THE ECONOMIC DETERMINANTS OF ETHNIC SEGREGATION IN POST-WAR BRITAIN[1]

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ABSTRACT

Ethnic residential segregation is usually investigated using a constrained-choice approach. This study explains the variation in post-war Afro-Caribbean segregation in fifteen British cities by means of historical patterns of economic opportunity. Its dependent variable is newly available census data on residential segregation. It finds that the observed variation in segregation levels cannot be explained in terms of council housing policies or the passage of civil rights legislation from the mid-1960s, but rather by the interaction of New Commonwealth immigration and local labour and housing market conditions during the critical period 1951-1966.

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1. Introduction

A central feature of post-war race relations in Great Britain has been a pronounced segregation of black and white. Residential segregation by race, the theme of this study, matters for two important reasons. First, segregation is one of the most significant factors contributing to the ill-being of ethnic minorities in Great Britain. Segregation systematically undermines the economic and social well-being of ethnic minorities because it is both a cause and a consequence of inequality in the housing system, labour market, and access to the more general opportunity structure. A survey completed during the mid-1980s revealed that blacks disproportionately live in the most deprived and disadvantaged areas with the poorest housing stock and where services are in shortest supply, from education to health care to law enforcement.[2] Blacks are also concentrated in pre-war terraced properties, which helps to explain the fact that significantly more Asians and West Indians than whites share basic amenities and live at a household density of greater than one person per room.[3] The housing conditions of the ethnic population are clearly inferior to those of whites, but minorities fare no better in the labour market than they do in the housing market. The same survey revealed that black unemployment is at least twice that of whites, and blacks are more likely to work in lower status, semi and unskilled jobs, and for lower wages.4

The statistical reality of racial inequality in Britain is reflected in popular perceptions about the problems of urban cores. For many Britons, cities such as Leicester and Bradford, the areas of Handsworth and Sparkbrook in Birmingham, Mosside in Manchester, and the London boroughs of Notting Hill, Brixton and Spitalfields all connote images of urban decline, environmental decay, and social deprivation. As a result, the clustering of black minorities has attracted considerable national interest and concern and has become a pivotal point of debate about race, immigration, and social justice. The second reason that segregation matters is directly related to this swell of interest in race matters. From a policy-oriented point of view, attempts since the mid-1960s to narrow racial inequalities in Britain and to address central issues such as residential segregation and discrimination in housing dispensation have largely failed. While the impotence of the Commission for Racial Equality and the fundamental

[2] C. Brown, *Black and White Britain* (London, 1984).

[3] S. Smith, *The Politics of 'Race' and Residence* (Cambridge, 1989), p. 41.

[4] C. Brown, *Black and White Britain*, pp. 189, 191, 197, 214.

shortcomings of the Race Relations Acts of 1965, 1968, 1976 have been reviewed elsewhere[5], some theorists have taken this as an opportunity to argue for the futility of public intervention. Economist Thomas Sowell bases his own non-interventionist stance on two core ideas: first, that it's the discriminator and not the victim who pays the costs of discrimination in a competitive market[6]; secondly, that government intervention, including policies of slum clearance, urban renewal, rent control, and public housing, actually reduce the options open to blacks and militate against black interests.[7] Sowell's mistrust of government intervention combined with his faith in the redemptive powers of the market reflect many New Right policies, particularly those that aim to bring about 'commodification' of housing through, for example, 'right to buy' council housing programmes.

From the debate over the proper role of government in discrimination and disadvantage in housing, it is clear that a detailed understanding of the history of the development of segregation is crucial to the success of present-day policies of public intervention or non-intervention. This study will attempt to expand our understanding of the evolution of urban residential segregation in Britain by making a contribution to the growing literature that re-iterates a point that was once taken as self-evident: that it was precisely those market forces that are alleged by some to be the future salvation of ethnic minorities that produced high levels of segregation and minority disadvantage in the first place.

The empirical heart of the study is a measure of segregation for fifteen British cities as calculated from small-area census data by ethnicity, available for the first time in the 1991 Census of England and Wales. The study will bypass the ambiguities of the choice-constraint approach to explaining segregation and will instead focus on the large-scale, economic and industrial determinants of segregation. The central findings are that the seeds of segregation were sown as early as 1961, and that the workings of large-scale, market-driven forces explain nearly all the variation in present-day levels of segregation across the fifteen cities. The opening chapter will outline the considerable secondary literature on housing segregation. The second chapter will lay the foundation for the empirical study that follows by focusing on theories of racial inequality and its relationship to the labour market and industrial change. The third chapter contains the statistical

[5] M. Cross, 'Racial Equality and Social Policy: Omission or Commission?', *The Year Book of Social Policy in Britain*, 1980-81, eds. C. Jones and J. Stevenson (London, 1982).

[6] T. Sowell, *Race and Economics* (New York, 1975), p. 168.

[7] T. Sowell, *Minorities and Markets* (New York, 1981), p. 108.

analysis itself. The concluding fourth chapter is a brief discussion of the empirical findings and their implications for future segregation studies.

2. From the Chicago School to Choice and Constraint: An Extended Review of the Literature

In 1948 the SS *Empire Windrush* unloaded its cargo of 491 Jamaicans headed for the London borough of Brixton. So began the post-war international movement of labour to Britain from the less-developed countries of the New Commonwealth. Since 1948, British social scientists have examined residential segregation in urban centres. A central focus of the research has been the plight of ethnic minorities in so-called 'twilight areas', where post-war immigrants from the West Indies, South Asia, and Africa are consigned to live in concentrated ethnic neighborhoods. The causes and consequences of segregation are a complex web of social, economic, and political factors, and the secondary literature on housing segregation is appropriately large. From the vast literature can be gleaned four major strands of research: conceptual analysis of social distance and geographical space in urban centres beginning in the 1920s with the Chicago School of Sociology and Human Ecology; the development of increasingly sophisticated statistical measures of segregation since the Second World War; the micro-modeling of the process of the development of segregation at the local level; and the creation of an analytical framework that focuses on choices and constraints and aims to pinpoint and weigh the various factors that cause and sustain racial segregation. We now examine the conceptual, the descriptive, the model-based, and the causative strands of the secondary literature.

The fountainhead of the discipline known as urban geography is Robert Park's 'The Urban Community as a Spatial Pattern and Moral Order', first published in 1926. Park is credited with founding the 'human ecology' approach to the study of urban geography, which first linked spatial and social associations in the urban setting. Because changes of economic and social status tend to be registered in changes of location in the urban environment, Park points to the 'importance of location, position, and mobility as indexes for measuring, describing, and eventually explaining, social phenomena.'[8] Nearly all of the subsequent research in the field is derived in part from Park's initial monograph and his coupling of spatial and social relations in urban settings. S. Lieberson and O. D. Duncan, two leaders in the field since Park, have furthered the Park thesis and have produced empirical evidence that the degree of residential segregation of

[8] R. E. Park, 'The Urban Community as a Spatial Pattern and Moral Order', *Urban Social Segregation*, ed. C. Peach (London, 1975), p. 27.

a given immigrant group is inversely related to indicators of its socio-economic status and 'social distance' from the native population.[9] Similarly, Peach has tested the accuracy of the Park thesis and found that rates of intermarriage between ethnic groups in New Haven, Connecticut, correlated inversely with the degree of segregation of the two groups.[10] In effect, much of the work carried out in the post-war period has merely lent empirical weight to the conceptual framework first put forward in 1926.

Because the investigation of spatial and social associations along the lines of Park and his disciples has become highly empirical, a mathematical measure of residential segregation has been fundamental to post-war analyses. The second major strand of segregation research has therefore involved the development of an increasingly sophisticated set of tools for measuring the intensity of segregation in a given locale. Between 1947 and 1955, researchers waged a protracted 'index war' in the geographical and sociological literature over which measure best captures the intensity of segregation. A variety of statistical measures have been developed to measure the spatial distribution of groups within an urban area, including the Cowgill index, the location quotient, and a measure called P*, but the index of dissimilarity, or ID, has won out as the most powerful statistical tool and has come to dominate the field.[11]

The index of dissimilarity is easy to compute, possesses a clear and simple operational meaning, takes into account the relative size of the two populations being measured, and enjoys a cumulative literature. The index measures the distribution of two different populations over the same sub-set of residential areas, including boroughs, wards, enumeration districts, blocks, and census tracts. It yields scores from 1 to 100 and represents the percentage of a population group which would have to shift its residence in order to reproduce a spatial distribution identical with that of the group with which it is being compared.[12] Table 1 is an example of a calculation of ID for whites and Afro-Caribbeans across the nine regions of England and Wales in 1991. The ID value of 39 indicates that four out of ten Afro-Caribbeans would have to move out of

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[9] O. D. Duncan and S. Lieberson, 'Ethnic Segregation and Assimilation', *Urban Social Segregation*, ed. C. Peach (London, 1975), p. 96.

[10] C. Peach, 'Ethnic Segregation and Ethnic Intermarriage', *Ethnic Segregation in Cities*,, eds. C. Peach, V. Robinson, and S. Smith (London, 1981) p. 214.

[11] For a description of the alternative measures of segregation and a review of the arguments regarding each one, see Duncan and Duncan's 'A Methodological Analysis of Segregation Indexes, *Urban Social Segregation*, ed. C. Peach (London, 1975).

