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Ideal in 1970s Britain**

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RING ROAD: BIRMINGHAM AND THE COLLAPSE OF THE MOTOR CITY IDEAL IN 1970S
BRITAIN*

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Running head: Collapse of the Motor City Ideal

Abstract

Reconstructing Britain's cities to accommodate the 'motor revolution' was an integral part of urban renewal in the post-war decades. This article shows how opposition to urban motorways had a pivotal role in the retreat from urban modernism in the 1970s. It takes as its case study Birmingham, Britain's premier motor city, headquarters of the motor industry and with heavy investment in roads, including the Inner Ring, Britain's first urban motorway completed in 1971. The article traces the collapse of the motor city ideal in Birmingham sparked by controversy over car pollution at Spaghetti Junction, the growth of roads protest and the implication of the Inner Ring in municipal corruption. In so doing it identifies the intersection of environmental, political and economic factors that lay behind the *volte-face* in urban policy and compares Birmingham with other cities which witnessed similar revolts. It argues that the 1970s in Britain saw the end of a specific engineering vision of the post-war city, centred on the car and the 'citizen-driver'.

In David Lodge's novel *Changing Places*, set in Birmingham (named 'Rummidge') in the late 1960s, the anti-hero, Morris Zapp, is presented driving along an urban motorway. Freshly arrived from California, Zapp is struck by the transformation occurring in the cityscape viewed from the car window.

Morris took the newly opened section of the Inner Ring, an exhilarating complex of tunnels and flyovers ... From here you got a panorama of the whole city and the sun came out at that moment, shining like floodlighting on the pale concrete facades of the recent construction work, tower blocks and freeways, throwing them into relief against the sombre mass of nineteenth-century slums and decayed factories. Seen from this perspective it looked like the seeds of the whole twentieth-century city had been planted under the ground a long time ago and were now beginning to shoot up into the light, bursting through the caked, exhausted topsoil of Victorian architecture.¹

Lodge was prescient in depicting his hero against this particular backdrop. By 1970 Birmingham stood as Britain's most unabashedly modern and even 'transatlantic' city, a status that owed much to the car and the associated system of urban expressways, of which the Inner Ring and Gravelly Hill Interchange, popularly known as Spaghetti Junction, were the prime exemplars.²

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¹David Lodge, *Changing Places* (London, 1975), p. 210. I am grateful to Otto Saumarez Smith for drawing my attention to this description.

²On Birmingham's 'transatlantic modernity' see Anthony Sutcliffe and Roger Smith, *History of Birmingham: Vol.3, 1939-1970* (London, 1974), p. 468.

The Inner Ring was the centrepiece of the 'new Birmingham' developed from the late 1950s. Opened by the Queen on 8 April 1971 in a ceremony hosted by the Mayor and Corporation, it was Britain's first complete urban motorway. The road was long in the making. Masterminded by the City Engineer, Herbert Manzoni, it was already part of city plans in the 1930s and given parliamentary ratification by a special Birmingham Corporation Act in 1946. In the climate of post-war austerity, though, government funding for construction was not forthcoming till 1957. Thereafter, the three and three-quarter mile route was gradually carved, section by section, through the slum housing and factories that surrounded the city centre. In total it took fourteen years to complete, the 'great red road' becoming the symbol of Manzoni's techno-utopian vision of Birmingham as a 'motor city'. To celebrate the completion of the road, the Council supported a proposal by a local night-club owner, Martin Hone, to hold the British Grand Prix on the Inner Ring. Encircling the city's remodelled centre, overlooked by the gleaming modernist architecture of the Bull Ring and the Rotunda, the race would enable Birmingham to present a glamorous face to the world, transforming it into a latter-day Monaco. Despite gaining support in the City Council and the British motor racing fraternity, the proposal never obtained parliamentary approval.³ But that it was seriously countenanced in the first place suggests the symbolic centrality of the car in the making of modern Birmingham.

Birmingham's claim to be Britain's premier motor city rested on deeper foundations. The city was acknowledged to be the nerve centre of the British motor industry, with the headquarters of the British Motor Corporation and a workforce peaking at 25,000 in the late 1960s, sited at Longbridge. Wide sections of the

³ *ATV Today*, 17 June 1971, Media Archive for Central England (MACE), University of Lincoln; *Guardian*, 10 May 1973. Birmingham nevertheless hosted thereafter an annual Motoring Festival.

Birmingham economy were tied up with the motor industry, BSA motorcycles, Dunlop tyre manufacturing and Lucas electrical components being just three internationally known names. Writing in 1958, the best estimate of the *Times*' industrial correspondent was that between one fifth and a quarter of the city's labour and capital were tied up in motor manufacture.⁴ In pressing the Conservative government for investment in the Inner Ring at this period, the City Council argued its case in terms of the importance of the road system for local industry: 'The Ring Road should, in the Council's view, be treated for Government investment purposes in the same way as a scheme for a large conveyor installation in one of our big motor works.'⁵ The Council backed its claims with an extensive construction programme, investing more than twice as much capital in highways and bridges as any other provincial city in Britain.⁶ The Inner Ring was to become the linchpin in a network of urban motorways, including Middle and Outer Rings as well as the Aston Expressway, connecting the city to the M5 and M6 motorways and constructed simultaneously as part of the national motorway system in the 1960s and early 1970s.

Birmingham exemplified with exceptional clarity the identification of the modern city with mass automobility, a creed espoused more widely by Britain's post-war planners and City Engineers. In Newcastle-upon-Tyne, the chief planner Wilfred Burns and Labour leader T. Dan Smith saw a network of urban motorways around the Georgian centre as essential to promote the city's make-over as the 'Brasilia of the North'. In Leeds the Inner Ring Road, linking to the M1, led the City Corporation to brand Leeds with the slogan, 'Motorway City of the Seventies'. Second-generation new

⁴ 'The industrial structure of Birmingham', *Times*, 8 May 1958.

⁵ City of Birmingham Inner Ring Road scheme, deputation to the Ministry of Transport and Civil Aviation, 21 November 1955, memorandum, pp. 6-9, 15, The National Archives (TNA), MT 122/3.

⁶ Sutcliffe and Smith, *History of Birmingham*, p. 398.

towns like Milton Keynes, Washington and Cumbernauld had the expansion of mass automobility built into their design.⁷ Conservative as well as Labour politicians joined the chorus by the early 1960s, while almost every major British city planned an urban motorway scheme.⁸ London had its Ringways, Glasgow its Inner Ring Road, Liverpool its Inner Motorway. The impetus for all this came partly as a response to the surge of mass motorization (the numbers of cars on Britain's roads increased five times between 1950 and 1970); partly from the influence of the Buchanan Report, *Traffic in Towns* of 1963, which urged motorway construction as a means to obviate the effects of the 'motor revolution' on urban living; partly from the persistent belief among planners like Herbert Manzoni in civil engineering as providing technical solutions to inherited problems of 'slums' and traffic congestion; and partly from examples from abroad, particularly North America where freeway systems seemed the key to unlocking a new phase of urban modernity.⁹ In 1956 Birmingham Corporation sent a delegation led by Manzoni to examine highway systems in Chicago Pittsburgh, Philadelphia, Washington and New York. Significantly America's own 'motor city', Detroit, was not part of the itinerary; already by the 1930s Birmingham was being recast in Manzoni's phrase as 'the city of the motor car'.¹⁰

⁷ John Pendlebury, 'Alas Smith and Burns? Conservation in Newcastle upon Tyne city centre, 1959-1968', *Planning Perspectives* 16:2 (2001), pp. 115-141; Simon Gunn, 'The Buchanan report, environment and the problem of traffic in 1960s Britain', *Twentieth Century British History*, 22:4 (2011), pp. 536-538; Guy Ortolano, 'Planning the urban future in 1960s Britain', *Historical Journal*, 54:2 (2011), pp. 477-507.

