areas, to become distributed across areas in the same way as the rest of the population. Both indices were developed to monitor the evolution of Black–White population geography in the USA, following the effect of discriminatory housing and labour market conditions which ensured that African-American families would not escape the ghettos into which they had been herded (Duncan and Duncan, 1955). Unlike the index of isolation, the index of dissimilarity is not affected by the overall proportion of the group in the population but only by its distribution through the areas. The indices of isolation and dissimilarity are considered to represent the main dimensions of racial geography in the USA (Massey and Denton, 1988). While a group could have a high level of both isolation and dissimilarity if it is only found in areas where there are few residents of other groups, the two indices can change over time in different directions, and as we shall see this is what would be expected after significant streams of immigration; in that circumstance a new community is growing with new children and few elderly, at the same time as some residents are moving away from the original settlement areas.

Segregation 3: Movement towards One’s Own Group

Public debate has made much of the idea of “self-segregation” and its colour-conscious equivalent “White flight”. The suggestion is that residents of a group are choosing to live with others of the same group. It suggests retreat into one’s own areas, and is not measured by the proportions of people in each locality but by the extent of their movement towards existing concentrations. There can certainly be many different aspects to such movement, but it is most directly measured by *migration* of each group to and from areas in which the groups have greatest presence.

Segregation 4: Lack of Diversity

In contrast to the measures of segregation and separateness, the Greater London Authority focused on how mixed is an area. This may be measured simply by whether the proportion of White residents and Other residents both exceed say 10 per cent, or 25 per cent (Simpson, 2005). The Diversity

Index is a more complex measure developed by ecologists to measure how close a set of species are to equal numbers within an area, and was used by the Greater London Authority (2005). Unlike the measures above, it captures the diversity of several groups in an area, appropriately to London's cosmopolitan population.

Tables 2 and 3 show the first two indices for each ethnic group. Each is based on the electoral wards of England and Wales. Table 2 shows that for all groups except Chinese, more than half of the population would have to move to be spread between localities in the same way as the rest of the population. It shows that the White group is by far the most isolated than is any other group, followed by Pakistanis then Indians.

Table 2
Index of dissimilarity (segregation) and isolation for Census ethnic groups in 2001

2001	White	Caribbean	African	Indian	Pakistani	Bangladeshi	Chinese
Index of dissimilarity (unequal spread across localities) (%)	59	67	71	62	72	72	41
Index of isolation (average probability of meeting one of the same group in a locality) (%)	93	7	8	15	17	14	1

Table 3 shows the changes in the two indices for England and Wales by ethnic group between 1991 and 2001. No group has become more segregated, rather each group is spread through England and Wales more like the rest of the population except for Africans whose spread has not changed. The White, Caribbean and Indian groups have also become less "isolated". However, "isolation" has increased for the African, Pakistani and Bangladeshi groups over the decade; these are also the groups of most recent immigration and greatest population growth. The index changes are not great over the decade.

Table 3
Change in the indices of dissimilarity (segregation) and isolation between 1991 and 2001

Change between 1991 and 2001	White	Caribbean	African	Indian	Pakistani	Bangladeshi	Chinese
Index of dissimilarity (%)	-2	-2	0	-3	-3	-2	-1
Index of isolation (%)	-2	-1	+4	-1	+3	+3	0

Each of the four measures can be applied to any social group or class, to measure segregation by poverty or education or age, and how it has changed over time, as did Danny Dorling and Phil Rees (2003) for the period 1971–2001. While the focus has been on Black and Asian segregation, one may examine the isolation, segregation, migration and diversity of Whites, or one of the many White groups, which include Jews (the old Blacks) and Polish (the new Blacks). The measurement is only limited by the data available. Many authors have used a number of different indices, and variations of them. No single index has triumphed, but a summary measure of segregation has been sought by labelling as ‘hyper-segregated’ those groups that are segregated on all dimensions (Massey and Denton, 1989; Wilkes and Iceland, 2004). All the indices view as highly segregated any population whose members all live in areas where other groups do not live. But a single summary measure is not suitable when different aspects of residential patterns are moving in opposite directions, as they are in Britain.