[12] C. Peach, 'Introduction', *Urban Social Segregation*, p. 3.

their current region of residence and into another region to achieve a theoretically even distribution. However, ID has not been immune to criticism. A number of

Table 1 Sample calculation of ID for whites and Afro-Caribbeans in the nine regions of England and Wales, 1991

	Total White Population	% of Total White	Total Afro-Caribbean Population	% of Total Black	Absolute Difference of two %
North	2,987,742	6.4	1,088	.2	6.2
Yorksh./Humb.	4,620,794	9.9	21,236	4.3	5.6
East Midlands	3,763,607	8.0	24,076	4.9	3.1
East Anglia	1,982,760	4.2	4,791	1.0	3.2
South East	15,462,461	33.0	327,151	66.4	33.4
South West	4,545,196	9.7	12,166	2.5	7.2
West Midlands	4,723,479	10.1	77,388	15.7	5.6
North West	5,996,770	12.8	21,332	4.3	8.5
Wales	2,792,858	6.0	3,243	.7	5.3
Totals	46,875,667	100.0	492,471	100.0	78.1
					(ID = 39)

challenges have been leveled: that any index that purports to capture city-wide segregation levels with a single numerical expression is strongly affected by its own mathematical properties[13]; that ID is a blanket measurement and does not capture specific distribution patterns that may exist in metropolitan areas, including clustering effects and a population's distance from the urban centre[14]; that ID can produce misleading results where the minority numbers are very small[15]; and that ID is dependent on the scale of analysis.[16] Regardless of such

[13] O. D. Duncan and B. Duncan, 'A Methodological Analysis of Segregation Indexes', *Urban Social Segregation*, ed. C. Peach (London, 1975), p. 41.

[14] O. D. Duncan and B. Duncan, 'A Methodological Analysis of Segregation Indexes', *Urban Social Segregation*, p. 42.

[15] C. Peach, 'Does Britain Have Ghettos?', (unpublished article, School of Geography, Oxford), p. 3.

shortcomings, there is currently consensus within the field that ID is the most satisfactory measure of segregation, but that caution should be exercised where the group number or the areal unit of analysis is small.

The third major strand of segregation research has centred on the construction of models that aim to capture the evolutionary process of residential segregation. The central dictum of model builders is that the evolution of segregation is a dynamic process, not a static pattern. Researchers have thus scrutinised small areas and specific locales over time, describing in detail the dynamic process that leads to segregation. The classic model of segregation sees the development of ethnically concentrated neighborhoods as the result of two opposing demographic trends: the centripetal flow of immigrants into central cities and the centrifugal flow of the native population to the periphery. The inward flow of immigrants and the outward flow of whites— often referred to in terms of neighbourhood invasion and succession— creates 'zones of transition' in which former areas of social standing slip into deprivation.[17] Another model type, the ghetto expansion model, relies on block by block analysis and is based on probability fields and vectors assigned to the direction, distance, and time components of the advancing fringe of the ghetto.[18] A third model type, the immigrant dispersal model, posits that the gradual spatial and social assimilation of immigrants is an inevitable and irreversible process. Beginning soon after arrival, successive generations of immigrants gradually move towards the periphery and inhabit progressively better quality dwellings until they are fully absorbed into mainstream society.[19] One last model type— taken from Rex and Moore's 1968 study of Birmingham—is more representative of British attempts at modeling the process of residential differentiation. For their study of the ward of Sparkbrook, the authors drew on a Weberian notion of class conflict and argued that the market competition between five distinct 'housing classes' for available housing resources was 'the central process of the city as a social unit.'[20]

Most of the above models were first devised to explain the gradual assimilation of white immigrant groups in the United States and are therefore less

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[16] T. P. Jones and D. McEvoy, 'Race and Space in Cloud-Cuckoo Land', *Area*, 10(3), p. 165.

[17] T. Lee, *Race and Residence*, pp. 26-27.

[18] See R. L. Morrill, 'The Negro Ghetto: Problems and Alternatives', *Urban Social Segregation* and H. M. Rose, 'The Development of an Urban Subsystem: The Case of the Negro Ghetto', *Urban Social Segregation*.

[19] T. Lee, *Race and Residence*, p. 55.

[20] J. Rex and R. Moore, *Race Community and Conflict*, p. 283

applicable to the immigrant experience in Great Britain where, at present, a near majority of ethnic minorities were born in Britain but are still largely segregated by race. The Weberian approach put forward by Rex and Moore is a powerful explanatory tool within the Sparkbrook context, but Lee has pointed out that in London, where tenure patterns differ to a significant extent, the model advanced by Rex and Moore is of limited utility.[21] In general, the principal shortcoming of predictive modeling is that, occasionally, such models do accurately prophesy ghetto expansion or segregation patterns; however, like indices of dissimilarity, they are merely descriptive. They may predict where the edge of the ghetto will be next year or the year after, but they do not help pinpoint its determinants, nor do they shed light on the economic, social, and cultural forces that underpin minority clustering.

In the fourth major strand of segregation research, scholars have endeavoured to construct a causal framework that explains the origins and the persistence of ethnic segregation in Britain's urban centres. Most research has focused on the choice-constraint model. In its simplest form, the choice-constraint model posits that minority residential patterns result from an interaction between internal, self-ascriptive forces on one hand, including the needs, desires, aspirations, and choices of minorities themselves, and external, proscriptive forces on the other, including limits imposed by the majority society such as discriminatory practices and legal exclusion as well as barriers posed by socio-economic status.[22] The choice side of the framework represents the optimistic face of residential segregation and shall be highlighted first before the bleaker facts of those forces that constrain minority choice are outlined in more detail.

Choice theorists focus their attention on the positive forces of ethnic association as the most important determinant of urban segregation. Choice theory's most forceful expression is Dahya's work on Pakistani immigrants in Britain. Dahya argued that the minority propensity for self-segregation is 'voluntary and rational and irrespective of whether racial discrimination occurs or not.'[23] A sampling of choice factors that perpetuate ethnic segregation might include: chain migration, which often occurs along family and village lines and leads directly to ethnic concentration[24]; the so-called 'myth of return', wherein

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[21] T. Lee, *Race and Residence*, p. 42.

[22] C. Peach, 'Introduction', *Urban Social Segregation* , pp. 8-9.

[23] B. Dahya, 'The Nature of Pakistani Ethnicity in Industrial Cities in Britain', *Urban Ethnicity*, ed. A. Cohen (London, 1974), p. 112.

[24] J. S. MacDonald and L. D. MacDonald, 'Chain Migration, Ethnic Neighbourhood Formation and Social Networks', *Millbank Memorial Fund Quarterly*, 42 (1964).

many immigrants resist assimilation under the false assumption that they will someday re-emigrate to their native lands[25]; the minority desire to remain in the inner city in close proximity to kinship networks, community institutions, and places of worship, even if that means foregoing higher quality housing at the periphery[26]; and the physical and psychological security provided by ethnic community.[27] The 'voluntary segregation' thesis is also bolstered by a number of studies that have found high levels of intracommunity segregation within as well as between various ethnic populations. For example, research has shown that Afro-Carribeans tend to cluster by island of origin[28] and that among Asians there is substantial residential sorting by national, religious, and linguistic criteria.[29] However, it should also be pointed out that intracommunity segregation levels are almost always lower than the levels of segregation observed between ethnic communities and the indigenous white population. Even so, it is hard to deny that ethnic residential clustering brings with it considerable social and cultural benefits and that choice considerations may contribute to residential differentiation.

Unlike the mostly cultural factors that comprise ethnic choice, the constraint side of the choice-constraint framework is a discouraging blend of willful discriminatory practices on the part of individuals, organisations, and government and 'institutional racism'[30], defined as the institutional processes and practices that are discriminatory in effect but not in intent. Quantifiable evidence of overt discriminatory behaviour includes a study which found that one in six advertisements for rented accomodation in Kensington in the late 1950s were 'explicitly anti-coloured'.[31] Similarly, in situational actor tests carried out by the *Political and Economic Planning* organisation in the mid-1960s, 45 out of 60

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[25] V. Robinson, 'The Development of South Asian Settlement in Britain and the Myth of Return', *Ethnic Segregation in Cities*, p. 151.

[26] H. Flett, 'Dispersal Policies in Council Housing: Arguments and Evidence', *Race and Residence in Britain: Approaches to Differential Treatment in Housing*, ed. R. Ward, (Bristol, 1984), pp. 84-85.

[27] F. W. Boal, 'Ethnic Residential Segregation, Ethnic Mixing and Resource Conflict: A Study in Belfast England', *Ethnic Segregation in Cities*, pp. 235-236.

[28] C. Peach, 'The Force of West Indian Island Identity in Britain', *Geography and Ethnic Pluralism*, eds. C. Clarke, D. Ley, and C. Peach (London, 1984), pp. 23-25.

[29] V. Robinson, 'The Development of South Asian Settlement in Britain and the Myth of Return', *Ethnic Segregation in Cities*, p. 151.

[30] D. Phillips, 'The Institutionalization of Racism in Housing: Towards an Explanation', *New Perspectives on Race and Housing in Britain*, eds. S. Smith and J. Mercer (Glasgow), p. 127.