⁸ Otto Saumarez Smith, 'Central government and town centre redevelopment in Britain, 1959-1966', *Historical Journal*, 58:1 (2015), pp. 217-244.

⁹ From 2.2 million to 11.5 million, B.R. Mitchell, *British Historical Statistics* (Cambridge, 1988), p. 558; Colin Buchanan, *Traffic in Towns: A Study of the Long Term Problems of Traffic in Urban Areas* (London, 1963). Like many traffic planners, Buchanan had investigated road systems in continental Europe and North America as part of his study.

¹⁰ Report of the delegation who visited America to the Public Works Committee: Traffic Facilities – Interim Report, 28 March 1957, p. 12., Library of Birmingham Archives (LBA), BCC/1/AO/1/1/144, PWC. On Detroit see Thomas Sugrue, *The Origins of the Urban Crisis: Race and Inequality in Postwar Detroit* (Princeton, 2005).

In the course of the 1970s, however, the ideal of the motor city collapsed in Britain, and with it the belief in new roads as integral to urban renewal. This collapse was part of a wider retreat from urban modernism as the guiding ethos of post-war urban redevelopment.¹¹ The reaction against modernism after 1970 has been explored by architectural and planning historians largely in relation to buildings: tower blocks, council estates and Brutalist ‘megastructures’.¹² But the retreat from modernism was also manifested in an escalating critique of the engineering vision of the post-war city remodelled around the priorities of the car and free-flowing automobility. In effect, the disavowal of urban modernism encompassed infrastructure as much as buildings and understanding it involves environmental and social history no less than the history of architecture and planning. The case of Birmingham, England’s second largest city, shows in especially stark fashion the role of urban motorways in the demise of the techno-utopian ideal, visible also in those industrial cities like Glasgow, Leeds and Bradford where that ideal had been most eagerly embraced.¹³ It highlights too the variety of actors involved in the process of unravelling, planners, architects and politicians, to be sure, but also the local and national media, academic experts and community protestors.

¹¹ For discussion of the concept of urban modernism see Simon Gunn, ‘The rise and fall of urban modernism: planning Bradford 1945-1970’, *Journal of British Studies*, 49:4 (2010), pp. 849-69. Urban modernism is productively discussed in John Gold, *The Practice of Modernism: Modern Architects and Urban Transformation, 1954-1972* (Oxford, 2007), esp. ch. 1; Ortolano, ‘Planning the urban future’, esp. p. 506; Otto Saumarez Smith, ‘The inner city crisis and the end of urban modernism in 1970s Britain’, *Twentieth Century British History*, online publication August 2016, pp. 5-6.

¹² See for example Lionel Esher, *A Broken Wave: The Rebuilding of England 1940-1980* (London, 1981); Elain Harwood, *Space, Hope and Brutalism: English Architecture 1945-1975* (New Haven, 2015). There has also recently developed a more popular version of this narrative: Lynsey Hanley, *Estates: An Intimate History* (London, 2012); John Grindrod, *Concretopia: A Journey Round the Rebuilding of Postwar Britain* (London 2014).

¹³ For Leeds see Eamonn Judge, ‘Leeds since Buchanan 1963-1983’ in Peter Hall, ed., ‘Buchanan twenty years after: Traffic in Towns today’, *Built Environment*, 9, 2 (1983), pp. 112-118; on Glasgow’s motorways, Ronald Miller, ‘The new face of Glasgow’, *Scottish Geographical Magazine*, 86:1 (1970); Christopher Harvie, ‘The motorway interest’, *New Statesman*, 13 November 1973; for Bradford see Gunn, ‘Rise and fall of urban modernism’.

In this article I examine how Birmingham's motorway network, hailed as a major achievement of civic engineering prior to its final completion in 1972, metamorphosed into an environmental and political disaster that helped to turn the tide of opinion in Britain against the earlier dream of the 'fully motorized' city. It is a detailed and often episodic narrative and one that was consequently not mirrored in exact terms in other towns and cities. The elements of the narrative, encompassing public health, popular protest, technical failures and municipal corruption, can appear as separate, 'disjointed fatalities'.¹⁴ Yet their effects were conjunctural and cumulative, serving to weaken and ultimately destroy the commitment of Birmingham's politicians and planners to the model of the 'motor city' and to reshape urban policy more widely. It is a narrative that has international dimensions, connected to the 'transatlantic collapse of urban renewal' which Christopher Klemek has charted from New York to Berlin.¹⁵ It is part, finally, of the history that is just beginning to be written of Britain's own 'urban crisis' in the later 1970s and early 1980s, marked by de-industrialization, dereliction and 'uprising'.¹⁶ In the conclusion I will return to this wider national and international context and to these larger themes in order to bring out the full significance of the Birmingham case. First, though, we need to analyse the complex series of events that saw the unravelling of motorway mania in Britain's most 'transatlantic city'.

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¹⁴ My thanks to one of the anonymous reviewers for this apt phrase.

¹⁵ Christopher Klemek, *The Transatlantic Collapse of Urban Renewal* (Chicago, 2011).

¹⁶ The historiography is sparse and only just emerging but for pointers see Jim Tomlinson, 'De-industrialization not decline: a new meta-narrative for post-war British history', *Twentieth Century British History* (online publication, 2016); Andy Beckett, *When the Lights Went Out: Britain in the Seventies* (London, 2009) and *Promised You a Miracle: UK 80-82* (London, 2016), esp. chs. 3 and 14; Saumarez Smith, 'The inner city crisis'. I am also grateful to Aaron Andrews and Alistair Kefford for sight of unpublished papers on these topics.

The unravelling started at a motorway interchange. Gravelly Hill Interchange or Spaghetti Junction was intended by its planners to be the final piece in the jigsaw of Birmingham's urban motorway system, linking the Inner Ring Road and Aston Expressway to the major national M6 and M5 motorways. When it was opened in 1972 it represented the largest free-flowing roads interchange in Europe, achieved by a series of curving flyovers, without the need for roundabouts and traffic lights. Within two months, though, the new Interchange was at the centre of a public row about traffic noise and – soon after – potentially dangerous levels of lead pollution believed to derive from vehicle exhaust emissions. These issues, especially lead pollution, were fiercely debated and Birmingham's Gravelly Hill became an important test-case in a national debate about car pollution in Britain that was to last throughout the 1970s.

Concerns about the environmental effects of mass automobility were not new. The setting up of the Buchanan Study Group on *Traffic in Towns* in 1961 had been prompted by fears about the consequences of the spread of automobility for the quality of urban life, fears which the ensuing Report intensified rather than dampened. 'All the indications are', Buchanan warned, 'that given its head the car would wreck our towns within a decade'. Proposing both vertical and horizontal segregation of pedestrians and traffic, the Report advocated a new 'traffic architecture' as the basis for the modernisation of Britain's cities alongside the creation of 'environmental areas' in which motor traffic would either be restricted or excluded altogether. 'Environment', in particular the need for environmental protection, was a leitmotif of Buchanan: a town's

'environmental capacity' was calculated in relation to noise level, air pollution and visual blight.¹⁷

Britain was something of an international leader in responding to concerns about traffic and pollution but developments North America also made themselves felt. As early as 1950 a clear causal link had been made between car exhaust emissions and atmospheric smog in Los Angeles, which notoriously suffered from the problem. Over the decade that followed analyses of urban air pollution in the United States highlighted a number of other damaging effects to health and environment. The American lawyer and anti-car campaigner Ralph Nader argued in 1965 that automobiles were 'pollution factories on wheels' as well as a danger to life and limb.¹⁸ Resulting changes to legislation in California to reduce carbon monoxide and hydrocarbons in vehicle emissions had a direct impact on British manufacturers, including the British Motor Corporation at Longbridge, since almost a third of British car exports went to the United States in the late 1950s. UK-based organisations such as the Motor Industry Research Association (MIRA) and the government-funded Warren Spring Laboratory at Stevenage likewise began to investigate air-based car pollution by the 1960s. As Matthew Parker argues, priorities derived from export markets rather than official concerns about public health drove British research, which increasingly also focused on invisible rather than visible pollutants, especially carbon monoxide.¹⁹ Air pollution was not the only concern about growing levels of traffic. In 1960 the British parliament

¹⁷ Buchanan, *Traffic in Towns*, 32 and conclusion. See also Gunn, 'The Buchanan report, environment and the problem of traffic'.

