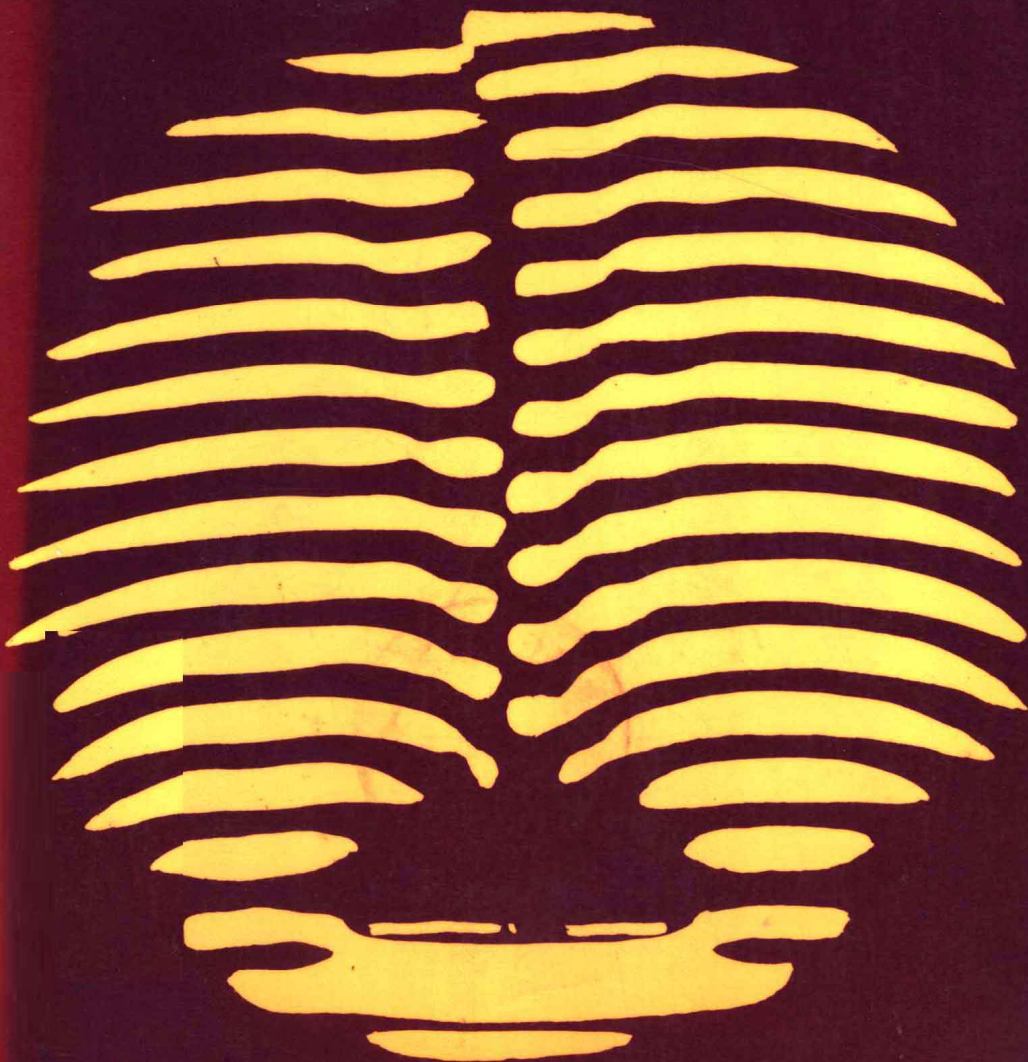*Theory & Practice in Geography*

THE GEOGRAPHY OF PLANNING DECISIONS

John M. Hall

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Theory and Practice in Geography

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Contents

1 Introduction

Land use planning is about people and politics in managed places. The continually changing distribution, numbers, and activity patterns of people within localities, regions, and the nation generate demands for new investment, or cause the abandonment of earlier investment, in what is now often called the 'built environment' and the interstitial countryside. Controversy about the desirable visible form and particular location of the investment is expressed in political debate—sometimes through local and central government institutions, sometimes through spontaneous local protest on non-party-political lines. And the outcome of public and private investment decisions—estimated recently in the order of £6,000m. a year in Britain (Eversley and Moody, 1976)—is that some places change rapidly in their perceived desirability and convenience. The visible is reinforced by the invisible: withholding investment, even foregoing necessary repairs, can convince other potential investors that an area is going downhill, so accelerating its decay. The rather metaphysical rhetoric is used intentionally, for planning in practice has much to do with beliefs and the art of persuasion.