Section 5: Brief Arithmetical Review of Indices of Segregation

The easiest and most pertinent criticism of the indices of segregation is that while they are used to indicate potential ghettos from where people cannot escape poverty, they are in fact purely measures of population distribution across space. They include no measure of social conditions. To move from a high value on an index of isolation or dissimilarity to an assessment of a social problem requires either more evidence, that the Blackness of an area leads to social problems, or an attitude of anxiety when confronted with Black areas.

However, the indices of isolation and dissimilarity can be assessed on their own arithmetical terms too. Each index has its sensible and accurate interpretation explained above: for isolation, read the probability of meeting someone of the same group locally; for dissimilarity, read the proportion of the group which would have to change locality for the group to be spread through localities in the same way as the rest of the population. These simple readings of a value of the index are valuable. However, the indices are used to assess change over time, to compare groups, to compare cities, and to compare the situation in different countries; it happens that the value of each index is sensitive to several other important things that must be considered when making those comparisons.

First, the index of isolation is sensitive to population growth. Suppose the Muslim population maintains the same spatial distribution but grows by 50 per cent in every local area. The distribution of the populations through the localities has not changed but in each area the number of Muslims is

greater in absolute and proportional terms. More of the population live in areas with high proportions of Muslims. Such population growth in every area results in higher concentrations as measured by the index of isolation and the classifications of mixed and polarised enclaves, without any movement towards those concentrations. As a result of these measures' dependence on population size, the White population is seen to be extremely isolated (93 per cent in Table 2), a useful reminder of how little contact most Whites have with other groups. Measures of concentration such as the index of isolation cannot evaluate the level of segregation over time, because each population is growing at a different rate. They simply measure areas with high proportions of each ethnic group. Some authors have attempted to deal with this problem by deducting the population proportion to create a Modified Index of Isolation (Johnston et al., 2004). But changes in the index, modified or not, remain correlated with population growth in situ and therefore do not measure the changing racial geography associated with *movement*.

Second, the measures cannot fairly be used to compare cities, local authorities or countries, in spite of their use in precisely that manner by many of the quoted studies, because the boundaries of the areas compared are of quite different natures. For example, of the populations of Bradford and Leicester one quarter live in relatively rural areas in which almost the entire population is White. Their indices of segregation are higher than if the districts had been bounded more tightly around the city, as are for example Manchester and most London Boroughs. It is not surprising therefore that Bradford and Leicester are identified by studies using segregation indices to compare sub-national regions as do both Peach and Johnston in the studies cited above.

Third and similarly, the boundaries of the localities used to measure segregation influence the measures of segregation. Calderdale Council's ward boundaries were revised in 2004, such that the Muslim population was mainly included in one ward rather than several as with the previous boundaries. With no change in population but simply a change in the way the boundaries of each locality were drawn, the measures of segregation based on ward boundaries increased significantly. This is a classic example of a general phenomenon termed the Modifiable Area Unit Problem by Stan Openshaw (1984) and other geographers, such that social indicators may vary simply because of adjustment to area boundaries.

Fourth, the *scale* of the areas measured makes a difference: the smaller the areas, the greater the values of the indices. Tables 2 and 3 used electoral wards. Had they used local authority districts the index values would have been lower. Had they used smaller areas, the index values would have been greater. At the extreme, measuring the indices for individual people would give index values of one, indicating complete segregation—everyone

sharing space with only themselves! While this is a trivial result, together with the previous results it clarifies that comparisons between cities in different countries have been speculative and not based on any comparable evidence.

These observations shed doubt on the claims of growing segregation and the comparisons between cities, for the sensitivity of the index values to area boundaries, city boundaries, and the scale of measurement are greater than the differences between 1991 and 2001 values, and between cities. This incidentally makes it very difficult to interpret the results of recent work comparing school and residential segregation in England (Johnston et al., 2004; Burgess et al., 2005). Primary school catchment areas are naturally compact and closely match neighbourhood areas defined by housing and physical barriers such as roads and railways. In this recent research, the racial segregation between school areas was compared with that between electoral wards which are administrative boundaries, only loosely connected to community boundaries and which therefore should be expected to yield lower values of segregation indices.