¹⁸ Ralph Nader, *Unsafe at Any Speed: The Designed-In Dangers of the American Automobile* (New York, 1965), pp. 147, 151.

¹⁹ This paragraph as a whole owes much to the discussion in Matthew Parker, 'Making the city mobile: the place of the car in the planning of Birmingham, c.1955-1973' (University of Leicester PhD, 2015), ch. 6. The PhD mainly deals, however, with the planning of the motor city in the 1950s and 1960s rather than the subsequent collapse in the 1970s.

established a Committee on the Problem of Noise headed by Sir Alan Wilson, scientist and deputy-chairman of Courtaulds. The Wilson Committee's final report, produced in 1963, concluded that 'in London (and, no doubt, in other large towns), road traffic is, at the present time, the predominant source of annoyance from noise, and no other single noise is of comparable importance', a point which the Buchanan Report later that year reaffirmed.²⁰ For its part, the Wilson Committee proposed regulating vehicle noise levels, with a maximum of 85 decibels (dBA) for cars and 90 dBA for motorcycles.

In exactly the same years Birmingham was being recreated as a motor city, then, a number of expert critics in both Britain and North America were raising questions about the effects of mass automobility on the urban environment and public health. In the terms of the period, however, these positions were not viewed as antithetical. Air pollution was associated with traffic congestion rather than traffic flow; the Buchanan Report itself had advocated urban motorways as a means to preserve 'civilized life' in city centres and residential areas and this became a standard response of planners in cities such as Newcastle-upon-Tyne, Leicester and London where rings and expressways were identified with conserving the historic urban fabric of the central areas.²¹

Nevertheless, by the time Birmingham's Inner Ring was in its final stages of construction in the late 1960s, car pollution was rising up the political agenda in Britain. The Department of the Environment was formed in 1970 by Edward Heath's incoming

²⁰ Committee on the Problem of Noise, *Noise: Final Report* (London, 1963), p. 133.

²¹ Pendlebury, 'Alas Smith and Burns?'; Simon Gunn, 'Between modernism and conservation: Konrad Smigielski and the planning of post-war Leicester' in R. Rodger and R. Madgin (eds.), *A History of Modern Leicester* (Lancaster, 2016), pp. 267-291; Jerry White, *London in the Twentieth Century* (London, 2008), pp. 68-72.

Conservative government but the preceding Labour administration had already established a Central Unit on Environmental Pollution in 1969, which swiftly produced a White Paper on the subject.²² This was followed by the publication of a Department of the Environment study of public opinion entitled *Pollution: Nuisance or Nemesis* in 1972. Apart from a growing concern with the subject, what these reports revealed was the lack of expert or political consensus, particularly regarding the environmental and public health effects of mass automobility. The 1969 White Paper, *The Protection of the Environment: The Fight Against Pollution*, argued that car emissions in British towns and cities were much less acute than in the United States, that there was no evidence that carbon monoxide represented a danger to urban populations and that the lead produced from exhaust fumes was 'trivial'.²³ By contrast, the subsequent government report, *Pollution: Nuisance or Nemesis*, took seriously the potential threat of lead pollution and criticised the absence of legislation to control vehicle emissions. The report was also prescient, observing that personal mobility might need to be reduced in future while acknowledging that it was 'very difficult, politically, to persuade people to make sacrifices in the 1970s to avert what might be unprecedented environmental disasters in the early twenty-first century'.²⁴

When the Gravelly Hill controversy first broke in July 1972, then, it was at a moment of increased public sensitivity in Britain to issues of automobility and pollution with no expert consensus having been reached on their exact inter-relationship. It was

²² The new DoE replaced the three Ministries of Housing and Local Government, Transport and Public Building and Works.

²³ Central Unit on Environmental Pollution, *The Protection of the Environment: The Fight Against Pollution* (London, 1969), pp. 11-12.

²⁴ Department of the Environment, *Pollution: Nuisance or Nemesis?* (London, 1972), p. 80. Debate went wider than government of course; *The Ecologist* magazine regularly reported on lead pollution from car emissions soon after its launch in 1970.

noise pollution that initially aroused concern. In July 1972 Birmingham's newly appointed Air Pollution and Noise Abatement Inspector, Frank Reynolds, reported that 'the opening of the link has produced a sudden and severe deterioration in the environment of many hundreds of Birmingham citizens'.²⁵ Residents in the neighbourhoods adjacent to the Interchange and the Aston Expressway began to protest. One woman complained of the 'brainwashing noise' from the motorway; others barricaded the walls of their houses with mattresses and hardwood to try to keep the noise out. A government-funded study of noise levels in houses bordering the newly-opened M6 at Perry Bar found traffic from cars averaging 64 mph to create noise levels of between 74 and 67 dba. This was within the limits set by the Wilson Committee but as the researchers pointed out, the Committee did not take into account the long-term psychological and health effects produced by continuous noise at these levels.²⁶

Protest soon spread across the city. In December 1972 the newly formed Calthorpe Park and Lee Bank Tenants' Association, with some six hundred members, demanded to speak with the City Engineer, Neville Borg, about plans for the Middle Ring Road which was due to pass close by local housing estates. Residents pointed to the forthcoming Land Compensation Bill, which included a proposal for compensation for noise disturbance from new motorway schemes.²⁷ Birmingham's problems loomed large in debates during the Bill's passage through parliament. Julius Silverman, Labour MP for Aston in which Gravelly Hill was sited, was especially vituperative in his condemnation of the Interchange. In a speech in November 1972 he fulminated against the 'intolerable noise, fumes and dirt' generated at Gravelly Hill:

²⁵ 'Spaghetti Junction compensation plea', *Times*, 13 July 1972.

²⁶ D.J. Fisk, A.C. Salvidge and J.W. Sargent, 'Traffic noise propagation from the M6 motorway - Perry Bar, Birmingham', Building Research Station, January 1973, TNA, AT 67/214.

²⁷ 'Noise protest by Ringway residents', *Birmingham Mercury*, 3 December 1972.

As an engineering construction it is superb. As a work of art it is one of the greatest monstrosities which any Government has inflicted upon any section of this country.

Nor did the problems recede. In 1974 a local Labour MP, Peter Snape, informed the House of Commons that his constituents 'frequently write to tell me about what they call the "living hell" on their doorsteps – the thundering traffic which makes an unbroken night's sleep a half-forgotten memory'. A survey conducted in the same year suggested that over a third of the urban population of Britain was regularly exposed to 'excessive traffic noise'.²⁸

Meanwhile, the effects of traffic at Gravelly Hill ignited a still more toxic dispute. In late 1971, some six months before the Interchange opened, Birmingham's Medical Officer of Health had instigated a study undertaken by Dr Robert Butler of Aston University into lead in the air from traffic around Gravelly Hill. The study was the first in Britain 'designed to look at the introduction of a motorway interchange in a city and to attempt to relate the consequent atmospheric lead levels with the blood lead levels of residents living nearby'.²⁹ That motorway traffic was responsible for air pollution was already suspected. Days before the Interchange opened, a local Conservative MP, Sydney Chapman, addressed the Junior Minister for Environment, Eldon Griffiths, in parliament: 'I will hold the dubious distinction of having a constituency [Handsworth] which is almost entirely encircled by urban motorways', Chapman announced. 'There is genuine concern among my constituents about the level of atmospheric pollution'.³⁰ Yet

²⁸ Peter Snape, *HC Debs*, 29 July 1974, 878, cols.151-186; I.D. Jones, *Road Traffic Noise* (London, 1976), p. 138.