This volume has been arranged to show how statutory planning is contributing to the changing geography of town and country in Britain. Planning is what planners do, of course, and its practitioners would appear especially prone to seduction by the swings of fashion in both philosophy and technique. A sharp philosophical shift became evident with the return of a Conservative government after the general election of 1979. Several MPs and ministers regard many aspects of physical land use planning as an irritating hindrance on individual freedom and on the operation of the market economy, and the Local Government, Planning and Land Act 1980 was framed, in part, to dismantle some of the accumulated intricacies of planning procedure.

Readers wishing more closely to follow legislation filtering through into working practices can be recommended to two British journals: *The Planner*, published six times a year by the Royal Town Planning Institute, 26 Portland Place, London W1N 4BN; and *Town and Country Planning*, the journal of the independent Town and Country Planning Association, 15 Carlton House Terrace, London SW1Y 5AS, published eleven times a year. The association also publishes the weekly *Planning Bulletin*—a summary of press items and a digest of the latest reports and plans. Other journals are cited among the detailed references beginning on page 58; most of the journals and books should be available in college and larger public libraries. Commission and committee reports appear under the chairman's name.

2   The planners and the planning system

The 10,000 or so people who work in a British local 'planning office' and bear or seek the letters MRTPI—Member of the Royal Town Planning Institute—after their name are only a small, albeit influential, group among those who are in fact 'the planners'. Anyone who seeks to arrange events in order to secure desired change in the future is a 'planner'. Planning is simply the application of forethought; the consideration of the most appropriate means of achieving desired ends in the future (for definitions see Faludi, 1973). In land use planning what was once the absolute prerogative of the rich and powerful—the land-owning church, gentry, and nobility—is now hedged about by customs and public laws, and indeed much land has now been acquired for public housing and institutional uses. As an increasingly heterogeneous professional group, the MRTPIs see one of their roles as the safeguarding of the mysteries of the craft, in part through approving training courses for planners.

Table 1 identifies the wider group of 'planners' and lists some of the major curbs placed on their actions in the evolution of planned landscapes—a phrase which I like to contract to 'plannedscapes'. As will become clear in this chapter and the next, anyone in England and Wales (for Scotland maintains a distinctive legal tradition) who wants to build, engineer, or mine 'in, on, over or under the land', or to alter materially the use of buildings, has to apply for 'planning permission' from the local 'planning authority'. The planning committee of the local council comprises elected politicians (councillors) and they are advised by a selected staff from the planning department (council officers) who, having regard to local financial and political circumstance, interpret the broad intention of national legislation and practice. One planning department, in the Metropolitan Borough of Trafford, Greater Manchester, states its purpose in the borough handbook as being 'to help make the Borough a better place in which to live. Its chief concern is with the environment; to ensure that it is pleasant, safe, healthy and convenient; that you can travel comfortably and quickly and that business can move its goods and materials without damaging the way we want to live.'

The phrase 'pleasant, safe, healthy and convenient' encapsulates the several strands of effort which have been absorbed into the syllabus of land use planning.

Amenity or *pleasantness* reminds us of the 'city beautiful' school of what might now be termed 'architect-planners' who reviled the in-dustrial city and who sought verdure in the stead of ugliness. Practical

TABLE 1 *Considerations for the plannedscape makers*

The potential investors . . .

whether households, private firms, or public agencies and institutions, whose family circumstances, vulnerability in business cycles, or party political control can change at short notice . . .

. . . want to 'develop'

by constructing new buildings, adaptations and extensions, engineering operations, or changes of use of existing buildings, using surveying and design skills and the resources of the construction industry . . .

. . . at particular places

bearing in mind the costs imposed by the physical *site* conditions and advantages of the broader geographical *situation* which helps to determine the desirability and hence the economic value of the site . . .

. . . at a particular time

bearing in mind that their particular desires cannot be separated from the prevailing climate of *investment* in private and public money markets, the seeming arbitrariness of local and central government's *political predilections,* and even the anticipated changes of personal and corporate *taxation* . . .