[31] R. Glass, *London's Newcomers* (Cambridge, 1960), p. 59.

West Indian testers were discriminated against in their attempt to rent private accomodation.[32] Evidence also suggests that the segregation of black and white in Britain has been perpetuated by local authorities[33], building societies[34], and housing associations[35] through housing allocation procedures that implicitly or explicitly discriminate against minorities. Inner city urban policies and in particular programmes of slum clearance and dispersal are another way in which government and, more specifically, local authorities have contributed to the racial differentiation of residential space. Such programmes have actively sustained black over-representation in the poorest segments of the housing stock by passing over concentrated black areas in favour of mostly white working class areas[36] or by establishing re-settlement quotas that relegate minority applicants to long waiting lists and drive them back into the private market.[37] Although not all government intervention has been universally detrimental, the outcome of some programmes has been the perpetuation, not the amelioration, of ethnic residential segregation. A final line of research has focused on socio-economic status and labour market standing as additional constraints on minority housing choices. Some researchers have constructed socio-economic profiles of different ethnic groups as a means of controlling for socio-economic status in segregation, most notably Peach, Winchester, and Woods, who found that social class and socio-economic status explains approximately 17 per cent of observed West Indian ward-level segregation in London during the 1970s.[38] Thus, there may be an important, though limited, class dimension to segregation.

The bane of many segregation scholars is that it is nearly impossible to disentangle the positive and negative forces that shape distribution patterns. The persuasiveness and the force of the choice arguments have been acknowledged,

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[32] W. Daniel, *Racial Discrimination* (London, 1967), p. 155.

[33] See H. Flett, 'Dispersal Policies in Council Housing: Arguments and Evidence', *New Community*, 7 (1979), pp. 184-194; also D. Phillips, 'The Rhetoric of Anti-Racism in Public Housing Allocation', Race and Racism, ed. P. Jackson

[34] V. Karn, J. Kemeny, and P. Williams, *Home Ownership in the Inner City: Salvation or Despair* (Aldershot, 1985).

[35] P. Niner, 'Housing Associations and Ethnic Minorities, *New Perspectives on Race and Housing in Britain*, p. 219.

[36] S. Smith, *Politics of 'Race' and Residence*, pp. 55-56.

[37] J. Henderson and V. Karn, *Race, Class and State Housing: Inequality and the Allocation of Public Housing in Britain* (Aldershot, 1987), pp. 129-130.

[38] C. Peach, S. Winchester, and R. Woods, 'The Distribution of Coloured Immigrants in Britain', *Urban Affairs Annual Review*, 9 (1975), p. 405.

and there does indeed appear to be a limited cultural basis to ethnic segregation.[39] However, the distinction blurs for many of the choice theories when the positive, cultural side and the negative, constraint-oriented side of the framework are examined together. Simply put, voluntary segregation on the part of ethnic minorities can easily be seen as a reaction to host culture antipathy and exclusion. In an attempt to unravel the ambiguities of the choice-constraint continuum, some segregation scholars have looked to the 'structuration theory' of Giddens and others with its focus on the interaction of human agency and structure.[40] According to this paradigm, agents 'reconstruct structures during their experiences and actions within the social system, and reproduce them through their actions.'[41] A dynamic agent-structure interaction is an attractive conceptual framework, but in reality is no different from the give and take of simple choice-constraint considerations. Because of the ambiguities of the choice-constraint framework, the best researchers can conclude is that in housing decisions ethnic minorities, like all human actors, constantly re-evaluate their options in light of both their preferences as well as the imposed constraints of their environment

This discussion of the four major strands of segregation research has highlighted the interlocking nature of many of the social, economic, cultural, and political forces that create and sustain patterns of residence in Britain's urban environments. The strengths of existing research programmes have also been highlighted, including the honing of statistical tools and the wide-ranging search for possible answers. It was also noted that much of the methodological and conceptual innovation within the field has gone into the task of description, not explanation, of segregation levels. Analytical frameworks have evolved— most notably the choice-constraint polemic— in an attempt to remedy the gaps in our understanding of the causes of segregation. Such frameworks have focused heavily on human agency and the thought processes and actions of individuals that, when assessed in the aggregate, are believed to hold clues to the formation and persistence of patterns of residential differentiation. But over five decades the quarrels in the academic literature over statistical measurement and the interplay of positive and negative forces have produced as much heat as light. The story of segregation remains incomplete. One possible extension of existing research has already been hinted at, though not examined in detail: large-scale economic

[39] S. Smith, *The Politics of 'Race' and Residence*, p. 38.

[40] M. Byron, *Post-War Caribbean Migration to Britain: The Unfinished Cycle* (Aldershot, 1994), p. 136.

[41] R. Sarre, 'Choice and Constraint in Ethnic Minority Housing', *Housing Studies*, 1 (1986), p. 74.

forces and the workings of the labour market. It is to this topic that we turn in the next chapter.

2. The Macro-Economics of Migration and Settlement: An Alternative to the Choice-Constraint Framework

An area of inquiry that has shown considerable promise in explaining the existence and persistence of segregation lies in the geographical dimensions of the economic and industrial changes of the post-war period. As the consequences of the restructuring of the British economy of the last twenty years have come to light, attention has been turned to the economic forces that have disadvantaged ethnic minorities in the post-war period. This chapter will provide a schematic overview of economic and industrial change in Britain since the Second World War, including the shift from manufacturing to service provision and the unevenness of development at the regional and intra-urban level. The central argument made here stems from growing public interest in the geography of economic and social change. In the post-war period, a trio of trends– regional concentration, intra-urban segregation, and economic restructuring– have operated together to restrict ethnic opportunity. As a result of these changes, housing has come to represent more than just a commodity or a service; increasingly, housing is also a determinant of opportunity in broader social and economic spheres.[42] Racially determined spatial concentration and the new spatial dimensions of the labour market therefore constitute a self-perpetuating, feedback mechanism that continually undermines minority well-being and perpetuates racial disadvantage.[43] Once the general characteristics of this mechanism have been laid out, more specific questions can be asked about the relationship of economic restructuring to segregation levels. The concluding discussion will therefore begin to hone questions and hypotheses for the empirical study that follows in chapter three.

After the long post-war boom of the 1950s, the two basic economic trends within British industry have been slow growth and a marked shift away from manufacturing and manual industries and towards service and knowledge-based industries. Between 1961 and 1976, nationwide manufacturing declined 14 per cent for a total of 1.2 million jobs lost; mining and quarrying employment fell 48.4 per cent for a total of one-third of a million jobs; construction, transport and communications, and utilities accounted for another quarter of a million jobs lost. Over the same fifteen years, employment in the professional and scientific trades

[42] R. Ward, 'Race, Housing and Wealth', *Differential Access*, p. 113.
[43] S. Smith, *Politics of 'Race' and Residence*, p. 42.

increased 55.8 per cent for a total of 1.4 million jobs; the number of banking and finance jobs rose 52 per cent for a total of 400,000 jobs; and public administration accounted for another two-thirds of a million jobs.[44] The decline in manufacturing has continued into the 1980s as large firms and small firms alike have shed labour in unprecedented numbers.[45]

But these changes have not occurred across the board at the same rate, for the post-war economic history of Britain is also characterised by an unevenness of development at the national, regional, and intra-urban level. At the national level, there has been a general migration of capital and population away from the large conurbations and cities and into middle to small-size towns and rural areas. Between 1960 and 1978, manufacturing employment declined precipitously in London, the conurbations, and free-standing cities, but held even in towns of 100,00 to 250,000 in population, and even grew in small towns of 35,000 to 100,000 residents and in rural areas.[46] Economic development has been uneven between regions as well. Between 1952 and 1973, the 'north-south divide' confirmed its presence, and growth was concentrated in the South-East, East Anglia, and the South-West.[47] Since 1973, employment in these three regions has either continued to grow at a reduced rate or has declined slightly. But in the West Midlands, Yorkshire and Humberside, and the North-West the decline in employment has been five to ten times as fierce.[48] In addition to the unevenness at the regional level, an extended quotation from Susan Smith demonstrates that restructuring and the unevenness of development have had perhaps the greatest impact on the inner cities:

> the inner cities themselves have lost jobs— in all areas of employment— at a greater rate than have suburbs, small towns or rural areas. . . . Testifying to the force of this statement, employment fell by 55 per cent among residents of the inner cities between 1951 and 1981 (this compares with falls of 7 per cent in the outer estates

[44] N. Harris, 'Deindustrialisation', *The Economic Decline of Modern Britain,* eds. D. Coates and J. Hillard (Brighton, 1986), pp. 9-10.

[45] B. Rowthorn, 'De-industrialisation in Britain', *The Geography of De-industrialisation,* ed. R. Martin and B. Rowthorn (London, 1986), p. 6.

[46] S. Fothergill, G. Gudgin, M. Kitson, and S. Monk, 'The De-industrialisation of the City', *The Geography of De-industrialisation,* p. 231.

[47] M. Dunford and D. Perrons, 'The Re-Structuring of the British Space Economy', *The Geography of De-industrialisation,* p. 66-67.

[48] M. Dunford and D. Perrons, 'The Re-Structuring of the British Space Economy', *The Geography of De-industrialisation,* p. 96-97.