²⁹ Joint Working Party on Lead Pollution around Gravelly Hill, *First Report*, December 1974, TNA, HLG 156/749.

³⁰ Sydney Chapman, *HC Debs*, 17 May 1972, 837, cols 517-519.

expert opinion in Birmingham was divided about the effects of lead pollution in the Gravelly Hill area and the wider city. In August 1972, three months after the opening of the Interchange and the M6, Dr Robert Butler pronounced that lead levels around Gravelly Hill had actually fallen since the previous year. By November, however, a Birmingham University chemist, Dr Robert Stephens, was reported as saying that 'children living in big cities risk brain damage from the large amounts of lead in dust' and that 'more than 90% of airborne lead came from car exhausts'.³¹

In part, these divisions among experts related to the different sets of data they examined – Stephens frequently drew on data from international studies, for example, by contrast with the predominantly local studies of Butler and others. But the unresolved nature of expert controversies opened up a space of uncertainty which encouraged protest and even suspicions of an official cover-up. A local action committee was set up at Gravelly Hill where four hundred people lived within a hundred metres of the Interchange and 4,000 within three hundred metres. The committee's vice-chairman, Reg Dawson, demanded a clear scientific statement about lead levels and radical action if they were proven to be higher than public health guidelines deemed safe. 'If the area is past that stage [i.e. above acceptable levels], then they should clear the area of people ... They've put a vast motorway system in the heart of a city. The idea was good at the time, but since then experts have said, never again anywhere else.'³² The City Council, too, was forced to acknowledge the problems. 'If we had known what we know now', the Labour leader of the City Council, Stanley Yapp, confessed in March 1973, 'I am certain we would not now have Spaghetti Junction in its present form'.³³

³¹ Joint Working Party, *First Report*; 'Brain injury threat from lead in big cities', *Times*, 24 November 1972.

³² 'Spaghetti Junction', *ATV Today*, 14 March 1974, MACE.

³³ *Birmingham Mail*, 30 March 1973.

Gravelly Hill remained a focus of national debate for much of the decade. In April 1974 it was reported to parliament that a 'drastically significant increase' in levels of lead had been found in the blood of people living in the vicinity; evidence from a sample of 100 residents showed that levels had risen by 80% between 1972 and 1974.³⁴ In the light of the new findings, and the persistent concerns regarding the environmental effects of traffic at Spaghetti Junction, the new Minister of the Environment, Denis Howell, himself MP for Birmingham Small Heath, established a parliamentary Joint Working Party on Lead Pollution at Gravelly Hill. Its initial report, presented in December 1974, played down fears about lead levels, arguing that 'they were in no way exceptional for urban areas' and 'there is no danger of these people developing chemical lead poisoning', while acknowledging that the long-term effects of exposure to lead from traffic were unknown.³⁵

Yet controversy continued to dog the Working Party to the end. The verdict of its final report in May 1978 was as upbeat as its initial report, the press release being headlined 'No cause for concern about lead pollution at Gravelly Hill'. At the press conference, however, Dr Robert Stephens, the Birmingham University chemist who had been a long-term member of the group, broke ranks, claiming that 1 in 5 of children under 13 in inner Birmingham were 'experiencing a disturbance of central nervous system functions because of elevated body burdens of lead'. New research from Germany, Canada and the United States, he argued, showed that there was a direct

³⁴ J.W. Rooker, *HC Debs*, 5 April 1974, vol. 871, 1692-1694.

³⁵ Joint Working Party, *First Report*, summary.

correlation between low IQ performance and high levels of lead in teeth of children exposed to heavy urban traffic.³⁶

Later the same year, scientists working at the Atomic Energy Authority at Harwell appeared to corroborate these views, suggesting that the risks from lead levels had been severely underestimated by the Gravelly Hill Working Party. On the back of this the British Society for Responsibility in Science accused both the lead industry and government of a cover-up.³⁷ Such opinions fed back to Birmingham. By November 1979 the city's Environmental Health Department appeared to have conceded the critics' case, distributing a leaflet to all households listing the dangers of lead, including those from traffic. 'Do not leave a baby in a pram near heavy traffic', it warned. 'Discourage children from playing in or near busy streets. Keep windows facing traffic closed.'³⁸ The very road systems that had been viewed a decade earlier as an index of Birmingham's civic ambition were now being treated by the city's officials as a menace to public health.

II

Birmingham's self-proclaimed status as a motor city meant that throughout the 1960s it was seen by civil servants and the national press as staunchly pro-car.³⁹ In June 1972, just after the opening of the Gravelly Hill Interchange, the *Times* commented that 'unlike the fight put up by many Londoners against urban road schemes, the authorities have

³⁶ Joint Working Party on Lead Pollution around Gravelly Hill, *Final Report* (London, 1978); *New Scientist*, 13 July 1978, pp. 118-19.

³⁷ *Financial Times*, 6 January 1979.

³⁸ Lead pollution in Birmingham Steering Committee, flyer produced by Birmingham Environmental Health Department, November 1979, TNA, HLG 156/749.

³⁹ See 'Public transport in the Birmingham area', 12 October 1966, TNA, MT97/536, p.1 on the strong 'car-consciousness' among Birmingham's residents.

found little resistance to their plans in Birmingham'.⁴⁰ In reflecting on the emergence of urban roads protest the newspaper was alluding to the campaigns against the London Ringways scheme orchestrated from 1971 by bodies like the London Motorway Action Group and Homes before Roads.⁴¹ Controversy over pollution at Gravelly Hill Interchange changed this picture. Yet Gravelly Hill itself was only part of a much wider wave of protests against motorways that overtook Birmingham in the early 1970s, adding a new repertoire of activism to local politics.

These protests were routinely reported in the Birmingham press and on local television and radio news. The two main Birmingham newspapers, the *Post* and the *Evening Mail*, were scarcely radical voices. Owned by the Iliffe family, who also had a part share in the *Daily Telegraph*, the *Post* especially had been an active agent of boosterism for the 'new Birmingham' from the late 1950s; the high-rise *Post* and *Evening Mail* building, designed by the local Brutalist architect John Madin and opened in 1965, towered over the Inner Ring Road at Colmore Circus.⁴² The local press for the most part represented moderate, civic-minded Conservatism, anxious to see the city and its economy thrive, and zealous on behalf of ratepayers and local business. Further media attention was provided by Associated Television, based in Birmingham with the franchise for the Midlands region from 1968; television news broadcast almost any

⁴⁰ 'Rapid transit system forecast for 1980s', *Times*, 8 June 1972.

⁴¹ Peter Hall, 'London's motorways' in his *Great Planning Disasters* (Berkeley, Ca., 1980), pp. 56-86; John Davis, "'Simple solutions to complex problems": the Greater London Council and the Greater London Development Plan, 1965-1973' in Jose Harris, *Civil Society in British History: Ideas, Identities, Institutions* (Oxford, 2003), pp. 249-74. Davis argues that the Ringways literally drove the GLC plan, especially the inner London Ringway 1 or Motorway Box.