. . . but have to satisfy the law

of *restrictive covenants* relating to the particular property, of locally enforced *building regulations,* and locally enforced but nationally applied *planning permission,* granted by a planning committee advised by planning officials who consider the local statutory development plan . . .

. . . and may even have to recognize

that there may be users (and even beholders) of their land and buildings—who have strong *views* about the form of proposed changes, for places and owners' actions are endowed with *emotional attributes*; so development proposals may be contested by discontented citizens and groups.

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designs were often commissioned by philanthropic patrons such as Sir Titus Salt at Saltaire, West Yorkshire, Cadburys at Bournville, West Midlands, and Rowntrees at New Earswick, North Yorkshire (Bell and Bell, 1969). Pleasantness and tidiness were also coveted by the countryside movement, notably in the early campaigns of the Council for the Preservation (now 'Protection') of Rural England (MacEwan, 1976).

Safety calls to mind the early traffic engineers who in this century sought *the segregation of vehicles and pedestrians*—especially children on the way to and from school (examples are given in Tetlow and Goss, 1968).

The *public health* origins of controls over city form are most important: long before the term 'planners' was widespread (the Town Planning

Institute was formed in 1914) enlightened city administrators and out-spoken reformers pressed for better sanitation, wholesome water, lower density housing layouts, adequate daylight and ventilation.

It was long thought that *convenience* was largely a matter of disposi-tion—the right thing in the right place. Planners often realize now that the narrow bands of time which people use daily in getting to work, school, shops, and entertainment, and home again, often defy their best attempts to promote convenient access. And convenience is not shared equally: for many individuals their lack of mobility may make a non-sense of general claims about improved accessibility.

The growth of planning

Although in British towns the individual property owner has long been obliged to conform to local regulations, planning as a widespread activity dates only from the last half-century or so. Indeed effective national policy-making and administrative co-ordination dates only from the Second World War. Cherry (1974) gives a detailed analysis of the evolution of planning in its institutionalized form, and his peace-time history volume (1975) on the evolution of countryside policy and legislation is mirrored for land use planning by Cullingworth (1975, 1979); both authors used Cabinet Office material in compiling their official histories. This chapter now outlines the context and intention of significant legislative changes—mainly additions and adjustments rather than simplifications—during the last fifty years. If such a pre-occupation with historical events appears unnecessary, it should be recalled that forward-looking planners sometimes recall earlier planning *solutions* without always reassessing the *assumptions* specific to the earlier period. As Broadbent (1977) shows, policies devised in one economic phase may be implemented in contrasting conditions, and this is one contributory factor to the 'great planning disasters' chronicled by P. Hall (1980) in his book of that title.

The 1930s: still early days

Between the First and Second World Wars towns broke out of their most recent shell; the Victorian foot, omnibus, and railway suburbs, whether of villa or terrace, were to be left behind by the outward march of bicycle-, train-, and (in London) underground-commuters' semi-detached suburbs. Some, to be sure, would travel by car, but notice how few new houses were provided with garages. Planning was still haphazard, and supervised by the Ministry of Health. Not all of the 1,400 or more local authorities had yet encouraged developers to con-form to simple land use zoning schemes. Councils frantically tried to build sufficient new schools in the burgeoning suburbs (especially around London; the other of the two nations, to the north, was experi-encing chronic unemployment in traditional industries). Measures such

as the Ribbon Development Act 1935 and the Green Belt Act 1938, both intended to prevent uncontrolled urban sprawl, especially around London, were applied too late.

The 1940s: the wartime view of peacetime

The military mind appreciates order and control. Operations, tactics, and strategy are key words in the language of military planning. War exposes civilian populations to regulations and restrictions, and shows them that economic and social 'targets' can be met by adherence to plans. Add this pervasive ethos to the natural desire to reconstruct blitzed cities to the best standards, and to build homes fit for heroes in a socially secure yet more egalitarian society, and the optimistic tone of wartime reports and plans can be appreciated.