> and 15 per cent in free-standing cities, and an increase of 20 per cent in towns and rural areas). These same areas have lost employment in manufacturing industries at an accelerating rate since the 1950s, culminating in a loss of 37 per cent between 1971 and 1981 (when the national average was a decline of only 25 per cent).[49]

The unevenness of economic development at the regional and intra-urban levels has resulted in, in the words of Malcolm Cross, an 'enhanced salience of space.'[50] As we shall see, post-war changes in the organisation of production have hit immigrant populations and their offspring particularly hard.

The importance of large-scale economic and industrial forces has not been lost on scholars of race and immigration. A pair of theses advanced by Ceri Peach provide evidence that large-scale economic forces shaped the early migration and settlement of ethnic minorities in two critical ways: first, the circumstances of and rationale for their migration; second, their role as a 'replacement population' in terms of both jobs and housing. First, as with many mass migrations, there is the issue of push versus pull factors. 'Push' factors include conditions in the sending region that make remaining there unattractive; 'pull' factors attract immigrants to more prosperous regions. In the case of West Indian migration to Britain, Peach has shown that, between 1955 and 1974, the fluctuation of the volume of West Indians coming over year by year, quarter by quarter, and island by island, correlate inversely (r = -.65) with fluctuations in unemployment in Britain, and not with conditions in the Caribbean.[51] A similar, though weaker, correlation has been found for net immigration from India (r = -0.52) and Pakistan (r = -0.49) for the period 1959 to 1974.[52] In general, conditions in sending countries, including population pressure and lack of economic opportunity, appear to have been permissive but not causal factors. Demand for labour in Britain was the principal regulator of the volume of black immigration.

Secondly, from analysis of the 1961 and 1981 censuses, Peach noted that Britain adheres to the 'classic case of the black immigrant population as a replacement of population':

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[49] S. Smith, *Politics of 'Race' and Residence*, p. 43.

[50] M. Cross, "Introduction: Migration, the City and the Urban Dispossessed", *Ethnic Minorities and Industrial Change in Europe and North America*, ed. M. Cross (Cambridge, 1992), p. 2.

[51] C. Peach, *West Indian Migration to Britain: A Social Geography* (London, 1968), p. 44.

[52] C. Peach, 'Urban Concentration and Segregation in Europe since 1945', *Ethnic Minorities and Industrial Change in Europe and North America*, p. 124.

> Analysis of 1961 census data revealed a pattern which has not changed in essence since that time. West Indians, Indians and Pakistanis were concentrated in regions, which despite their demand for labour were failing to attract, or were being abandoned by, the white population. Coloured immigrants avoided areas of high unemployment, but, on the other hand, were relatively restricted in their penetration of areas which were attractive to whites. The immigrants were particularly concentrated in the conurbations which were losing population and had been doing so since before 1951.[53]

Peach found that regressing the absolute numbers of ethnic immigrants on the absolute increase or decrease of population between 1961 and 1981 yielded inverse correlation coefficients as high as -0.934.[54] In general, blacks were attracted to the decreasing urban cores of expanding industrial regions, moved into jobs for which white workers could no longer be found, and resided in housing in least demand by the white population, mostly in debilitated, inner-city areas. Industries and sectors with the worst unemployment in the decades of the 50s and 60s— including iron and steel, coal-mining, ship-building, heavy engineering, and cotton textiles— did not attract immigrants. Outside London, immigrants tended to be drawn into industries where manual assembly was the norm, including the automotive industry and subsidiaries, foundry trades, the garment and hosiery industries, and electrical engineering.[55] In general, macro-scale trends within the British economy have exerted a significant influence on the experience of black immigrant arrivals in Great Britain from the very beginning of the post-war period.

Beyond migration and settlement patterns, the uneven pattern of economic change and urban development in Britain beginning in the 1960s has contributed to the uniquely disadvantaged position of new Commonwealth immigrants and their descendants. First, restructuring has resulted in the decline of industrial sectors traditionally associated with migrant labour, including the across the board decline of manufacturing and the loss of mostly unskilled and

[53] C. Peach, 'Urban Concentration and Segregation in Europe since 1945', *Ethnic Minorities and Industrial Change in Europe and North America*, pp. 124-125

[54] C. Peach, 'Urban Concentration and Segregation in Europe since 1945', *Ethnic Minorities and Industrial Change in Europe and North America*, pp. 124-125

[55] D. Eversley, 'Urban Disadvantage and Racial Minorities in the United Kingdom', *Ethnic Minorities and Industrial Change in Europe and North America*, pp. 146-147.

semiskilled jobs.[56] It is also important to note that non-growth industrial sectors do not necessarily have to decline to affect ethnic minority well-being; simple stagnation is enough to ensure that the sons and daughters of immigrants do not have jobs waiting for them upon reaching young adulthood.[57] But sectoral disadvantage would not be so damaging were it not coupled with the spatial disadvantage caused by black concentration at the regional and local level that has restricted black access to healthier sectors of the economy.[58] At the national level, unemployment increased 325 per cent for blacks compared to 138 per cent for all workers between 1972 and 1981.[59] To the north, regions with a large black population— including Yorkshire, Humberside, and the North-West— have undergone a more dramatic fall in unemployment than the North as a whole. Similarly, the more densely black West Midlands have fared worse in unemployment terms than the East Midlands or East Anglia. Unemployment discrepancies within regions are also large: in the Northwest, 40 per cent of Afro-Caribbean and 32 per cent of Asian, but only 17 per cent of white males were unemployed in the early 1980s. In the West Midlands, the figures were 43, 32, and 19 per cent respectively. The discrepancy in unemployment is not just regional; it is also intra-urban, though in a subtly different way. Outside London, Birmingham, and Manchester, 26 per cent of West Indian, 19 per cent of Asian, and 12 per cent of whites were unemployed in 1982.[60] Within inner London, Birmingham, and Manchester, the discrepancy between white and black unemployment rates is not great, being high in both cases but differing by only a few percentage points. The problem is not so much 'race' as it is 'space': one-fifth and two-fifths of the Asian and Afro-Caribbean population in Britain, but only 6 per cent of whites reside in these three inner areas.[61] It is not entirely clear, therefore, the extent to which the labour market woes of ethnic minorities are the result of their concentration in *sectors* of decline or because they disproportionately live in *areas* of decline. What *is* clear is that the ethnic minority population in Britain has disproportionately suffered the effects of

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[56] S. Smith, *Politics of 'Race' and Residence*, p. 42.

[57] D. Eversley, 'Urban Disadvantage and Racial Minorities in the United Kingdom', *Ethnic Minorities and Industrial Change in Europe and North America*, p. 147.

[58] S. Smith, *Politics of 'Race' and Residence*, p. 42.

[59] C. Harris, 'Post-war Migration and the Industrial Reserve Army', *Inside Babylon: The Caribbean Diaspora in Britain* (London, 1993), p. 46.

[60] S. Smith, *Politics of 'Race' and Residence*, pp. 42-43.

[61] C. Brown, *Black and White Britain*, p. 192.

technological change and industrial restructuring within the economy since as early as the 1960s.

Economic restructuring has had clear implications for the economic and social well-being of ethnic minorities, but what is its relationship to segregation? Is ethnic minorities' heightened vulnerability to economic change a cause or a consequence of concentration and segregation at the regional and local level? The difficulty in answering these questions lies in the feedback mechanism that has underpinned minority disadvantage: segregation is both a reflection of and constraint on labour market participation. Like the choice-constraint debate, finding answers to important questions becomes an issue of disentangling the two sides. A partial answer to some of these questions has been provided by analyses of the effects of local housing and market conditions in a variety of localities. As an historical process, the development of segregation may be the result of not only the dynamic interaction of choices and constraints, but also the initial economic, demographic, and housing conditions present at the onset of the development of segregation. Some authors have suggested that the 'different social and physical character of the initial development'[62] or the 'pre-existing housing stock' and 'antecedent social and morphological conditions'[63] are important factors in the development of urban segregation.

The work of Robin Ward has done the most to develop this line of inquiry. Ward has studied housing and market conditions in a number of cities and has constructed a typology of regions that shows the interaction of housing opportunities and labour market conditions during the crucial early stages of New Commonwealth settlement. His five typologies include: declining traditional industrial areas such as those found in the North-West; stable traditional industrial areas including the cotton and wool textile mill towns of Yorkshire and Lancashire; expanding traditional industrial areas, including most of the West Midlands; traditional industrial areas with an expanding commercial sector, such as Manchester and parts of London; and newly established industrial and commercial areas, including cathedral towns, market towns, and new towns. We shall examine each in turn.

In declining traditional industrial areas, a sharp contraction in industry immediately after the post-war boom provided few job opportunities for New Commonwealth immigrants. Most arrivals were single men, and their numbers

[62] P. N. Jones, 'Some Aspects of the Changing Distribution of Coloured Immigrants in Birmingham, 1961-1966', *Transactions of the Institute of British Geographers*, 50, p. 200.