Examination of both the dissimilarity and the isolation indices for the same region (England and Wales), and for similar shape localities (electoral wards) has shown that one index has increased over time while the other has decreased over time (Tables 2 and 3) for the African, Pakistani and Bangladeshi populations. The following sections will explore a different framework within which to understand the changing geography of UK cities, and briefly describe the evidence that supports it.

Section 6: A Dynamic View of the Demographic Consequences of Immigration

We need to address those original statistics, which show increasing Black and Asian concentration in minority White areas, and simultaneous movement away from the same areas. The segregation indices showed the same picture—an increasing index of isolation (concentrations) for African, Pakistani and Bangladeshi groups but a decreasing index of dissimilarity (more spread).

The explanation is quite simple to historians of immigration and settlement, whether of Huguenots in the 18th century, or Irish and Jews in the 19th and 20th centuries. It is a story of social solidarity through living in close proximity in a strange and largely unwelcoming country, initially pushed together through experiences of flight as refugees, or labour demand from textile, service and other industries in specific British locations. The story moves towards integration by means of a confidence-building period in a few settlement areas. It is a story of class divisions, in

which many of those with better income, or better connections to the established labour and housing markets in Britain, invest in their families' future by moving to better housing outside the original settlement areas.

It is a story of young men and women leaving their homeland, establishing their families and proving their maturity; of those same parents some years later but still far from old, proud as their children in turn leave home; and of those children establishing their own household a few streets away, further enlarging the areas that have become familiar with shops and street signs and places of worship that recognize the new community. The story continues as in time the new communities are no longer new, but cultural traditions and practises have become established and institutionalized; the new institutions work hard to maintain connections to those with most resources who may have moved away. The story accepts that if those who have moved are not assimilated into mainstream existing indigenous cultures, further clusters of the now-not-so-immigrant population appear in new areas.

Thus the Huguenots (Gwynn, 2002) are hardly visible now, the 'mini-Erin' Irish cultural and political centres which were the target of abuse and anxiety are no longer so visible (Busteed, 2000), and Jews have moved on from Spitalfields (Waterman and Kosmin, 1987). On the corner of Fournier Street and Brick Lane in Tower Hamlets there stands a building that was once a Huguenot church, was then a synagogue early in the 20th century, and is now a mosque (Leech, 1994). This has not usually been a process of assimilation, but of population growth and re-clustering away from the poorest housing to which immigrants are initially attracted through economic necessity and host hostility. The 2001 Census shows that the Jewish population is more clustered than the Muslim population, with an index of dissimilarity of 62 per cent compared to 54 per cent, showing that it is less spread through localities when compared to the rest of the population (Dorling and Thomas, 2004: 56).

This historical process lends itself to demographic and statistical hypotheses as follows (and further developed in ongoing work). The first hypotheses suggest rapid population growth leading to greater isolation and segregation. The next suggest a subsequent counter-current of dispersal.

Hypotheses of Population Growth and Concentration

- Pioneer immigration results in settlement areas of ethnically similar population.
- Subsequent immigrants are attracted to existing clusters of population ethnically similar to themselves.
- Settlement areas grow rapidly from relatively few deaths compared to the number of births.
- Natural growth (births exceeding deaths) becomes greater than the effect of immigration.

Hypotheses of Dispersal

- Natural growth limits the in-migration of all groups to immigrant settlement areas, as housing becomes crowded.
- Pressure on housing leads to dispersal from settlement areas to other parts of the country (internal migration).
- Internal migration to areas neighbouring the settlement areas is of residents with similar employment and housing conditions.
- Internal migration further afield is of economically more successful members of the ethnic group.
- Internal migration maintains clusters of ethnically similar population, albeit in new locations.

There are many other hypotheses that can be usefully developed. In particular, both social mobility and institutional pressures influence migration over and above the demographic processes outlined here. The aspirations of young people, and the direction given by estate agents and building societies, are worthy of much more qualitative study along the lines of Debbie Phillips' (2006) work in Leeds and Bradford. Here we are more concerned with the evidence of the core demographic processes of population growth and subsequent dispersal. Such evidence would explain greater concentration and simultaneous dispersal, and suggest what the future holds in store.