To begin the decade, the delayed publication of the report (1940) of the Royal Commission on the Distribution of the Industrial Population, appointed in 1937 with Sir Anderson Mantague Barlow as chairman emphasized the grave social and strategical disadvantages of concentrating large numbers of people into a limited number of large conurbations. The commissioners advocated, in varying degrees, controls on the location of industry. After Barlow, the report of Lord Justice Scott's Committee on Land Utilization in Rural Areas (1942) urged the preservation of agricultural production in the countryside of the blockaded nation by a system of planning controls. The final report of the Expert Committee on Compensation and Betterment chaired by Lord Justice Uthwatt (1942) connected land use, planning controls, and land values, and urged the nationalization of undeveloped land.

Reports were followed by White Papers and then by legislation. Local authorities were empowered to reconstruct blitzed areas by the Town and Country Planning Act 1944. The Distribution of Industry Act 1945 empowered the Board of Trade to control the location of expanding factories through the Industrial Development Certificate (IDC). Following reports from Lord Reith's committee (1946), the New Towns Act of that year created new town development corporations which could operate at speed. Reports by John Dower (1945) and Sir Arthur Hobhouse's committee (1947) led to the National Parks and Access to the Countryside Act 1949 and creation of the National Parks Commission. The acquisition and management of national nature reserves was entrusted to the new Nature Conservancy.

But for our present purposes the most important provisions were those contained in the Town and Country Planning Act 1947, which established the mechanism for regulating the geography of change to all land and buildings. The system created by this Act is described in the next chapter; it is sufficient here to note that developers were now required to obtain planning permission for change from the local planning authority (normally a county or county borough council) which usually would be decided by reference to a statutory develop-

ment plan. Development *land* had not been nationalized, as Uthwatt had urged; rather development *rights* over land had been nationalized. Safeguards against the arbitrary imposition of restrictions were afforded by the right of the public to object to the plan itself, and to appeal against the refusal of permission.

The 1950s: return of market forces

During the 1950s the planning-minded coalition and Labour governments of the previous decade were replaced by a Conservative government. The wartime shortages of food that led to rationing, and of construction materials that led to building licences, were soon to pass. Whereas the creators of the 1947 planning system had envisaged most development originating from public agencies, it was the private sector that was to prove dominant. Apart from the Town Expansion Act 1952, which allowed population overspill agreements to be made between large exporting cities and smaller receiving settlements, the decade brought few planning initiatives—and many would say regression. First, in 1953 the 1947 Act's 100 per cent development charge on land value increases arising through planning permission was abolished, and then after 1959 public authorities had to pay the *market* or *development value*, not the *existing use value*, of land acquired by compulsory purchase. (The difference between the two values may be considerable; a glance at a country newspaper might show agricultural land changing hands at £5,000 a hectare while the same land with outline planning permission for housing might be sold for £200,000 a hectare.) Goodall (1972) and Hallett (1979) explain the theory of land values, Ratcliffe (1976) recent policies, Massey and Catalano (1978) the structure of land ownership.

The 1960s: newcomers contemplating equity and growth

After the quiescent decade associated with Conservative government, there was another legislative effusion after a Labour government was returned in 1964. Several members of the new Cabinet sensed that they were makers of history, and turned their diaries, papers, and reminiscences into memoirs. George-Brown (1971) led the newly created and short-lived Department of Economic Affairs (1964-9), which produced both an unfortunately timed and misleadingly entitled *National Plan* in 1965 with forecasts by sectors, and also a more permanent regional structure for new economic councils and boards, modelled on prototypes in France and the USA. Richard Crossman (1975) gave his own view of the departmental and Cabinet battles while Minister of Housing and Local Government, 1964-6; his permanent secretary has also written about her department (Sharp, 1969).

The leitmotif of the decade was the search for managerial and technical methods of accommodating (and, in the search for equity, redistributing) the anticipated growth of population, and the related

horrors of vehicle numbers, student numbers, office jobs in central London—at least until mid-decade—and demands on public water supplies. (See Inter-departmental Study Group, 1971; Buchanan, 1963; Robbins, 1963; Ministry of Housing and Local Government, 1964; and annual reports of the former Water Resources Board, respectively.) Growth brought increased pressures on the 'heritage', be it the coastline for which protection was proposed by the Countryside Commission (1968a and b, 1969), or attractive townscapes. 'Conservation areas' were given to the technical vocabulary by the Civil Amenities Act 1967 so that groups of buildings and their settings—not just isolated 'listed' buildings of architectural or historic interest—could be conserved. Old houses were offered reprieve from demolition by becoming rehabilitated new homes under the terms of the Housing Act 1969.