[63] D. Ward, 'The Ethnic Ghetto in the United States: Past and Present', *Transactions of the Institute of British Geographers*, 7, p. 264.

remained insignificantly low. The relatively limited and insulated settlement of blacks did not lead to major pressures on the local housing market. Segregation levels were universally high in such areas because migrant workers made their way to specific streets and lodging houses, the location of which were passed along by word of mouth. Liverpool is a good example of this first typology.[64] Secondly, in stable traditional industrial areas,

> the economy has contracted but at a slower pace than the contraction of the local labour force. In these circumstances, a need has arisen for a replacement labour force willing to take over unattractive and often badly paid employment, and migrants from India and Pakistan have typically responded to these opportunities.[65]

In this second typology, the general stagnation of the local economy means that neither whites nor blacks made the kind of earnings necessary to seek re-housing in new peripheral estates. As a result, residential boundaries were closely guarded, and a high level of segregation developed between ethnic minorities and a white working class population that refused to admit minority households to the better residential areas. Bradford is a representative example of this typology. The third typology, expanding traditional industrial areas, is characterised by a high rate of economic expansion over the period of New Commonwealth immigration. Large numbers of whites took advantage of employment opportunities in newly established suburban factories leading to a need for replacement labour. Although many whites moved into new suburban, owner-occupied housing, there was still insufficient housing to accommodate the extra workers. Because of pressure on the local housing stock and competition for housing resources, lodging houses and multiple occupation were the only way to stretch available housing to meet needs. The result was high levels of racial discrimination and a marked segregation of black and white. Birmingham is a good example of the third typology.[66] The fourth typology applies to regions with an above average concentration of tertiary activities in the local economy. Because of available non-manual job opportunities, many middle-class immigrants acted as a replacement population for white, middle class jobs and housing. According to Ward, New Commonwealth

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[64] R. Ward, 'Race and Access to Housing', *New Perspectives on Race and Housing in Britain*, p. 186.

[65] R. Ward, 'Race, Housing and Wealth', *Differential Access*, p. 115.

[66] R. Ward, 'Race and Access to Housing', *New Perspectives on Race and Housing in Britain*, pp. 188-189.

immigrants in these areas tended to come from a higher socio-economic background. The large scale movement of whites to the suburbs also created opportunities for minorities at the centre. Housing outcomes tend to be less ethnically distinctive, and lower levels of segregation have prevailed. Manchester and also parts of London adhere most closely to this fourth typology.[67] The fifth and final typology, newly established towns, have not, according to Ward, been extensively researched, probably because they have not typically been the site of significant minority settlement, even though they have been responsible for much of recent industrial growth in Britain. Mid-sized towns to the north and west of London, including Slough and Luton, adhere most closely to this typology. From these five typologies, it can be seen that post-war New Commonwealth immigrants were attracted to a variety of locales that differed markedly in terms of job opportunities and the conditions of the local housing market.

But a number of questions remain: do the more intuitive predictions about the effects of large-scale economic and demographic forces put forward by Ward and others stand up to empirical investigation? Do cities where the black population was more of a direct replacement of white population in terms of housing and jobs exhibit higher levels of segregation? Peach has noted, 'Given that the black population is concentrated in regions, cities and parts of cities which have for a considerable period of time been losing population, it seems inevitable that the degree of concentration and of segregation of these groups would increase between 1961 and 1981.'[68] This may be true of concentration at the regional and urban level in terms of absolute numbers, but a substantially declining population also means less housing pressure and less intense competition for available jobs and available housing resources, and should lead to lower levels of segregation. In a similar vein, it has been suggested that there may be a relationship between black settlement patterns, the condition of the local economy, and the extent of local prejudice. But it is unclear whether the economic and residential exclusion of blacks is related to the intensity of competition for resources and is therefore most pronounced in localities with declining or expanding market opportunities. What about segregation levels in the few areas of black settlement outside traditional industrial regions that have experienced net population growth and economic expansion but have not typically attracted large numbers of black immigrants? Finally, because segregation is both a cause and a consequence of labour market

[67] R. Ward, "Race and Access to Housing', *New Perspectives on Race and Housing in Britain*, pp. 191-192.

[68] C. Peach, 'Urban Concentration and Segregation in Europe since 1945', *Ethnic Minorities and Industrial Change in Europe and North America*, p. 126.

position, a central question relates to the direction of causation: did initial economic and demographic conditions at the time of the bulk of New Commonwealth immigration contribute most to the extent of segregation, or were the more sweeping economic changes brought on by restructuring long after primary immigration had ceased in the 1970s more instrumental in bringing about high degrees of segregation? In the chapter that follows, newly available 1991 census data will provide an opportunity to test empirically some of the above queries.

3. Afro-Caribbeans and the Roots of Urban Segregation in Britain

Large-scale economic and demographic forces and the restructuring of the British economy have demonstrably affected patterns of black settlement and black well-being in the post-war period in Britain. But questions remain as to the relationship of such forces to levels of segregation at the urban level. What follows is a focused, empirical study of segregation across fifteen British cities with 1,000 or more Afro-Caribbeans in 1991. The questions for which answers are sought are: 1) What, if any, is the relationship of the demographics of migration and settlement, economic and industrial change, and the condition of the local housing stock to present-day patterns of segregation among West Indians? 2) If so, did such forces affect patterns of segregation in tandem with the process of immigration during the late 1950s and early 1960s, or did they influence levels of segregation as the pace of economic restructuring quickened in the 1970s? 3) Do Ward's five typologies— declining industrial, stable industrial, expanding industrial, industrial/commercial, and new towns— cohere and do his predictions about levels of segregation in each case remain intact under empirical analysis? Before we proceed, it is necessary to highlight some of the potential problems that may be encountered because of the shortcomings of the data to be used in the study and also to provide some background information on the Afro-Caribbean experience in Britain throughout the post-war period.

A precise account of the experience of ethnic minorities in Great Britain over the course of the post-war period is difficult to come by because of data problems. The most glaring deficiency is the lack of census data by race. The 1991 British Census included a question about ethnic identity for the first time. Prior to 1991, a question was included regarding place of birth, but the data were inadequate for a couple of reasons. First, reliance on birthplace data can lead to both under- and over-enumeration of ethnic minorities in data sets, since those British citizens born in Asia, Africa, or the West Indies are not necessarily a part of the coloured population even though they are, by birth, natives of that country. Peach has estimated that the Afro-Caribbean population in general may be under-

enumerated on the 1961 and 1971 censuses by at least fifteen to twenty per cent.[69] A second more significant shortcoming of the census numbers available before 1991 is the lack of small-area data necessary to measure levels of segregation via the index of dissimilarity. Prior to 1991, much of the small-area data were aggregated at the local authority and enumeration district level and then discarded. As a result, calculation of the index of dissimilarity for the decades

Table 2 Net Annual Immigration from the West Indies to Great Britain, 1955-1974[70]

1948-1953– 14,000	1961– 66,290	1969– 688
1954– 11,000	1962– 35,051	1970– 1,749
1955– 27,550	1963– 7,928	1971– (-) 1,163
1956– 29,800	1964– 14,848	1972– 1,176
1957– 23,020	1965– 13,400	1973– (-) 2,130
1958– 15,020	1966– 9,620	1974– 5,845
1959– 16,390	1967– 10,080	
1960– 49,670	1968– 4,801	

leading up to 1991 has been virtually impossible, with the exception of a handful of local studies carried out by independent researchers.

The advantages of the Caribbean, as opposed to South Asian, focus of this study are manifold. First, the Afro-Caribbean migration was the earliest, dominant, and most circumscribed migration of the post-war period. The bulk of immigration from the West Indies occurred during the 1950s, peaking in 1961, and then declining rapidly to the point of negative net annual immigration in the 1970s because of the increasing incidence of return migration. When the numbers of Afro-Caribbean arrivals peaked in 1961, South Asian immigration was only beginning to reach its stride.[71] Table 2 is a combination of the unofficial statistics

[69] C. Peach, *West Indian Migration to Britain: A Social Geography*, p. 114, and C. Peach, 'Birthplace, Ethnicity and the Enumeration of West Indians, Indians, and Pakistanis', *New Community*, 3 (1974), p. 388.