⁴² On the Iliffe family see Charles Arnold-Baker, *Companion to British History* (London, 2015), p. 683; on the Birmingham *Post* and *Evening Mail* building, *Architect's Journal*, 139 (8 December 1965), pp. 1385-1406.

significant roads story, from the opening of Spaghetti Junction to residents' protests against the damaging effects of traffic.⁴³

From 1970 the Birmingham media reported steadily expanding opposition to the Corporation's roads agenda. One aspect was opposition to new roads, including by-passes, affecting residential areas. This included not only the Inner Ring, which passed through 'slum' areas where the Corporation had used compulsory purchase orders from the later 1940s to demolish large tracts of housing, but also the Middle Ring which passed through more suburban areas. One such area was Moseley and Kings Heath, neighbouring Victorian suburbs on the south side of the city. Here a by-pass was proposed by the Corporation in May 1973, linked to the construction of the Middle Ring and a proposal for a new Midlands to Southampton motorway.⁴⁴ The by-pass, estimated to cost £8 million in 1975, threatened 324 houses which required to be demolished in the process; if built, residents claimed, south Birmingham would be divided by 'a canyon filled with motor vehicles'.⁴⁵ Home to a high number of politically-active professionals the leafy southern suburbs were very different socially from the predominantly working-class areas of Aston and Perry Bar that adjoined Gravelly Hill. Even before the Corporation's proposals for the bypass were agreed by the Council's Public Works Committee, the Kings Heath and Moseley Motorway Action Committee (KHAMMAC) was formed, the name echoing the London Motorway Action Group which had just won its battle to halt the capital's Ringways scheme. Over the next three years KHAMMAC evolved an imaginative repertoire of tactics to publicise its case and pressure the Council to stop the by-pass. A torchlight protest parade was held in the

⁴³ ATV regional television news between 1968 and 1982, as well as other footage on roads in Birmingham can be found at the Media Archive for Central England (MACE), University of Lincoln.

⁴⁴ *Birmingham Post*, 24 May 1973.

⁴⁵ *Birmingham Post*, 3 May 1977; *Birmingham Post*, 5 June 1973.

centre of Birmingham; City councillors were 'hijacked' in Kings Heath by mothers with babies who forced them to take a tour of the proposed route and pressed them to reopen the local railway station; and the Labour leader of the Council, Stanley Yapp, was deluged by 250 letters opposing the by-pass, delivered to his home address.⁴⁶ In response, the Council sought a compromise, including tunnelling the road under Kings Heath at a cost of £1.5 million, but to no avail. By late 1976 it was in full retreat over the road, facing widespread accusations in the local press and in parliament that delay was causing blight in the area and that the episode had become a 'farce'. In May 1977 the scheme was scrapped following a decision of the West Midlands County Council Transport and Highways Committee.⁴⁷

Indeed, within a year of the completion of Birmingham's network of inner urban motorways, road protests were breaking out all over the city. At Colton Hackett in June 1974, residents opposed a road extension to the British Leyland Longbridge plant, claiming 'the cars are bumper to bumper ... and the place is absolutely thick with exhaust fumes'; at Nechells Parkway in November 1974 mothers blockaded the road to demand a safety barrier to protect children from traffic.⁴⁸ Women as mothers played a leading part in these protests, acting in the name of children at risk from the new road systems. As early as 1969 a group of women in Princip Street, a terrace of working-class housing close to the Inner Ring Road and the city centre, took direct action, painting a pedestrian crossing on the street at 2 a.m. to highlight the threat to their children from

⁴⁶ *Birmingham Post*, 24 May 1973; 3 July 1974; 30 March 1973.

⁴⁷ *Birmingham Mail*, 25 May 1977.

⁴⁸ *Birmingham Mercury*, 3 December 1972; *Birmingham Mail*, 14 June 1974 and 26 November 1974.

through traffic.⁴⁹ They had good reason for their fears: in 1974 Birmingham had the highest rate of traffic accidents involving children of any area in Britain, the numbers of such accidents having risen by 24% since 1969, precisely the years when new motorways were being opened across the city.⁵⁰ Such roads were inherently dangerous and not just for children. In the first three months of 1970 alone there were 29 deaths and 1,510 people injured in traffic accidents across the city.⁵¹

Safety was also a significant worry on Birmingham's newest and most experimental road, the Aston Expressway, opened at the same time as Gravelly Hill Interchange in May 1972. From its inception the new road, a seven-lane motorway with a reversible middle lane for tidal flow, was a source of concern for civil servants and influential elements of local opinion. J.R. Madge, a senior official in the Ministry of Transport, confessed in 1969 that the Expressway 'rather makes me shudder from the safety point of view ... We are bound to get asked [about safety testing] when the first (inevitable?) head-on crash occurs in the centre lane'.⁵² Less than a year before the opening of the road, the *Birmingham Post* published two major articles on the Expressway, arguing on the basis of a similar scheme in Montreal that serious accidents would ensue: 'on the figures available it is expected that one person will either be killed or seriously injured on the Aston Expressway every nine days'.⁵³ Faced with the rising tide of damaging evidence about the effects of mass automobility, the *Birmingham Mercury* struck a doleful chord: 'There are times when the motoring picture seems one

⁴⁹ 'Do it yourself crossing', *Birmingham Mail*, 26 June 1969. Krista Cowman's work on playstreets highlights the role of women in contesting traffic on city streets from at least the 1930s onwards. I am grateful to her for allowing me to see her forthcoming article on this topic.

⁵⁰ *Birmingham Post*, 14 February 1974.

⁵¹ *Birmingham Mail*, 13 April 1970.

⁵² J.R. Madge, 'Aston Expressway', Ministry of Transport paper, 26 June 1969, TNA, MT 112/322.

⁵³ 'Motorways – Traffic Regulations Policy, Aston Expressway', TNA, MT 112/322.

of unrelieved gloom: more cars and more fumes (one vehicle to every twenty-four yards of road now); more accidents (an estimated one car in eight in an accident this year); more fatalities (nineteen people killed each day last year)⁵⁴ Only the paradox that the city's motor manufacturing sector was a major contributor to this predicament seemed to escape critics' attention. The powerful motoring lobby including manufacturers' and the major driving organizations, the AA and RAC, were largely silent on Birmingham's problems, concentrating their attention on issues deemed to be of national rather than local importance, such as road safety legislation.⁵⁵

That attitudes to automobility were shifting in Birmingham in the early 1970s was confirmed from an altogether different direction, that of pedestrianization. Making the city centre accessible to traffic had been a cardinal tenet in the planning of the Inner Ring. Following the North American example of restricting car access would be an 'ostrich act', Herbert Manzoni pronounced in 1959, and the view persisted among the city's politicians and planners for much of the 1960s, despite Buchanan's call for 'environmental areas' free of traffic. In 1963 Alderman Thomas, chair of the city's Public Works Committee, confirmed to a national audience: 'We have not reached the conclusion in Birmingham that the motor car should be excluded from the city centre; I personally hope we never shall'.⁵⁶ By 1970, though, this orthodoxy was in question. Now the Inner Ring was projected as a 'moat protecting the city centre from marauding traffic', yet even so the levels of traffic accessing the centre were seen as an unwarranted nuisance. A survey conducted among shoppers in New Street by the Junior

⁵⁴ *Birmingham Mercury*, 29 March 1970.

⁵⁵ Though the AA were sufficiently concerned to publish a general report in late 1971, *Air Pollution and the Motor Vehicle*.

⁵⁶ Records of Sir Herbert Manzoni, newspaper cuttings 1959, LBA, BCC, MS1543/1; 'Papers to the People and Cities conference, 11 December 1963, London', TNA, MT122/77, Part 1.