Section 7: Evidence of Growth and Dispersal

As Kilo has already claimed, there is no doubt that Britain is segregated. Populations originating in immigration from Britain's past colonies in the second half of the 20th century tend not all to live in a soup of mongrel Englishness but to a visible extent in clusters, mainly but not only in the areas where they were first housed in answer to British labour needs: in the inner cities of West Yorkshire and Lancashire, in the Midlands and in London.

Tables 2 and 3 have already presented some useful evidence on this. The clustering does not reach an average proportion of 20 per cent for any group (this is the index of isolation). In other words, neither Bangladeshis nor Pakistanis nor any other non-White group measured in the 2001 Census reaches an average proportion of 20 per cent in the areas in which they live. This hardly justifies the tarring of a whole visible population with the claim of dangerous-ghetto-tendencies.

Of course some areas have much higher proportions of Black and Asian residents than others. But while there are 118 electoral wards with a minority White population, there are only 14 wards in England and Wales (out of 8850) with more than 50 per cent of one census-measured ethnic group.

Britain's non-White areas are diverse, not mono-ethnic. In no ward does a single non-White ethnic group make up as much as 75 per cent of the population (contrast this with White, which makes up more than 98 per cent of the population in more than 5000 wards).

Seven of the 14 wards with a majority of one non-White group are Indian; there is a simple reason for this: Indians are the biggest non-White population in Britain. The other seven wards have a majority of Pakistani or Bangladeshi residents.

In England during 1991–2001 natural growth was more than the effect of immigration for each of the Caribbean, Indian, Pakistani and Bangladeshi groups (Williamson, 2003). The young age structure of all these groups, with relatively few elderly people and therefore few deaths relative to the number of younger people, continues to drive population growth, and this is the main reason for growing clusters of their population. The relatively high fertility in the Pakistani and Bangladeshi groups has been decreasing throughout the past three decades and is expected to continue to do so; it is not the main reason for their population growth. The Caribbean population is the oldest, in age and in length of residence in Britain; it has stopped growing in total size.

The census very clearly shows movement away from areas of immigration, as was highlighted in Table 1. As a proportion of their population, Asian and White people are both moving out of the original Asian settlement areas, and at a similar rate of 1–2 per cent net a year. This dual dynamic of migration out at the same time as a growing population, has been documented and published for the national picture and for each district in Britain (Simpson, 2005), and has also been published in more detail for Bradford, Oldham and Rochdale by our own research programme at the University of Manchester (Simpson, 2004; Simpson and Gavalas, 2005). White flight is a myth; and much of White net out migration may be more about White people not going to Asian settlement areas rather than an unusual proportion leaving them. If there is no surplus housing, it is not surprising that few families are moving to those areas.

What then happens to the segregation indices? Given the demography of immigration, one would expect the index of dissimilarity to increase for a while, because during the early years of immigration new immigrants live only in the clusters around cultural facilities. When families begin to move elsewhere, the index of dissimilarity would decrease. Table 2 showed that it is decreasing now for all census groups in Britain. We are mixing more.

The other main index (of 'isolation') measures the probability of meeting someone of your own group. We have seen that it is sensitive to the group's overall proportion in the population. In the terms of this index, having babies increases isolation. Indices of isolation are indeed growing for the African, Bangladeshi and Pakistani groups, and they will continue

to do so for many years. Their change over time measures the growth of a population more than anything else useful for social policy.

It is of much more use to understand how and why people are moving. There are three research results that are very clear here, taken from Simpson (2005). First, the migration patterns of White and other groups are very similar, involving families and middle-aged people moving out of inner cities, and moving further when they can afford the housing and commuting costs. As Table 1 shows for the 118 electoral wards in England with a minority White population, in the year before the census there were more non-White people who left those areas than White people who left them. Within each major city, there is dispersal of the minority ethnic populations, not retreat: more minority ethnic residents left their inner areas than came to them from other parts of the UK.