[70] C. Peach, 'Patterns of Afro-Caribbean Migration', *The Caribbean in Europe*, ed. C. Brock (London, 1986), p. 70, and D. Hiro, *Black British, White British*, p. 331

[71] C. Peach, 'Patterns of Afro-Caribbean Migration', *The Caribbean in Europe*, p. 66.

of the Home Office between 1955 and 1962 and official statistics published annually by the Home Office until 1974. The West Indian population remained quite small in Great Britain until 1952 when events on the other side of the Atlantic touched off wide-scale emigration to Britain. Although the 1948 British Nationality Act conferred on all New Commonwealth citizens the right to unrestricted entry and the right to live and work in Britain, the preferred destination of the overwhelming majority of West Indians was still the United States. But with the passage of the McCarran-Walter Act by the United States Congress in 1952 and the virtual shutting off of West Indian immigration into the United States, West Indian emigration to Britain soared. In 1951, the West Indian population of England and Wales stood at 15,301. By 1961, that figure had reached 171,796; by 1971, 304,070. The 1962 Commonwealth Immigrants Act, the 1965 White Paper on Commonwealth Immigrants, and the 1968 Commonwealth Immigrants Bill, each placed increasingly tight restrictions on immigration from the Commonwealth. After the 'beat the ban' immigration of 1961, the absolute numbers of New Commonwealth immigrants were tightly controlled by a system of work vouchers that barred entry to many semi- and unskilled workers.[72] Because the majority of Afro-Caribbeans arrived during a brief, ten to twelve year period centring on the census year of 1961, they are the ideal population from which to investigate the effects of economic and demographic forces on the development of patterns of segregation at the time of migration and settlement

Once inside Great Britain, Afro-Caribbeans have been identifiable by an unchanging distribution at the regional level, their class position at the bottom of the labour and housing market hierarchy, and their segregation at the intra-urban level. First, the distribution of Afro-Caribbeans at the regional level was more or less set by 1961.[73] Table 3 bolsters this assertion by showing that, for the fifteen cities that constitute the focus of this investigation, the relative distribution of Afro-Caribbeans has remained much the same from 1961 to 1991. Because Afro-Caribbeans acted as a 'replacement population' for whites, they were drawn into areas where demand for labour was relatively high and into occupations and industries unable to retain a white workforce. At the national level, Afro-Caribbeans were therefore disproportionately represented in areas losing white population– the South-West and Greater London, the West Midlands, and West Yorkshire– but only sparsely represented in areas of net white population growth, including the East and the South-West. In addition, while the general flow of the

[72] M. Byron, *Post-War Caribbean Migration to Britain: The Unfinished Cycle*, p. 77.
[73] C. Peach, 'Patterns of Afro-Caribbean Migration', *The Caribbean in Europe*, p. 62.

Table 3 Absolute numbers of West Indian population and rank-ordering in fifteen British cities, 1961-1991[74]

	Afro-Caribs in 1961	Rank-Order	Afro-Caribs in 1971	Rank-Order	Afro-Caribs in 1991	Rank-Order
Birmingham	16, 169	1	21,825	1	42,341	1
Manchester	3,979	2	6,090	2	10,390	2
Wolverhampton	3,709	3	6,305	2	9,974	3
Leeds	2,186	4	2,265	7	5,102	7
Sheffield	2,128	5	3,150	5	4,994	8
Sandwell	2,029	6	3,100	6	7,837	4
Bristol	1,821	7	3,890	4	5,949	6
Leicester	1,347	8	1,405	10	4,070	9
Coventry	1,202	9	2,250	8	3,275	11
Bradford	984	10	1,355	11	3,323	10
Liverpool	900	11	805	12	1,479	14
Luton	825	12	2,010	9	6,243	5
Slough	781	13	**	**	2,714	12
Oxford	635	14	795	13	1,732	13
Oldham	276	15	530	14	1,042	15

** not available-- erroneously omitted from 1971 census

white population was from large cities to towns and rural areas, West Indians were mostly drawn to the conurbations and metropolitan counties. In fact, by 1971, 75 per cent of Afro-Caribbeans were living in Britain's seven main conurbations, especially London (55 per cent) and Birmingham (13 per cent).[75] Most important in the context of this study is that the role of Afro-Caribbeans as a 'replacement population' was more pronounced than it was for South Asians: the negative correlation for unemployment and annual migration as well as for regional

[74] All numbers from County Reports of 1961, 1971, and 1991 Censuses of England and Wales.

[75] C. Peach, 'Patterns of Afro-Caribbean Migration', *The Caribbean in Europe*, p. 72.

settlement and loss of population are higher in both cases for the Afro-Caribbean population.[76]

Secondly, a corollary of the spatial distribution of Afro-Caribbeans at the regional level and their role as a 'replacement population' has been their position on the bottomrungs of the labour market ladder and their incorporation into mostly semi- and unskilled manual employment. Many West Indian migrant workers were employed below qualification, mostly by British Rail, London Transport, the National Health Service, and a range of manufacturing industries. In 1966 more than nine out of ten Afro-Caribbean men were working in manual employment, and half were concentrated in semi- and unskilled occupations. West Indian men have only improved their position slightly since 1961, for 88 per cent of working West Indian men were still in manual employment in 1981.[77] In the labour market, West Indians have suffered the same fate as other ethnic immigrant groups. Because of the structural crisis of the British economy and the spatial dimensions of economic restructuring, Afro-Caribbeans were unemployed at twice the rate of the white population in the mid to late 1980s.[78] Because this study is seeking to establish links between large-scale economic and demographic forces and levels of segregation, the Afro-Caribbean dependence on manual and manufacturing employment, which is particularly pronounced outside London, is another advantage of the focus on a single ethnic population.

On the housing front, the experience of Afro-Caribbeans in post-war Britain has been characterised by the inferior quality of the housing available to them and by specific patterns of housing tenure. In similar fashion to other New Commonwealth groups, Afro-Caribbeans have suffered from markedly inferior housing achievements compared to the general population, whether measured in terms of available amenities, density of occupation, or age and value of dwelling.[79] Where Afro-Caribbeans diverge from other post-war immigrant groups is in their pattern of housing tenure. In the pioneer period of New Commonwealth immigration before 1950, single, male migrant workers used informal contacts to find their way to lodging houses and other privately rented accommodations in

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[76] C. Peach, 'Urban Concentration and Segregation in Europe since 1945', *Ethnic Minorities and Industrial Change in Europe and North America*, pp. 124-125

[77] M. Cross and M. Johnson, 'Mobility Denied: Afro-Caribbean Labour and the British Economy', *Lost Illusions: Caribbean Minorities in Britain and the Netherlands*, eds. M. Cross and H. Entzinger (London, 1988), p. 79.

[78] S. Smith, *Politics of 'Race' and Residence*, pp. 42-43.

[79] C. Brown, *Black and White Britain*.

specific areas of slum housing.[80] But by the 1960s, immigrants and their families were looking to establish a permanent housing position.[81] Owner-occupation, albeit in low status, pre-1914 cores of cities, was at least as popular as private rental by 1966. Because of the allocative procedures within local authorities detailed in the first chapter, a mere 1 per cent of blacks and a smaller proportion of West Indians gained access to council housing until the mid-1960s. With the advent of civil rights legislation in 1965, Afro-Caribbeans began a slow transition into council housing estates: by 1974, some 26 per cent lived on council properties; by 1982, the proportion was 46 per cent.[82] This is in stark contrast to

Table 4 Indices of dissimilarity for the West Indian population in selected cities, 1961-1991[83]

	1961	1971	1981	1991
London	56.2	50.8		49.0
Coventry	51.0	34.0		28.0
Oxford	43.0			33.0
Birmingham	66.0	56.0		54.0
Leeds		72.0	69.0	
Bradford		44.0	47.0	
Manchester		62.7		56.0

[80] R. Ward, 'Race and Access to Housing', *New Perspectives on Race and Housing in Britain*, p. 185.

[81] R. Ward, 'Race and Access to Housing', *New Perspectives on Race and Housing in Britain*, pp. 193-194.

[82] M. Byron, *Post-War Caribbean Migration to Britain: The Unfinished Cycle*, p. 74.

[83] All 1991 figures come from C. Peach, 'Does Britain Have Ghettos?'; figures for London (excepting 1991) come from T. Lee, *Race and Residence*; figures for Coventry come from Winchester, 'Immigration and the Immigrant in Coventry'; figures for Oxford come from P. Collison, 'Immigrants and Residence', *Sociology*, 1 (1967); figures for Birmingham come from R. I. Woods, 'Aspects of the Scale Problem in the Calculation of Segregation Indices: London and Birmingham, 1961 and 71', p. 67; figures for Leeds and Bradford come from P. H. Rees and M. Birkin, 'Census-Based Information Systems for Ethnic Groups: A Study of Leeds and Bradford'; figures for Manchester come from H. Flett, 'Council Housing and the Location of Ethnic Minorities'.

the experience of South Asians, who overwhelmingly prefer owner-occupation and private rental and have not entered council housing at nearly the same rate, even now, in the mid-1990s. For the sake of this study, it is important to note that Afro-Caribbeans did not gain access to public sector housing for the first fifteen years or more of their settlement in Great Britain. They were thus dependent on the more market-driven owner-occupation and private rental sector during the earliest stages of the development of segregation, the focus of this study.

In addition to their concentration at the inter- and intra-regional level and their position in the labour and housing markets, Afro-Caribbeans have been segregated to varying degrees at the local level. Because of the lack of small-area census data by ethnicity, the portrait of post-war segregation before 1991 that exists is necessarily based, not on standardised census data, but on localised studies carried out by independent researchers. Table 4 is a summary of most of the relevant local studies and the indices of dissimilarity as calculated by each researcher listed. It provides an imperfect sense of the course of the segregation of the West Indian population between 1961 and 1991.Although conversion equations have been devised that allow comparisons of ID measures taken at different scales of analysis[84], they were not applied to the figures in Table 4, mostly because many of the researchers did not specify the scale at which their segregation measures were calculated. The general trend appears to be one of declining segregation, slight in places such as Leeds and Manchester, precipitous in others, with reference to Coventry. But before too many conclusions are drawn, it is important to note that Table 4 is probably of limited use for this study because of the inherent problems of bringing together disparate research efforts into a compendium of figures and also the scale-sensitivity of ID.