Chamber of Commerce indicated that 76% were in favour of pedestrianizing the central streets and only 14% opposed.⁵⁷ In March 1971 City councillors undertook a 'trial walk' through the city centre, prompting strong responses. 'The whole concept [of the Inner Ring] was wrong', Alderman Florence Hammond was quoted as saying. 'Pedestrians should have been on top and the motorists underneath. The city is a place to shop, not motor through.' A market trader was equally trenchant: 'Birmingham has been built by the car for the car - but without the necessary facilities, people feel insignificant'.⁵⁸ Visiting Birmingham later that year Colin Buchanan echoed local opinion, judging the environment in the city centre 'unacceptable'. Standing in Manzoni Gardens, he commented: 'There's a hell of a noise here and the traffic seems terribly close. Noise is today's great pollutant'.⁵⁹ In the face of the criticisms from shoppers, shop-owners, councillors and planners, the Corporation relented. From 1 November 1972 Birmingham city centre was declared a traffic-free zone.

Within the city itself criticism of the roads agenda had become all but universal, even among council leaders. In December 1973 Harold Edwards, who had presided over the Public Works Committee during the last phase of Birmingham's inner motorway construction, acknowledged: 'The time has come when we cannot afford to build any more big urban roads and expressways, not only because they generate traffic, but because of the effects on the environment'.⁶⁰ The retreat was at first only partial, not least because large infrastructure works such as the Inner Ring were long-term projects, often taking decades to bring to fruition. Thus on the same day Edwards was signalling the end of major roads construction the City Council was announcing further

⁵⁷ *Birmingham Mail*, 30 September 1970. 10% of people asked were undecided.

⁵⁸ *Birmingham Mail*, 26 March 1971.

⁵⁹ 'Buchanan on Birmingham', *Birmingham Post*, 12 October 1971.

⁶⁰ *Birmingham Mercury*, 11 February 1973.

expenditure of £68 million to enable the completion of the Middle Ring Road, originally begun in 1961.⁶¹ Yet this expenditure was abruptly cut short by the effects of the international oil crisis, compounding economic recession in Britain in the winter of 1973/4. In February 1974 work on road improvement schemes in the West Midlands were put on hold for fifteen months and in October all major road programmes in Birmingham went under review.⁶²

The result was that, for the first time, a very public debate ensued in Birmingham about the significance and direction of the 'motor revolution' of the previous twenty years. In January 1974, with British industry on a three-day week and oil prices having quadrupled in the previous two months, the *Birmingham Post* reported on a conference of transport experts at Birmingham University. Speaker after speaker, the *Post* testified, saw the oil hike as having merely intensified what was a much deeper crisis. The car had become a version of Frankenstein's monster, despoiling the environment while at the same time destroying itself, since mass automobility was outpacing the capacity of the road system to accommodate it. 'Car ownership is theoretically expanding to the nth degree', one speaker explained, 'but land space is not and there is a limit to which we can go in polluting our atmosphere'. Extending Colin Buchanan's notion of the 'motor slum', Janusz Kolbuszewski, Britain's first professor of traffic engineering, proposed the neologism 'slurb' to describe the way in which formerly pleasant suburbs degenerated into slums through planning blight caused by new urban expressways such as the Middle Ring. Above all, the conference emphasized the critical dilemma which a motorized society was now forced to confront: 'Mobility is threatened because we all have it'. As a result, the *Post* urged, 'government and, indeed, society as a whole need to

⁶¹ Ibid; *Birmingham Mail*, 13 October 1970. The Middle Ring Road was only finally completed in 1998.

⁶² *Birmingham Mail*, 18 February and 6 October 1974.

think furiously not only about such things as passenger conveyor belts, advanced passenger trains, underground roads and so on, but about the whole concept of travel'.⁶³ By early 1974 the spiral of events, culminating in the oil crisis, meant that mobility and environment had begun to appear to academics, planners and the media as a zero-sum game; the more society had of one, the less it might have of the other. Policy-makers were confronted by a kaleidoscope of awkward choices, between economic growth and environmental damage, consumer choice and urban blight, freedom of movement and choking congestion.

III

With the ending of the oil crisis and the establishment of the Joint Working Party on Lead Pollution at Gravelly Hill in March 1974, the immediate controversy in Birmingham over the effects of mass automobility died down. The issues did not wholly go away but rather resurfaced sporadically in protests about new roads and delays to the Middle Ring caused by compensation claims. In April 1977 the *Birmingham Mail* featured an article on a section of dual carriageway underpass, built as part of the Hockley flyover, now lying abandoned with grass and trees sprouting through the tarmac. 'Times have changed', reflected the article, 'and there is no longer justification to complete it'; such roads seemed to be remnants of a previous era.⁶⁴ Within months of this elegy to an unloved past, however, the controversy over Birmingham's urban motorways reignited with unexpected force.

This time the controversy concerned the Inner Ring Road, the pioneering motorway which had so long been the symbol of the city's aspiration and status as a

⁶³ 'Jam tomorrow', *Birmingham Post*, 3 January 1974.

⁶⁴ *Birmingham Mail*, 7 April 1977.

'motor city'. In mid-May 1977 cracks were noticed on the Inner Ring at Masshouse Circus, causing the underpass to be temporarily closed for investigation. Worse was to come. On 29 May the *Sunday Times*, a paper with an unrivalled reputation for investigative journalism, published an article on the state of the Inner Ring Road. Based on a report by a consultant engineer, Bernard Clark, it painted a grim picture of decaying infrastructure.

Rainwater pours down supporting beams, rusting the reinforcement; chunks of concrete have crumbled away from the corners of pillars and beams holding up an underpass; and hundreds of cracks are evident in wells and staircases along much of the three and three-quarter mile road.

Without major investment, Clark predicted, Masshouse Circus and an earlier section of the road, Smallbrook Ringway, would collapse within a decade. The *Sunday Times* also alleged corruption in the construction of the road between the main contractors, Bryant Civil Engineering, and Sydney Piggott who supervised the project on behalf of Birmingham City Council.⁶⁵

Both the article and report were swiftly taken up by the Birmingham press and the County and City Councils together launched an enquiry, soon extended to all the city's major roads, flyovers, interchanges and multi-storey car parks. Meanwhile West Midlands Police and the Director of Public Prosecutions began to investigate the relationship between Bryant's and Piggott to establish whether a criminal case could be mounted.⁶⁶ Those implicated in the charges issued vigorous denials. Bryant's declared

⁶⁵ 'City's ringroad falling apart, says engineer', *Sunday Times*, 29 May 1977; Bernard I. Clark, 'General report on structural state of Birmingham Queensway' commissioned by the *Sunday Times*, 27 May 1977. The papers on which this section is based are to be found in TNA, AT 63/33 Local Transportation, Birmingham Inner Ring Road.

⁶⁶ *Birmingham Mail*, 31 May 1977; *Birmingham Post*, 2 June 1977.

itself gravely concerned, while simultaneously threatening to sue the *Sunday Times* for damages.⁶⁷ The local authorities were equally bullish in defence of the Inner Ring which was still seen by many as a flagship infrastructure project. David Bevan, chair of the County Council's Transport and Highways Committee, dismissed the public response to the newspaper article: 'There is absolutely no need for any kind of panic action at all', he declared in mid-June. 'This new hysteria is out of place'.⁶⁸ The Interim Report of the West Midlands County Council, with input from Birmingham's City Engineer, which appeared in mid-July was likewise sanguine, declaring the Inner Ring Road structurally 'sound' while acknowledging that it suffered from poor workmanship in places, including Masshouse Circus. The cost of maintenance of the road over the next five years was estimated at £400,000, which, while substantial, was hardly on the scale conjured up by Clark's original report. The views of the Labour Minister for Transport, Bill Rodgers, followed in the same vein, although the Department voiced criticism of Birmingham City Council's maintenance procedures for the Inner Ring.⁶⁹

However the local media, and the Birmingham press in particular, would not let the affair die down; it had acquired its own momentum. The *Sunday Times* exposé precipitated a slew of other critical articles on the Inner Ring in the local newspapers in the summer of 1977. A report from the City Council on the state of the subways was given wide publicity in June. On 21 June the *Birmingham Post* relayed the Council's view of the subway by the Albany – formerly the city's landmark hotel – as 'seedy' and reflecting 'a deplorable image of the city'. It was followed by a call on 24 June from the chair of the Council's Leisure Services Committee to brick up all subways in the city

⁶⁷ *Guardian*, 4 June 1977.