Second, there is much more mixing in Britain and that will continue. The number of mixed neighbourhoods (electoral wards) of England increased from 864 to 1070 in the 10 years between the last two censuses of 1991 and 2001. It will continue as dispersal continues. Here mixed areas were defined as those with at least 10 per cent White and 10 per cent Black and Asian residents. Those with minority White population are also mixed areas: they are diverse areas. As innercity areas, they tend to have a great deal of movement in and out of them, and for this reason are not monolithically poor as claims of ghettos would have us believe. The mixing extends to the most intimate of indicators: there are twice as many children of mixed ethnic group aged 0–4 as aged 20–24. And lest one stereotypically believes that this will be almost all Caribbean children, the census records over 100,000 children of Mixed Asian and White origin, and 158,000 children of Mixed Caribbean and White origin.

Third, comparing the minority White areas with mixed areas, and with areas that are almost all White, inequality between ethnic groups is very similar in each type of area. Although those who have moved out of innercity immigrant settlement areas are generally those who are better off, in comparison with their White neighbours they have poor housing and employment outcomes. For example, male Bangladeshi, Pakistani and Caribbean unemployment is double the White rate in wards with mainly White residents, just as it is in diverse innercity areas. This suggests that geography and ethnic mix are not the key to the inequalities that commentators agree are the root of disquiet among young people.

This evidence points to a very different image of the present and future than that painted by Trevor Phillips (2005), as “Residentially, some districts are on their way to becoming fully fledged ghettos—black holes into which no-one goes without fear and trepidation, and from which no-one ever escapes undamaged”. Instead, we find immigrant-origin populations growing naturally in situ, in areas where housing is poor but increasingly

full up. We find increased mixing, both through mixed unions and through movement away from original settlement areas. We find diverse innercity areas through which many people of different backgrounds come and go, and where immigrant communities find their feet in an atmosphere of relative safety and solidarity, as part of a path to integration. We find spatial expansion of the growing population, both into neighbouring areas (having the effect of increasing the visible cluster) and further (with the effect of providing new clusters, often in better housing).

Section 8: Policy Implications and Further Research

This essay has expanded on work published in *Urban Studies*, but some of the conclusions expressed there are pertinent to this essay (Simpson, 2004: 677–8):

Immigration is highly associated with concentrations of residents who lend each other family, cultural and social support in a society which is novel to them. For immigrants from South Asia and many other countries linguistic, religious and aspirational differences from the mainstream institutions also create natural reasons for clusters of residents. The hostility of many in the general population is often institutionalised; it is a hostility expressed in racial terms which makes it still more likely that those clusters will persist. Given this historical context, any suggestion of a preferred pattern, a norm or a natural dynamic to racial residence, is unhelpful and to this extent geographical analyses have become unnecessarily racialised to the point that it is not the geography but the analysis which is racially patterned.

...

Thus the positive message from this analysis is that segregation is not the problem it is perceived to be. Social policy for localities is better informed by a sociological and historical understanding of the class, housing, employment and educational dynamics of neighbourhood residential change. There are many positive aspects of communities that are strengthened by their historical common culture, which need to be recognised. At the same time the racially motivated barriers to movement and integration need to be dismantled, and the structural causes of sustained poor inner city neighbourhoods addressed.

Commentators have been misled by a numbers game which sees large numbers of Black and Asian people as a threat to integration. Those large populations are instead a result of Black and Asian communities in Britain “coming of age”, having families and making up a sizeable and settled proportion of many British cities. Policy based on a negative view of these clusters of population will fail, because they are here to stay and because they are a means to integration rather than a retreat from it.

This is not to suggest that a focus on improving relations between communities in school and work is misplaced. The way to social inclusion is through equal access to the housing market and jobs market. The fears of

White society also need to be addressed. While “White flight” is a myth when the average movement of people is examined, there is undoubtedly a lack of understanding that extends to fear of innercity areas, and particularly of innercity areas with major Black and Asian populations. That fear appears to be shared by many in powerful positions within media and politics, as well as the residents of suburban areas near the Black and Asian settlement areas, whose anxieties extend to the changing nature of their neighbourhood and their role within it. These fears also need understanding; a reduction in inflammatory and offensive claims about “Black areas” would help to reduce them.