The beauty of the 1991 census is that, because of the inclusion of a question on ethnic identity as well as the availability of data at the small-area level, an empirically reliable and comparable set of segregation indices can at last be calculated for a range of British cities. Ceri Peach did just that, and Figure 1 is a visual representation of his findings for a sample of fifteen British cities with 1,000 or more Afro-Caribbeans. The indices of dissimilarity are calculated at the level of enumeration districts, each of which constitutes approximately 150 households. Although the drawing of such districts are carried out by local

[84] R. I. Woods, 'Aspects of the Scale Problem in the Calculation of Segregation Indices: London and Birmingham, 1961 and 71', *Tijdschrift voor Economische en Sociale Geografie*, 67 (1976), p. 126.

Borough to Ward: $W = 12.75 + 0.86\ B$

Ward to ED: $ED = 16.04 + 1.09\ W$

Figure 1 Indices of dissimilarity for fifteen cities with 1,000 or more Afro-Caribbeans, 1991

authorities, the Office of Population Censuses and Surveys provides detailed guidelines for the process, so it has to be assumed that the level of spatial disaggregation at which measures are taken is approximately equal for all cities. Because of the reliability of these measurements, they will form the core of the statistical investigation offered here. The cities selected in Figure 1 represent a cross-section of British metropolitan areas, including small and large cities in the North-West, West Midlands, South-East, and South-West. Although the average level of segregation between the West Indian and white communities is 44, there appears to be a substantial amount of variability between cities. For example, in Leeds and Bristol, ID is up over sixty, and at least six in ten Afro-Caribbeans would have to move to achieve an even black-white distribution city-wide. The extent of segregation here approaches that of many North American cities, which are notorious for uniformly high levels of segregation.[85] Luton, Slough, and Coventry, on the other hand, exhibit negligible levels of segregation, so low in fact that they can probably be explained by socio-economic status and cultural preference alone. The main task of this study will be to explain this variability.

There is one other advantage to focusing on a single ethnic population that merits mention. It is hoped that restricting the study to Afro-Caribbeans will help to control for inter-community cultural differences. Although there are indeed some differences between various island groups from the West Indies, this study's concentration on Afro-Caribbeans will factor out many of the broader religious, linguistic, and other differences between West Indians, Indians, Pakistanis, and West Africans. However, it is also entirely possible that the results reported here for Afro-Caribbean segregation patterns do not apply to other immigrant groups precisely because of such differences.

For the purposes of this study, it has been assumed that the development of segregation is an historical process that is the result of a range of factors over the forty odd-years of the post-war period. The basic statistical exercise to be executed in this study is therefore a set of backward-looking correlations and regressions. The index of dissimilarity for whites and Afro-Caribbeans as calculated from the 1991 census will serve as the dependent variable, and a variety of data taken from throughout the post-war period from 1951 to 1991 will be used as independent variables. Economic indicators from 1961 will thus be utilised to determine whether they impacted *eventual* levels of segregation thirty years later. Using 1991 data to run regressions on 1961 data represents a backstair approach to exploring the historical determinants of urban segregation, but it is still the

[85] D. Massey and N. Denton, *American Apartheid: Segregation and the Making of the Underclass* (Cambridge, 1993), p. 64.

most viable strategy available because of the lack of reliable data before 1991. In addition, occasional problems have been encountered as a result of the re-drawing of boundaries in some districts and the establishment of new local authority jurisdictions. These changes are carefully noted in each census, and every effort has been made to obtain accurate measures going back to 1951. A good example is the local authority area of Sandwell, which prior to 1971 was in fact two districts— West Bromwich and Warley, both in Staffordshire. Pre-1971 measures for Sandwell used in this study are merely the sum of the figures found in the two districts. It is also important to note that the 1966 census is a 10 per cent sample survey and is therefore subject to some minor error. Although results reported in the whole of this chapter contain imperfections due to data problems, it is believed that they are accurate in terms of magnitude.

The independent variables for the study have been carefully chosen to represent economic and demographic change during the post-war period. Four of the principal variables are derived from what Doreen Massey has dubbed classic measures of industrial decline and regional unevenness: population growth and decline, unemployment rates, levels of out-migration, and proportion of manufacturing employment.[86] For the purposes of this study, the latter two have been altered slightly. First, a number of variables have been used to capture migration trends for each city, including in-migration from within Great Britain, in-migration from abroad, out-migration per thousand, the balance of in-migration and out-migration both within Great Britain and also including in-migration from abroad, and lastly a 'percentage migrant within area' statistic. This last migration-oriented variable by definition includes intra-urban migration and suburbanisation. All migration data is based on a five-year span of time so that, as an example, 'percent migrant within area' represents the percentage of residents who lived at a different address but within the same local authority area or metropolitan borough exactly five years prior to the date of the census. Secondly, because of the early West Indian dependence on semi- and unskilled employment, census data for social classes four and five— representing semiskilled and unskilled occupations respectively— have been combined into one measure that captures the extent of employment available to the average West Indian worker. One last variable that requires explanation— alluded to as 'housing pressure' in the text— is arrived at by subtracting the number of households in a given area from the number of occupied dwellings and then expressed in the form of a percentage of the total dwellings. It is not exactly a measure of multiple occupation, but is meant to capture the pressure exerted on the local housing stock

[86] D. Massey, *Spatial Divisions of Labour*, p. 126.

in a given area in light of population changes and the twin processes of in and out migration.

The single most important finding from the range of correlations and regressions run for this study is the dominance of economic and demographic indicators from 1961 to 1966 over data from later years. A summary of all of the findings is displayed in Table 5, but the more important findings were as follows. Using simple Pearson correlation coefficient calculations, it was found that ID for 1991 correlated positively with relative population loss between 1951 and 1961 (r= 0.7864, p= .001) as well as between 1951 and 1971 (r= 0.7566, p= .001), but showed no significant correlation for later years. A similar effect was noted with respect to unemployment, including a positive correlation between ID in 1991 and unemployment levels in 1966 (r = 0.5503, p = .034), but no correlation with other years, including decennial changes in unemployment from 1951 all the way to 1991. Migration statistics for the period 1961 to 1966 also showed strong correlations with levels of segregation in 1991, including in-migration from abroad per thousand population (r= -0.6068, p= .016), (white) out migration per thousand population (r= 0.6455, p= .009), the balance of the two movements expressed in terms of net migration (r= -0.6271, p= .012), and the 'percentage migrant within area' figure (r= 0.6645, p= .007). Correlations for migration statistics over the period 1966-1971 were also significant, but weak by comparison to the coefficients calculated for the period 1961-1966. As with relative population changes and rates of unemployment, no significant correlations were found for 1981 and 1991 migration patterns. Finally, correlation results for the remaining two sets of variables— including housing pressure and social class proportions— were disappointing. None of the housing pressure indicators from 1951 to 1991 showed any statistically significant correlation. As for social class proportions per thousand within cities, isolated statistics often yielded significant correlations, including percentage in class five in 1961 (r= 0.5086, p= .050), percentage in class four in 1971 (r= -0.5804, p= .023), and percentage in class five in 1971 (r= 0.5431, p= .036), but there were no significant correlations for a combination of classes four and five in 1961 and 1971 or for any variables after 1971. Overall, every possible permutation of the above data was thrown into the correlation calculations— even to the point of gross data mining— and yet the significant correlations in nearly all cases, for population changes, migration patterns, unemployment levels, and class composition, were restricted to the data for the early segment of the post-war period between 1951 and 1966.

Several early conclusions can be drawn from the above results. First, it would appear that, in terms of explaining the variability of 1991 segregation levels

Table 6 Multi-variate regression models of segregation of Afro-Caribbeans in British cities, 1991

	Model no 1	Model no 1a	Model no 2
Constant	29.81 (1.4)	19.27 (1.3)	12.99 (1.3)
Rel. Pop. Change, 51-61	-0.79 (-3.1)	-0.79 (4.4)	-0.77 (4.5)
Migration/1,000, 61-66	0.19 (3.4)	0.12 (2.6)	0.11 (2.6)
Housing Pressure, 61	2.50 (2.2)	2.83 (3.5)	2.92 (3.8)
% Class IV and V, 61	-0.11 (-2.2)	-0.03 (.6)	
R squared (adj.)	.81	.92	.89
SE	5.76	4.06	3.93
F	15.96 (.0002)	24.60 (.0001)	34.92 (0)
White's Test			0.07
n	15	14	14

(t-statistics in parentheses)

observed in the cross-section of British cities, the period 1951 to 1966 contributed most to current levels of segregation. Although many commentators have predicted increasing levels of segregation because of the economic restructuring of the past twenty years and the fact that West Indians continue to be drawn to localities that are rapidly losing white population, the period after 1970 appears to have impacted levels of segregation to a lesser extent than the earlier period before 1966. Secondly, it must be noted that the above results still fall short of an explanatory model of the effects of large-scale forces on present-day patterns of segregation in Britain.