The development plan system seemed incapable of responding to such growth, and the Planning Advisory Group's report (1965) urged simplification and the identification of key issues. Machinery for the structure-plan/local-plan system was introduced in selected counties after the Town and Country Planning Act 1968. Bold desk studies showed how the anticipated growth pressures—for an extra twenty million or so Britons by the turn of the century—could be absorbed in, for example, South Hampshire, Deeside, Humberside, Severnside, the Scottish Central Borders, and Tayside. But while the prosperous southern estuaries flourished, economic planning councils in the North, North-West, and Yorkshire and Humberside, understandably felt almost overwhelmed by problems of obsolescence in housing, industry, public services, and transport networks. It was no comfort to be told that migration patterns were simply showing a reversion of migrants' interest to those parts of the country that were well favoured before the industrial revolution made kings of coal and cotton. Accordingly almost the whole of Britain outside the allegedly, but by no means uniformly, prosperous Midlands, South, and East was declared a 'development area' under the terms of the Industrial Development Act 1966, and economically sluggish areas, including much of Lancashire, south Yorkshire, and Humberside, were designated 'intermediate areas' after the Hunt Committee's recommendations (1969).

The 1970s: shocks, stagnation, and introspection

Reported at the time as a catastrophe, heralding a new era of political breakdown and economic diaster, the Yom Kippur war and OPEC oil price rises of 1973 certainly strained the world economic order. The shock waves of Bible-land hostilities were soon felt in England and Wales, which in 1974 were together undergoing a thorough reorganization of local government following the Local Government Act 1972. The pattern adopted almost totally disregarded the advice offered by the Redcliffe-Maud Royal Commission for England (1969). (New authorities were created in Northern Ireland in 1973 and in Scotland

in 1975.) Ambitious, newly amalgamated councils had appointed well-paid officers in whose sparkling offices the new 'total approach' decision-makers had to contemplate at best stagnation and at worst unpopular public spending cuts (see the managerial proposals of the three 'making towns better' studies, Department of the Environment (DoE), 1973; for a view of the outcomes of corporate planning and community development see the critique by Cockburn, 1977). The structure planning system was now required of all counties, not just those selected experimentally after the 1968 Act. Alas, this proved no time for great expectations to be fulfilled.

Planners, accustomed to controlling the excesses of growth, now had to contemplate the realities of zero population growth and the casualties of recession—the unemployed, the vacated factory, or undeveloped site. Many shared a realization that much interventionist land use planning had not redistributed societal 'goods' to those in greatest need (Harvey, 1973).

The 'inner city' was rediscovered. Peter Shore, the fourth Secretary of State for the Environment (Peter Walker had energetically combined the ministries of Housing and Local Government, Transport, and Public Building and Works in 1970, see Draper, 1977), deflected the leviathan's research effort (additional inner area studies) and programme funding (rate support grant, urban aid, partnership schemes, grants under the Inner Urban Areas Act 1978) further in this direction. His department's urban affairs directorate also absorbed the earlier community development interests of the Home Office in a country which was belatedly recognizing the multi-racial composition of its major cities.

The organization of planning

In this summary of significant planning events, various agencies of government and some of the Acts of Parliament which define and legitimize their activities have been listed. Fig. 1 illustrates the organization of planning in England, omitting the eight counties and thirty-seven lower-tier districts in Wales, together with the nine regional councils, three all-purpose island authorities, and forty-nine district councils in Scotland, since the Secretary of State for Wales and the Secretary of State for Scotland function as the planning minister within their territories.

In England, then, the supervision and further development of land use planning rests with the DoE from which the Department of Transport (DTp) was partially released in 1976. Semi-permanent officials—for many civil servants are peripatetic—and even more briefly-posted politicians jointly devise legislation after the politicians have published their simplified election manifestos, and their generally more cautious White Papers when in office. The working of Acts is explained by circulars to local authorities, and design guides and policy notes can influence local practice even in the absence of new legislation. The departments of the

NATIONAL POLICIES emanate from

DEPARTMENT OF THE ENVIRONMENT
Politicians and administrators react to experts and pressure groups; parliament scrutinizes policy and spending; produces...