Human geographers, sociologists, statisticians and demographers can also play our part in reaching a society where skin colour is not an indicator of cumulative discrimination. Less attention to a cranky industry of segregation indicators would leave more energy to estimate the phenomena that are relevant to the UK’s changing cities. Care in identifying the components and dynamics of population change is important to understanding the future, while qualitative research is necessary to uncover and change the processes operating racially in the housing and labour markets.

Acknowledgements

Part of the work reported here has been funded by the ESRC award R000271214, “Local demography and race”. I should also declare two personal interests. First, while working and living in Bradford for 20 years, the movement of friends and neighbours from Manningham and Girdlington to Toller and Undercliffe did not accord with the claims of self-segregation made in reports about the city; the discordance helped lead to the demographic work reported here. Second, the refugee Kuczynski mentioned on page 7 has many grandchildren of whom I am one.

References

- Alam, M.Y. (2002) *Kilo*. Route: Glasshoughton.
- Alexander, Claire (2004) “Imagining the Asian Gang: Ethnicity, Masculinity and Youth after ‘the riots’”. *Critical Social Policy*, 24(4): 526–49.
- Burgess, S., Wilson, D. and Lupton, R. (2005) “Parallel Lives? Ethnic Segregation in Schools and Neighbourhoods”, *Urban Studies*, 42(7): 1027–56.
- Busteed M.A. (2000) “Little Islands of Erin: Irish Settlement and Identity in Mid-Nineteenth-century Manchester”, in D.M. MacRaild (ed.) *The Great Famine and Beyond. Irish Migrants in Britain in the Nineteenth and Twentieth Centuries*, pp. 94–127. Dublin: Irish Academic Press.
- Cantle, Ted (2001) *Community Cohesion: A Report of the Independent Review Team*. London: Home Office.

- Champion, Tony (1996) "Internal Migration and Ethnicity in Britain", in Peter Ratcliffe (ed.) *Social Geography and Ethnicity in Britain: Geographical Spread, Spatial Concentration and Internal Migration (Ethnicity in the 1991 Census, Volume 3)*, pp. 135–73. London: HMSO.
- Dorling, D. and Rees, P. (2003) "A Nation Still Dividing: The British Census and Social Polarisation 1971–2001", *Environment and Planning A*, 35(7): 1287–313.
- Dorling, D. and Simpson, S. (1999) *Statistics in Society: The Arithmetic of Politics*. London: Arnold.
- Dorling, D. and Thomas, B. (2004) *People and Places: A 2001 Census Atlas of the UK*. Bristol: Policy Press.
- Duncan, O.D. and Duncan, B. (1955) "A Methodological Analysis of Segregation Measures", *American Sociological Review*, 20: 210–17.
- Fisher, R. (1917) "Positive Eugenics", *Eugenics Review*, 9: 206–212.
- Fortuijn, Joos Droogleever, Musterd, Sako and Ostendorf, Wim (1998) "International Migration and Ethnic Segregation: Impacts on Urban Areas", *Urban Studies*, 35(3): 367–70.
- Galton, Francis (1869) *Hereditary Genius: An Inquiry into its Laws and Consequences*. London: Macmillan.
- Greater London Authority (2005) *London's Changing Population, Diversity of a World City in the 21st Century*. London: Greater London Authority Data Management and Analysis Group Briefing 2005/39.
- Gwynn, R. (2002) *Huguenot Heritage: The History and Contribution of the Huguenots in Britain*, 3rd edn. London: Routledge/Kegan Paul.
- Herrnstein, R. and Murray, C. (1994) *The Bell Curve: Intelligence and Class Structure in American Life*. New York: Free Press.
- Irvine, J., Miles, I. and Evans, J., eds (1979) *Demystifying Social Statistics*. London: Pluto Press.
- Johnston, R., Forrest, J. and Poulsen, M. (2002) "Are There Ethnic Enclaves/Ghettos in English Cities?", *Urban Studies*, 39(4): 591–698.
- Johnston, R., Poulsen, M. and Forrest, J. (2004a) "The Comparative Study of Ethnic Residential Segregation: US Metropolitan Areas 1980–2000", *Tijdschrift voor economische en sociale geografie*, 95(5): 550–69.
- Johnston, R., Wilson, D. and Burgess, S. (2004b) "School Segregation in Multi-Ethnic England", *Ethnicities*, 4(2): 237–65.
- Kerrison, S. and Macfarlane, A., eds (2000) *Official Health Statistics: An Unofficial Guide*. London: Arnold.
- Leech, K. (1994) *Brick Lane 1978, the Events and Their Significance*. London: Stepney Books Publications.
- Lieberman, S. (1963) *Ethnic Patterns in American Cities*. New York: The Free Press of Glencoe.
- MacKenzie, Donald (1999) "Eugenics and the Rise of Mathematical Statistics in Britain", in Daniel Dorling and Stephen Simpson (eds) *Statistics in Society: The Arithmetic of Politics*, pp. 55–61. London: Arnold.
- Massey, D.S. and Denton, N.A. (1988) "The Dimensions of Residential Segregation", *Social Forces*, 67: 281–315.
- Massey, D.S. and Denton, N.A. (1989) "Hypersegregation in US Metropolitan Areas: Black and Hispanic Segregation Along Five Dimensions", *Demography*, 26: 373–93.
- Openshaw, S. (1984) *The Modifiable Areal Unit Problem. CATMOG38*. Norwich: Geo Books.