Before any firm conclusions can be drawn based on the above findings, two additional statistical analyses of the data are necessary, including a set of rank-order correlations and the construction of a multi-variate regression model. First, Table 5 is a compilation of the significant variables centring on 1961 arranged in rank-order and with Pearson-r and Spearman rank correlations denoted. The rank-order exercise further strengthens the notion that the earlier period of immigration before 1966 was more significant than the later period of economic restructuring from the 1970s to the present

Secondly, multi-variate regression analysis of the data centring on 1961 yielded a satisfactory and statistically significant model of the observed variation in levels of segregation across the fifteen cities. Displayed in Table 6, model no. 1 is comprised of four variables— relative population loss, 1951-1961; proportion migrant within area, 1961-1966; proportion in social classes IV and V, 1961; and housing pressure, 1961. The model was checked for outliers via analysis of the studentised residuals. Leeds was found to be an outlier and was dropped from the regression analysis in model no. 1a. However, when the regression was run without Leeds, the variable for proportion in social classes IV and V, 1961 was found to be insignificant. Model no. 2, therefore, is a preferred model and does not include Leeds or the proportion social class variable. The three variables are relative population loss, 1951-1961; proportion migrant within area, 1961-1966; and housing pressure, 1961. This model is not only highly significant in terms of the t-statistics on each of the Beta coefficients, but also explains nearly 90 per cent of the variation in the observed segregation levels for 1991. Further, a test for heteroskedasticity has been run using White's Test, which regresses the square of the residuals on the original explanatory variables and their squares and cross-products. No relationship was detected, thereby rejecting heteroskedasiticity at the .995 level.

We return to one of the questions asked at the outset of the chapter: To what extent do Ward's typologies of industrial localities and levels of segregation cohere in light of empirical analysis? A careful examination of the data for the fifteen cities in Table 5 yields a high degree of fit for four of the five typologies. The cities of Bristol and Liverpool are both exemplary representatives of Ward's 'declining traditional industrial' typology. Both experienced large-scale population loss and unemployment with a corresponding paucity of in-migration from within and without Great Britain. Combined with a high degree of housing pressure, the result has been two of the four highest observed segregation levels for 1991. The cities of Bradford, Leeds, and Sheffield together are together a portrait of industrial stagnation and adhere to the second typology, 'stable traditional industrial areas'. For these three cities, the numbers for population loss, unemployment, percent migration, and housing pressure are clustered together in the average to high range. But more importantly, low levels of in- and out migration reflect a city that, compared to the other fifteen cities in the sample, did not undergo substantial growth or decline in the period following the Second World War. Mid to high levels of observed segregation in 1991 are the result. The typology for 'expanding traditional industrial areas' is equally satisfying: Leicester, Wolverhampton, and Coventry were three cities with below average levels of population loss and unemployment in the early 1960s. The relative

prosperity of these cities, at least in the crucial early post-war period, serves to explain the sizable in-migration from abroad. But here the empirical evidence diverges from Ward's prediction. According to Ward, in expanding industrial areas with high levels of in-migration, housing supply often lagged well behind demand, and high segregation levels were the result. However, the three cities that cluster together as examples of such expanding industrial areas are located in the bottom third of the fifteen cities in terms of segregation levels. It appears that relative economic prosperity may have outshadowed strain on the housing market caused by the arrival of new workers. Lastly, Slough, Luton, and, to a lesser extent, Oxford symbolise the newly established towns of Ward's framework. All three boast favourable unemployment rates, absolute population growth (as opposed to decline in most of the twelve other cities), and high levels of in-migration domestically and from abroad. Slough and Luton in particular are good examples of boom towns in the South East, and segregation levels are among the lowest observed anywhere in Great Britain.

One obvious shortcoming of the Ward framework is the 'industrial/commercial' typology represented by London and Manchester. London has not been a focus of this study, and so the typology must be judged by Manchester alone. According to the data in Table 5, during the period 1951-1966 Manchester evinced the second-highest rate of population loss and unemployment, high levels of housing pressure, and, directly contrary to the assertions of Ward, a higher than average proportion of semi- and unskilled jobs. Whatever tertiary development and middle-class growth that has occurred in Manchester since the 1970s is not in evidence during the period 1951-1961, and the end result is striking: in the present-day, Manchester suffers from the third highest level of West Indian segregation. As for the period beginning in 1951, Manchester adheres most closely to the declining industrial area typology, with economic stagnation and low levels of in-migration from abroad.

At this point, some cautions and concessions are needed. The ease with which rank-order data for the fifteen cities can be fitted into four of the five industrial typologies must be weighed against two potential criticisms of the regression models reported above. First, it may be argued by some that the observed level of segregation in the fifteen cities is simply a reflection of the size of the West Indian community in each case. After all, segregation is highest in cities with high absolute numbers of Afro-Caribbeans, particularly places like Birmingham, Manchester, and Leeds. By contrast, in locales with low numbers of minorities and thus less competition for available resources, including Slough, Luton, and Oxford, segregation levels are at their lowest. There may be some truth to this notion: the absolute West Indian population in 1961 does indeed show a

significant relationship to ID levels for the fifteen cities, but even then, only with a Spearman rank correlation (r= 0.5433, p= .036). Neither absolute nor relative numbers of Afro-Caribbeans show any significant correlation with respect to Pearson correlations or linear regression analysis. In the end, the notion that the segregation levels reflect the size of the minority population within a given city is unfounded on statistical grounds.

The second and more serious potential criticism of the regression models is that the data suffer from a big city bias. As with the first criticism, there is some evidence that supports this challenge: ID in 1991 for the fifteen city sample does in fact correlate with total population in 1961 (r= 0.6678, p= .007) and absolute population loss (r= 0.6453, p= .009). Simply stated, larger cities are more prone to high levels of segregation. However, relative population measures yield stronger and more statistically significant results, and none of the absolute population measures yields significant results in either of the regression models. In addition, there is some indication that by omitting from the analysis three of the most populous cities in the sample– Birmingham, Manchester, and Leeds– four clear plateaus emerge that are somewhat less clouded than with the fifteen city sample. Without three of the largest cities, four of the typologies form a tight cluster of cities. High levels of segregation are seen to prevail in the declining towns of Bristol and Liverpool; slightly lower segregation levels are in evidence to the North in the stable areas of Sheffield and Bradford; still lower levels of segregation in the expanding Midlands cities of Sandwell, Leicester, Wolverhampton, and Coventry; and the lowest segregation levels of all are in evidence to the South-West in the growth towns of Oxford, Slough, and Luton. Factoring out the big city bias by removing big cities from the analysis may actually improve the geographical sweep of the results.

The central conclusions of this chapter deserve one final restatement. First, the variance of the level of segregation of the Afro-Caribbean population across the fifteen city sample can be explained, not by post-1970 factors, but from the interaction of the forces of industrial change and New Commonwealth immigration over the period 1951-1966. Secondly, the forces that exerted the most influence on segregation levels include relative population change, intra-urban migration, and housing pressure. However, there appear to be considerable differences from city to city and region to region in the ways these variables interacted to produce present-day segregation patterns. Thirdly, the framework of industrial localities put forward by Robin Ward stands up to in-depth statistical analysis with a limited amount of modification. Two notable exceptions include the anomalous case of Manchester and the low levels of segregation observed in the areas that underwent industrial expansion in the immediate post-war period,

particularly the East and West Midlands region. Reviewed together, the three main conclusions do not represent a revolution in segregation studies. But due to the availability of new data in the 1991 Census, this study is valuable in that it represents a heretofore infeasible, empirical test of an important segment of the literature on residential segregation in Britain.

4. Conclusion

A central theme of this study has been the inadequacy of existing analytical frameworks used in segregation studies in Britain, particularly those relying exclusively on choice and constraint. The review of the main strands of the secondary literature in chapter one showed that, while much of research provides interesting food for thought on the makings of segregation, it fails to provide a coherent model of its development. This study has strongly demonstrated that the workings of the labour market and industrial processes are a promising area of inquiry and should be an analytical tool of first resort in future segregation studies.

An early-stated aim of this study was to foil some of the more reactionary thinking on discrimination in society, a premier example being the work of Thomas Sowell. There are many reasons why such reasoning is flawed. Entire volumes of research– for example, the ESRC's volume *Race and Residence in Britain: Approaches to Differential Treatment in Housing*– have been devoted to a point by point refutation of Sowell's arguments. It is hoped that this study represents a tightly focused illustration of the hard edge of industrial capitalism and demonstrates what can happen at the intersection of market forces and race or ethnicity.

Future research on the relationship of segregation patterns and economic and industrial trends will need to expand on the techniques and data sources used in this study to include other immigrant groups. A worthwhile project would be to see if the two models put forward in this investigation apply to other groups, especially the South Asian and Black African communities in Britain, both of which were not established in a significant numerical sense until after the bulk of West Indian migration was completed. Another important angle not covered in this study is the unraveling of the various migration statistics, my treatment of which is admittedly inadequate.

Finally, it has become clear over the course of this investigation that segregation has to do with a lot more than just housing. Susan Smith puts it succinctly when she states that segregation 'reflects and structures enduring inequalities in access to employment opportunities, wealth, services and amenities,

and to the package of civil and political rights associated with citizenship.'[87] Thus what appears to be a study of specifically spatial patterns of residence among ethnic groups actually stands at the center of basic issues of social justice within British society. In this study, scant attention has been paid to the consequences of persistent ethnic segregation. However, as we continue to develop empirical approaches that describe and explain such patterns, it is crucial that we keep in mind the far-ranging effects of segregation within a society that, to a significant extent, remains divided into black and white.

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[87] S. Smith, *Politics of 'Race' and Residence*, p. 170.

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