⁶⁸ *Birmingham Mail*, 1 June and 17 June 1977; *Times*, 31 May 1977.

⁶⁹ Report of Department of the Environment, 11 November 1977, TNA, AT 63/33, Local Transportation, Birmingham Inner Ring Road.

centre to reduce the incidence of muggings.⁷⁰ Finally, on 28 June the *Post* published a major article entitled 'The depths of despair' on the dire state of the city's subways, especially those linking the Inner Ring to the central area.

The redevelopment of Birmingham has been a malodorous affair. The latest emission [in the form of the subways] adds another unsavoury waft to the gaseous cloud and the ratepayers are experiencing some difficulty in seeing through the murk.⁷¹

As this implied, the *Post* saw the official investigations into the state of the Inner Ring as to all intents and purposes a cover-up. It had become, in the paper's phrase a 'Birmingham Watergate', a charge given additional substance by the fact that Rodgers and the Labour government rejected calls for an independent public enquiry.⁷²

The following month, on 24 July 1977, the *Sunday Times* published further allegations that seemed to confirm the *Post's* suspicions. They claimed that the contract for construction work on Masshouse Circus in October 1963 had gone to Bryant Civil Engineering in preference to a lower tender from Peter Lind favoured by Manzoni's successor as City Engineer, Neville Borg. Bryant's had been selected despite having little experience of major roads engineering, the article implied, because of connections to the City Council, in particular Labour councillors such as Albert Shaw whose plumbing firm had previously been employed as sub-contractors by Bryant's. A further Council official, the engineering supervisor Sydney Piggott, had also been involved in Bryant's

⁷⁰ *Birmingham Post*, 21 and 24 June 1977.

⁷¹ *Birmingham Post*, 28 June 1977.

⁷² A confidential minute indicates that Rodgers had been advised by Councillor Bevan on West Midlands County Council that 'although there was no need to hold an inquiry, in view of the public political interest in the matter he was inclined to support one'. Rodgers construed this to suggest the metropolitan authority was not in favour of a public inquiry. Minute from SV Whitcomb to Hughes, 20 March 1978, TNA, AT63/33 Local Transportation.

winning the contract. Piggott, it was revealed in the May *Sunday Times* article, had resigned from Birmingham City Council in July 1974 for 'irregularities in his relationship with contractors which amounted to misconduct'. In the July article it emerged that he had accepted from Bryant's an extension to his home at Kings Heath, a box at Ascot races, use of a holiday home in Bournemouth and a trip abroad.⁷³ While Piggott was never charged, the three directors of Bryant's were convicted of corruption in April 1978 for a total of twelve years, having secured contracts worth £112 million since 1963 from the Corporation with the assistance of officials including Piggott, Shaw and the City Architect, Alan Maudsley, who had been sent to prison after an earlier enquiry in 1974. The extent of corruption stretching back to the 1960s, in which 175 Birmingham councillors or officials were implicated, encouraged the judge at the Bryant's trial to label the city a 'municipal Gomorrah'.⁷⁴

This was not quite an end to the affair. In March 1978 inspectors found high-alumina cement in a number of concrete beams at St Chads Circus on the Inner Ring. Local authorities had been required to investigate the use of high-alumina cement by the Department of the Environment in 1974, blamed for the collapse of a roof at a school in East London. The cement was found to become unstable when exposed to salt and water, accelerating corrosion in the structure. The international engineering firm Ove Arup reportedly warned Birmingham's City Engineer that high-alumina cement was located in subway beams on the Ring Road but no further investigation was

⁷³ *Sunday Times*, 24 July 1977; see also 'Borg too far', *Private Eye* [n.d.], TNA, AT 63/33 Local Transportation.

⁷⁴ *Times*, 5 April 1978; 'The moral flaws behind Birmingham's modern face', *Times*, 18 May 1978; *Guardian*, 26 September 1978. This last article indicates that the directors had their sentences cut. See also Alan Doig, *Corruption and Misconduct in Contemporary British Politics* (Harmondsworth, 1984), pp. 182-5.

undertaken.⁷⁵ While questions were being raised about why it had taken three and a half years to follow up the problem, a survey swiftly carried out by County Council engineers identified high-alumina cement in nine places on the Inner Ring. In eight of these the construction work was found to have been carried out by Bryant Civil Engineering. For Stuart Mustow, the County Surveyor, this was the final straw. In July 1978 he proposed that Birmingham's local authority should no longer have control over the maintenance of the Inner Ring Road and that from October that year responsibility should pass from the City of Birmingham to the Roads Division of the West Midlands County Council. The proposal was endorsed by the Department of the Environment and the City Council was forced to accede.⁷⁶ Ignominiously, Birmingham's civic authority was no longer deemed fit to oversee the road that had been the centrepiece of its entire post-war renewal. From the 1990s parts of the Inner Ring began to be dismantled the remainder absorbed into the A38 – a road like any other.

IV

Between the ceremonial inauguration of the Inner Ring Road in 1972 and the removal from the City Council of powers over the same road in 1978, the long-held intention to remake Birmingham as Britain's premier motor city collapsed. In its heyday in the 1950s and 1960s the motor city ideal attracted cross-party support from MPs, city councillors, the Chamber of Commerce and trades council. The sequence of events that ran from the scandal of lead pollution to the evidence of municipal corruption fractured

⁷⁵ *Times*, 20 and 25 March 1978; *Birmingham Post*, 20 May 1978.

⁷⁶ Letter from West Midlands County Council to Birmingham District Council, 12 July 1978 and internal memos, DoE, 26 July 1978, TNA, AT 63/33 Local Transportation. Between 1974 and 1986 Birmingham was part of the West Midlands Metropolitan County; the city authority kept the title 'City Council', though technically Birmingham was now one of seven metropolitan districts.

this consensus with Birmingham Labour MPs like Jeff Rooker and Julius Silverman leading the attack in parliament.

As an exemplar of the motor city ideal, events in Birmingham inevitably played out on a wider stage and were interwoven with contemporaneous national and international developments whose ramifications were serious and unforeseen. The oil crisis from autumn 1973 to spring 1974 made clear how Britain's 'motor age' since the mid-1950s had been dependent on regular, cheap oil supplies from the Middle East. The oil crisis saw petrol prices quadruple; petrol shortages develop; a speed limit of 50 mph imposed on all roads; and a Conservative government considering petrol rationing for the first time since Suez in 1956. An AA survey calculated that the costs of motoring in repairs and fuel doubled in the two years following the crisis.⁷⁷ All this brought home the fact that motoring would no longer be either cheap or reliable, despite the promise of North Sea oil.⁷⁸

More widely still, the years between 1972 and 1974 were a time of protracted national crisis in Britain – of two miners' strikes, the three-day week and power shortages – which had severe repercussions for industrial and economic activity.⁷⁹ In Birmingham they resulted in all construction work, including roads, being halted for months at a time during 1973/4.⁸⁰ Industry in the city went into meltdown in the years

⁷⁷ Automobile Association, *Living With the Car* (Basingstoke, 1977).