DEPARTMENT OF TRANSPORT
functions similarly, grant aids major highways and approves counties transport policies and programmes

Related departments including Agriculture, Education, Employment, Energy, Home Office, Industry, Social Services, Trade, Treasury, Countryside Commission etc.

REGIONAL POLICIES

8 REGIONAL ECONOMIC PLANNING BOARDS comprising representatives of central government departments in the regions

8 REGIONAL DIRECTORS OF THE DEPARTMENTS OF THE ENVIRON-MENT AND TRANSPORT co-ordinate research and spending

8 REGIONAL ECONOMIC PLANNING COUNCILS, (disbanded 1979) nominated, without executive powers, produced regional strategies

LEGISLATION AND REGULATIONS
Acts of parliament and statutory instruments

ADVICE through circulars, design guides and policy notes

GRANTS especially for approved housebuilding schemes in the public sector

RESEARCH AND INITIATIVES
e.g. inner area studies and partnerships, policy reviews, experiments

Continuous interplay by meetings, visits and writings in this country and even abroad (e.g. EEC Council of Europe, UN agencies)

LOCAL POLICIES

39 counties, 6 metropolitan counties, and Greater London prepare STRUCTURE PLANS which are examined in public

296 districts, 36 metropolitan districts and 32 London boroughs plus the City of London prepare LOCAL PLANS which must broadly accord with the approved structure plan and may cover the whole DISTRICT an ACTION AREA or relate to a SPECIAL SUBJECT

DoE professional planners advise on and approve structure plans

Conflicts arising over DEVELOPMENT CONTROL — refusals of planning permission or the conditions imposed by the local planning committee, and special issues 'called in' by the Secretary of State — give rise to INQUIRIES

Planning inspectorate adjudicates over appeals, planning and highway inquiries
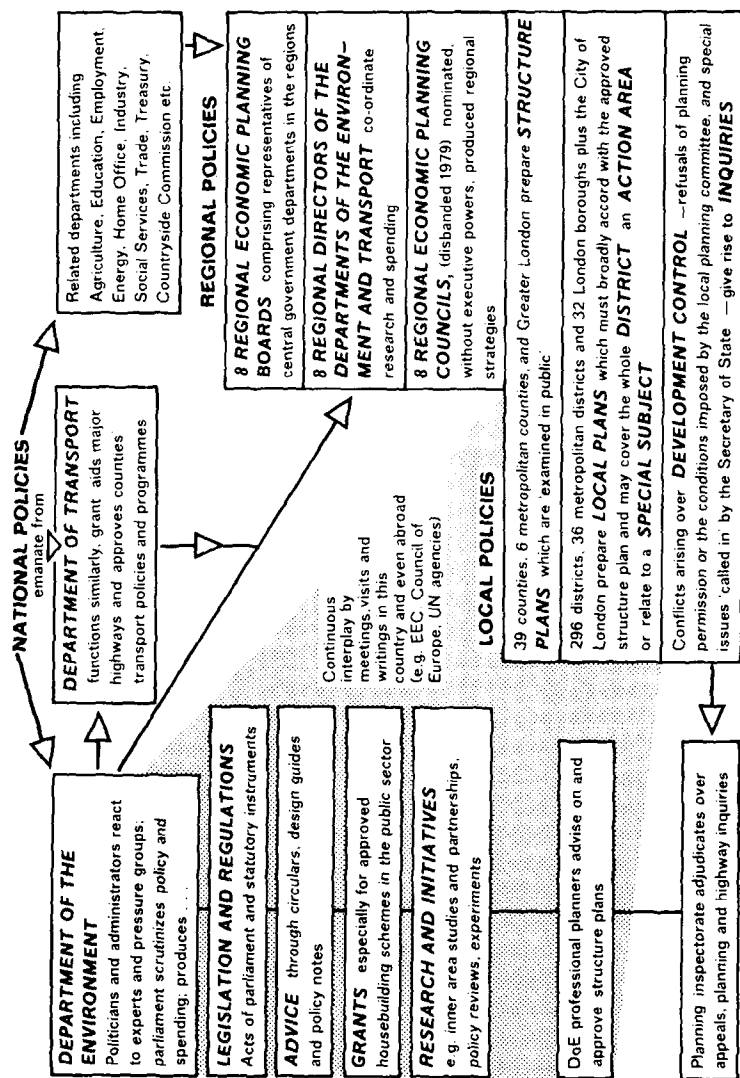
Fig. 1 The organization of planning in England.