- Ouseley, Herman (2001) *Community Pride Not Prejudice, Making Diversity Work in Bradford*. Bradford: Bradford Vision.
- Peach, Ceri (1996) "Does Britain Have Ghettoes?", *Transactions, Institute of British Geographers*, 21(1): 216–35.
- Peach, Ceri (1998) South Asian and Caribbean Ethnic Minority Housing Choice in Britain", *Urban Studies*, 35(10): 1657–1680.
- Phillips, D. (1998) "Black Minority Ethnic Concentration, Segregation and Dispersal in Britain", *Urban Studies*, 35(10): 1681–702.
- Phillips, D. (2006, forthcoming) "Parallel Lives? Challenging Discourses of British Muslim Self-Segregation", *Environment and Planning D: Society and Space*.
- Phillips, T. (2005) "After 7/7: Sleepwalking to Segregation", speech to the Manchester Council for Community Relations, 22nd September. Available at: <http://www.cre.gov.uk>
- Radical Statistics* (serial) published three times annually by the Radical Statistics Group. Available at: <http://radstats.org.uk/>
- Simpson, L. (2004) "Statistics of Racial Segregation: Measures, Evidence and Policy", *Urban Studies*, 41: 661–81.
- Simpson, L. (2005) "Measuring Residential Segregation", conference presentation to *Census: Present and Future*, Leicester. Available at: <http://www.ccsr.ac.uk/research/migseg.htm>.
- Simpson, L. and Gavalas, V. (2005) *Population Dynamics within Rochdale and Oldham: Population, Household and Social Change*. Manchester: Centre for Census and Survey Research University of Manchester.
- Waterman, S. and Kosmin, B.A. (1987) "Residential Patterns and Processes: A Study of Jews in Three London Boroughs", *Transactions, Institute of British Geographers*, 13: 79–95.
- Werskey, G. (1988) *The Visible College: A Collective Biography of British Scientists and Socialists of the 1930s*. London: Free Association Books.
- Whelpton, P.K. (1938) *Needed Population Research*. Lancaster, PA: Science Press Printing.
- Wilkes, Rima and Iceland, John (2004) "Hypersegregation in the Twenty-First Century", *Demography*, 41(1): 23–36.
- Williamson, L. (2003) "Population Projections of Minority Ethnic Groups in England: What Can We Conclude from the Differences with the 2001 Census?", presentation to British Society for Population Studies Conference, Bristol, 10–12 September.
- Zuberi, T. (2001) *Thicker than Blood: How Racial Statistics Lie*. Minneapolis, MN: University of Minnesota Press.

ABOUT THE AUTHOR

Ludi Simpson works with population, census and survey statistics, aiming to extend their use by communities and governments. His committee and editorial work has included the Local Authorities Research and Intelligence Association, the journal *Statistics in Society*, the Central and Local Government Information Partnership, the Radical Statistics Group, and with the Office for National Statistics on the 2001 Census. He is Reader in Social Statistics, at the Cathie Marsh Centre for Census and Survey Research at the University of Manchester.