⁷⁸ Timothy Mitchell, 'The resources of economics: making the 1973 oil crisis', *Journal of Cultural Economy*, 3:2 (2010), pp. 189-204.

⁷⁹ Andy Beckett, *When the Lights Went Out* (London, 2009), pp. 128-30. For the most part the 'crisis' has been recounted in national and governmental terms – Phillip Whitehead, *The Writing on the Wall: Britain in the Seventies* (London, 1985); Dominic Sandbrook, *State of Emergency: Britain, 1970-1974* (London, 2010).

⁸⁰ David Adams and Peter Larkham, 'Bold planning, mixed experiences: the diverse fortunes of post-war Birmingham' in Mark Clapson and Peter Larkham (eds) *The Blitz and Its Legacy: Wartime Destruction and Post-War Reconstruction* (Farnham, 2013), p. 137.

that followed, with 200,000 jobs lost and the workforce at the Longbridge plant halved. The material effects of de-industrialization were registered both in particular areas of Birmingham and in the region as a whole. In Saltley, beside the Inner Ring, almost half all employment was in vehicle manufacturing; here over 10,000 jobs were lost in the course of the 1970s, while sixty acres of land used for manufacturing industry were left derelict. 'In a traumatic ten years or so', commented Gordon Cherry, 'the economic landscape of the industrial heartland of the West Midlands was fundamentally altered.'⁸¹ The motorcycle industry collapsed and the slowdown in automobile production brought into question its position at the centre of the urban economy, weakening in the process a fundamental prop in the ideal of the motor city. By 1977 the extent of unemployment, poverty and dereliction in parts of the city meant that Birmingham was one of four 'inner areas', along with Manchester/Salford, London docklands and Lambeth, to qualify for a £41 million grant under the Labour government's urban programme.⁸² The transition from the boom city of the 1960s to the 'inner city' of the seventies in Birmingham was swift and savage.⁸³

Birmingham, of course, was not unique. In much of Britain ambitious roads programmes were pared back or shelved in the course of the 1970s, urban motorways above all. Organized opposition in London proved strong enough to put an end to the Motorway Box in 1973, the inner motorway of which the Westway was an early foretaste, as well as the larger Ringways scheme which had been the centrepiece of the Greater London Plan. Here housing not pollution was the major issue, whether in the

⁸¹ Birmingham Community Development Project, *Driven on Wheels*, final report (Oxford, 1977), p. 5; Gordon Cherry, *Birmingham* (Chichester, 1994), pp. 161-2.

⁸² *Hansard*, HC Debs, 'Partnership Agreements', 23 November 1977, vol. 939, cc 1495.

⁸³ The term 'inner city' was borrowed from America and used extensively by Peter Walker, Conservative Minister for the Environment between 1970 and 1974. Walker commissioned a number of 'Inner Areas' studies including Birmingham's Small Heath. For a detailed discussion see Saumarez Smith, 'The inner cities'; Mark Clapson, *Anglo-American Crossroads: Urban Planning and Research in Britain, 1940-2010* (London, 2013), pp. 124-137.

form of the deleterious impact on living conditions in houses bordering urban motorways or in the threat to property prices in the ring of gentrifying areas through which the Motorway Box was scheduled to pass.⁸⁴ Elaborate road schemes for the cities of York and Bath were also withdrawn following mass protests against damage to historic buildings and townscape.⁸⁵ But it was in industrial centres where the motor city ideal had been taken up with greatest alacrity that events in Birmingham resonated most forcefully. In 1974 the Newcastle-based protest group Save Our City from Environmental Mess (SOCEM) cited noise and lead pollution at Spaghetti Junction as well as the dire consequences for the neighbouring communities in its campaign against the construction of the Central Motorway East in the early 1970s. The campaign was unsuccessful in the short term but the group's efforts were sufficient to halt much of the rest of the roads programme on Tyneside thereafter. By 1975 the 'motorway city' label applied to Leeds was being described locally as a 'menace' and the City Council was reporting levels of lead nine times the recommended figure on sections of the inner ring. In Liverpool, which lagged behind in roads as much else, the grandiose Inner Motorway scheme proposed by Graeme Shankland in 1962 was never built; it was replaced by a more modest ring road scheme which, nevertheless, remained largely in abeyance into the 1980s. Notoriously, too, Glasgow's Inner Ring Road was only half-finished, being abandoned in 1972, the section in the Tradeston area of the city concluding dramatically in mid-air, known locally as the 'ski-jump'.⁸⁶

⁸⁴ This is gist of John Davis' argument on Ringways, Davis, "Simple solutions to complex problems".

⁸⁵ Peter Borsay, *The Image of Georgian Bath* (Oxford, 2000), ch. 6; N. Lichfield and A. Proudlove, *Conservation and Traffic: A Case-Study of York* (York, 1976).

⁸⁶ Mary Cooper, *Motorways and Transport Planning in Newcastle upon Tyne* (Manchester, 1974); 'Menace of motorway cities', *Yorkshire Post*, 22 July 1975; David Ellis, 'Pavement politics: community action in Leeds' (University of York PhD, 2016); Otto Saumarez Smith, 'Graeme Shankland: a sixties architect-planner and the political culture of the British left', *Architectural History*, 57 (2014), pp. 405-11. See also the multi-volume series *The Motorway Achievement* (Chichester, 2004-9), various editors.

In every British city, so it seemed, the roads agenda was under pressure during the 1970s from protests and costs. But as Britain's principal motor city, the case of Birmingham remains especially instructive. In no other British city did the car figure so prominently in urban renewal through the post-war decades; in Birmingham from at least the 1940s, the building of the Inner Ring Road was understood to be the linchpin of both slum clearance and city centre reconstruction. The failure of this vision between 1972 and 1978 resulted from a complex causation, the effect of interacting political, environmental and economic factors. It brought onto the political stage diverse groups, from academics to angry mothers, and diverse materials, such as exhaust fumes and cement. The end of the motor city coincided, too, with a widespread shift of opinion, in Birmingham as elsewhere, in favour of pedestrianism and investment in public transport rather than roads; for the first time the Corporation put the revival of railways services in Birmingham, not the private motor car, at the centre of its 1973 *Structure Plan*.⁸⁷

The critical response to mass automobility was thus an integral part of the retreat from urban modernism, of the engineered city as the physical expression of planners' ambition to satisfy what were perceived to be the material desires of the majority of the population. Neither the successive oil crises nor the opposition to motor cities, of course, halted the progress of automobility itself or the growth of private car ownership.⁸⁸ What did collapse in the later 1970s, however, in Birmingham as elsewhere, was belief in the cardinal tenet of urban modernism that cities should be

⁸⁷ City of Birmingham, *Structure Plan: Written Statement* (Birmingham, 1973), p. 35.

⁸⁸ While the growth in numbers of private cars in Britain slowed significantly between 1973 and 1978, the overall trend was steadily upward, from 19 million cars in 1970 to 31 million in 2007. For a profile see David Leibling, *Car Ownership in Great Britain* (London, 2008), pp. 1-7.

reorganized around the priorities of the car and the 'citizen-driver'. In Britain at least the dream of the motor city was over.⁸⁹

⁸⁹ As is implied, this was far from the case everywhere. In West Germany and Japan loss of faith in the 'automobile-friendly city' did not occur until a decade later; in China and much of Asia the motor city is only now coming into its own. For insights see Barbara Schmucki, 'Cities as traffic machines: urban transport planning in West and East Germany' in Colin Divall and Winston Bond, eds., *Suburbanizing the Masses: Public Transport and Urban Development in Historical Perspective* (Aldershot, 2003), pp. 149-70; Susan Townsend, 'The "miracle" of car ownership in Japan's "era of high growth", 1955-1973', *Business History*, 55:3 (2013), pp. 498-523.