Environment and of Transport conduct research, some internally, some through related agencies such as the Building Research Station and the Transport and Road Research Laboratory, and some by contracting with outside consultants, research institutes, universities, and polytechnics. Where departmental policies impinge on those of another department of state, accommodations may be reached by permanent secretaries acting for the minister, or by Cabinet committees. The department's day-to-day activities may be scrutinized by individual MPs asking questions; wider investigations of policy impacts and spending are made by select committees of MPs.

The two departments now share regional offices to co-ordinate infrastructure spending in the eight economic planning regions in England. Although there is no nationally agreed physical plan or diagram of the locations of future major investment, each of the regions produces a strategy document which does suggest the types and location of investment priorities. Although such strategies · are more indicative than mandatory, they do influence the structure-plan makers in the English counties. The form, content, and means of approving plans is described more fully in the next chapter.

Further reading

Broadbent, T. A. (1977) *Planning and profit in the urban economy* (Methuen).

Central Office of Information (1979) *Environmental planning in Britain* (COI Reference Pamphlet 9, HMSO).

Cherry, G. (1974) *The evolution of British town planning* (Leonard Hill).

Cullingworth, J. B. (1976) *Town and country planning in Britain* (George Allen & Unwin).

Hall, P. (1975) *Urban and regional planning* (David & Charles; new edn. Penguin, 1980).

3 Plans and the geography of change

The post-1947 land use planning system in Britain, although largely forged during wartime when reconstruction was the dominant theme and when large population increases were not anticipated, has enjoyed almost three decades of addressing itself to accommodating growth and raised expectations. Physical growth in the numbers of people, houses and cars, and more space in the dwelling, the place of work, and for garaging and parking; growth of expectations in terms of disposable income and disposable leisure time. This chapter begins with a summary of the significant pressures for growth and the related zoning of parts of the country in the planners' attempt to direct or resist change. House (1977) describes the geography of change.

Pressures for growth

The planning system has partly constrained, yet partly acted in response to, the sum of individual people's movements in search of a change in housing or employment. In most planning studies the opening chapter plunders the Census of Population to examine locally those fundamental determinants of population change: births, deaths, and migration.

Natural change

The difference between births and deaths, 'natural change', was until 1977 positive in England and Wales as a whole. Indeed it has already started to rise again from this brief negative sojourn in the late 1970s (see Fig. 2). But even if total population numbers in many parts of the country show little change, there is a high continuing pressure on housing because of the increasing number of 'households'—people who share catering or a housekeeping budget. The numbers are difficult to find because statisticians variously report totals for England and Wales, or Great Britain, or the UK. But in Great Britain the number of one-person households rose from 1,563,000 in 1951 (10.7 per cent of all households) to 3,329,000 in 1971 (18.1 per cent of the much larger total).

The phenomenon of continuing housing pressure associated with the underoccupation of dwellings, often by the single elderly, and with overcrowding, especially in larger families with one earner, is common in many parts of Europe (Eversley, 1978). And most slum clearance schemes, replacing high density Victorian tenements and terraces with lower density public housing in which smaller families also occupy more rooms, have rarely led to a gain of housing units in inner cities. But there is a surprise. Although planning as conceived in the 1940s urged the decentralization of jobs and of population from congested
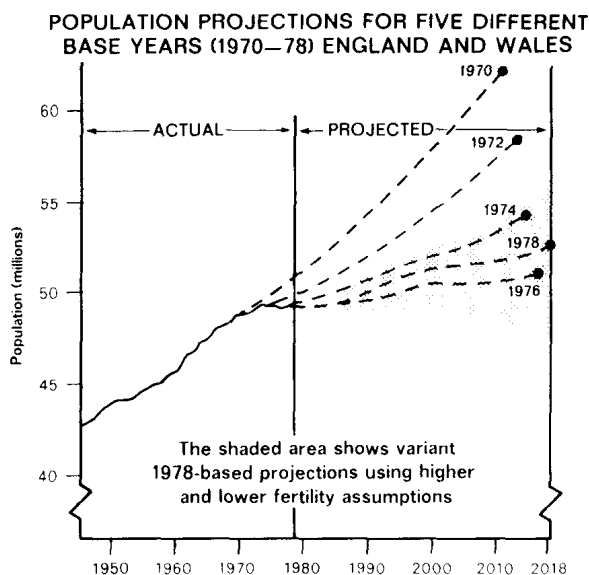
POPULATION PROJECTIONS FOR FIVE DIFFERENT
BASE YEARS (1970—78) ENGLAND AND WALES

Fig. 2. Unfulfilled expectations of a rapidly increasing population in England and Wales. *Source: OPCS Monitor* PP2 77/1 and PP2 79/2 (*Crown copyright*)

conurbations, it has facilitated such movements with relatively small expansions to the area of developed land. Peter Hall and his co-workers have dubbed this the 'containment of urban England' (1973, summary and discussion 1974; also DoE, 1976). Often it has been achieved by rural counties reinforcing their political hostility to urban encroachment by the planning device of green belt designation. Two consequences follow as noted by Hall *et al.* —the separation of workplace and residence as new housing was developed in settlements beyond the edge of existing towns, and the scarcity of developable land which in part led to the unprecedented inflation of land and property values and often to a reduction in average dwelling and garden size compared with the 1930s.

It is easy, and has recently been fashionable, to blame 'the planners' directly for the decline of the inner city through the persistent outmigration of people and of firms. Certainly it is wrong to blame the new and expanding towns (NETs) programme for the total demise of industry in, say, inner London. The Department of Industry has estimated that about 135,000 manufacturing jobs were lost in London during the period 1966–74 (Economy Group, DSPSE Team, 1976). Removals to NETs accounted for about 11 per cent of these; 66 per cent were due to factory closures—more by deaths of firms than by 'marriages' or mergers. Interestingly, only 9 per cent of moves were to the assisted areas of the country; most stayed within or on the edges of the South East region.

Migration

So the current focus of interest in population change, given the small numerical gap between births and deaths in most parts of England and Wales, is migration. County-based population projections for the period 1977-91 for England alone (Campbell, 1979) suggest an absolute decrease for nine of England's forty-six counties (Greater London plus five of the six metropolitan counties: Greater Manchester, Merseyside, South Yorkshire, Tyne and Wear, West Midlands; together with Cumbria, East Sussex and Surrey). But NET policy has been important in particular counties in the past (Deakin and Ungerson, 1977) and may continue to be so. It accounted for the spectacular growth of 3.4 per cent p.a. in Hertfordshire in the period 1951-61, and 1.8 per cent p.a. in Hampshire, with its expanding town of Basingstoke, in the inter-census period 1961-71. Likewise, for 1977-91 predicted population growth rates averaging 12 per cent in the three counties of the East Anglia region arise principally from migration to officially-designated expanding towns in the region, and should not be greatly affected by the GLC's more recent attempted reversal of NET policy.

Because urban housing estates are better mapped and signposted, there is a tendency to overlook what is happening on industrial estates. More space is now given over to single storey factories, with their flow-line assembly lines and fork-lift trucks and even automated retrieval from storage racks. Space around them is provided for the access of long vehicles and for the parking of workers' cars. And as within homes, where space standards have been rising, so within the workplace. In offices especially, norms of space per clerical worker in the modern *Bürolandschaft* have been raised considerably. The pressures of large industrial projects on land, admittedly often on estuaries previously occupied exclusively by wildlife, have been documented by Willatts (1962), Beaver (1968) and Warren (1978).

Traffic demands

The atomization of households, and the concentration of fewer and larger manufacturing plants on city fringes, came during a period when car ownership became both desirable and attainable for the ordinary family. 'S'-shaped growth curves in the Buchanan report (1963) on *Traffic in towns* showed a projected increase in car ownership from 12 to 30 million vehicles between 1970 and 2010 (0.2 to 0.4 per head in a population rising from 54 to 74 million). The report suggested that saturation would occur by about 2010. Buchanan's team's basic thesis was that long before saturation, in the absence of restraint or environmental 'improvements', the car would destroy, and *in some cases* already had destroyed, the familiar fabric of town centres.

Larger regions became the focus for 'land use transportation (LU/T) studies'. In their infancy, and partly because initially the techniques were