THE POST-WAR PLANNING OFFICE:
COVENTRY'S DEPARTMENT OF ARCHITECTURE
AND PLANNING
1957-66

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The objective of this research is to explain the appearance of a discourse on methodology in the post-war British planning system. Planning methods have been less well studied than the built environments they made possible or the social forces they represented. Therefore, this thesis falls into three parts: a review of the planning history literature from the point of view of method, a theoretical discussion in which certain marxian and foucaldian concepts are combined, and an empirical case study of planning methods in use and development.

From the literature review it is clear that methods of plan-making and handling or storing information were in use during the entire post-war period. But the historians' decision to impose a scientific perspective has divided method into two: scientific and pre-scientific, with the dividing line around the mid-1960s. The objective of the literature review is to reverse this decision and instead scrutinise the credentials of science. When did science assume the right to make judgements about planning practice, and under what conditions?

Method is approached twice in the theoretical section, once as labour and again as discourse. If planning can be conceived as a labour process, then planning methods appear when machines and science are applied directly to information. One consequence is the eclipse of the crafts in planning, and their bearer, the master planner. If planning can be seen as discourse, then planning methods represent the impersonalisation of truth and a critique of private, unaccountable skills in the planning process. Taken together, a possible (but unevenly accomplished) transition from 'craft' to 'systematic' modes of planning is suggested, with methodology defined as the truthful discourse on man-machine relations in the planning office.

The case study of Coventry's Planning Division focuses on the work that went into the Review of the Development Plan between 1957 and 1966. The migration of technique from traffic to population to projection is described, both as it involved planners and local educators, other planning offices and schools, the profession, and central government. Coventry appears as a key authority in the formation of an authoritative discourse on methodology, ranking alongside London, Liverpool and Newcastle.

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I have incurred many debts of gratitude in writing this thesis, and I am happy now to have a chance of repaying them.

In Coventry, Harry Noble (City Architect and Planning Officer) gave me permission to consult papers and files of the Department of Architecture and Planning, while Shirley Trafford (Assistant City Planner) guided me round them and gave much useful advice. Tony Hicks (Chief Executive) was kind enough to spare me some of his time, for a scene-setting introduction to Coventry of the 1960s. While working on the files I met Keith Thomas (Birmingham Polytechnic), who sold me a copy of Abercrombie's 1944 Greater London Plan at a knockdown price – and very interesting reading it made too.

I am grateful for the cooperation of the staff of the City Records Office in Coventry, and especially the City Archivist, David Rimmer. Mark Middleton (Birminghan City Planning Department) gave me free access to the minutes and attendence books of the West Midlands Branch of the Royal Town Planning Institute. The Institute's Secretariat

at Portland Place helped me locate several ex-Coventry personnel by supplying their current addresses. Over the years I have made considerable use of the Inter-Library Loans Service (Sydney Jones Library, University of Liverpool), and successive Civic Design librarians have let me trawl through the Department's special collections. David Hall (Director, Town and Country Planning Association) let me inspect a personal copy of his pioneering 1963 thesis on computers in town planning.

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In 1984 I was awarded a travelling Research Scholarship by the Dutch Ministry of Education and Science. I visited the Planning Department of the University of Amsterdam for ten days and was allowed to read a review paper on the state of methodological history. Arnold van der Valk and Peter de Ruijter were excellent hosts during my stay, and Koos Bosma (University of Groningen) obliged me with an interview. My visit was financially supported by both the Ministry and the University.

The form and content of this thesis have, of course, been greatly improved over the years by the active support and assistance of my supervisors. While taking full responsibilty for the final product, I would like to thank especially Dr. Peter Batey, but also Dr. David Massey, Peter Brown and Professor Gerald Dix.

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LIN and ALI

<u>Making plans</u>. - To make plans and project designs brings with it many good sensations; and whoever had the strength to be nothing but a forger of plans his whole life long would be a very happy man: but he would occasionally have to take a rest from this activity by carrying out a plan - and then comes the vexation and the sobering up.

(Nietzsche 1977 p.277)

CHAPTER   ONE

INTRODUCTION

One has only to hold and compare the 1944 Greater London
Plan and the Greater London Development Plan of 1969 to
become immediately aware that something has changed in the
way town planners conduct their work. These are changes not
only of presentation but also of approach. If once it had
been possible to assert confidently the virtues of balanced
judgement, and literally to 'draw up a plan' at the drawing
board, by the late 1960s a completely new discipline had
asserted itself. The plan, to use a famous phrase, was now
the product of a 'planning process', less important even
than the steering function of that process. And the plan
itself had disappeared as a detailed map, only to reappear
across a volume of technical studies and a sheaf of
written, reasoned proposals. The planners themselves were
not the same: they occupied a new division of labour in the
planning office, they operated machines, they spoke -
'methodology'....

How did a discourse on planning methodology come to appear

within the post-war British planning system? From the other side of the 1970s we are perhaps better placed to see innovations in planning method and procedure in their full historical context (Breheny 1983). For a long time. the systematic planners' claim to represent reason in human affairs allowed them to pass over the specific conditions of emergence of their discourse. After twenty years. these conditions of emergence can now fall naturally within the scope of modern planning history and a fresh evaluation begun. In fact, the study of the history of planning methodology is still very young (eg. Batey and Breheny 1982, Marshall and Masser 1981), and there have been surprisingly few contributions to the field. This thesis represents an attempt to summarise and appraise what is known of methodology's history, and to advance a few ideas as to the scope and claims of methodology as a discourse.

Chapter Two begins by making a preliminary review of the post-war period to the late 1960s, with special attention to labour invested in plan-making. With the aid of contemporary professional documentation. I seek to recover several obscure episodes and experiments that suggest systematic planning practices did not burst upon the planning scene in the mid-1960 so violently or surprisingly as we have been led to believe. In fact, what is now known as 'methodology' was forged out of a domestic interest in

record-keeping and efficient management as much as academic
research and the American example.

Chapter Three examines these shifts in planning practice
more precisely, in the light of two relevant bodies of
knowledge: the history of labour processes (descending via
Braverman from Marx), and the genealogy of discourse (from
Nietzsche via Foucault). Whereas the former offers us a
complete typology of planning processes, with specific
reference to the use of machines, the latter develops a
typology of statements made about planning processes and
the claims to truth made therein. These two great themes
(labour, discourse) direct the remainder of the thesis into
two large areas of work:

(1) how was craftsmanship in planning displaced, what
     impersonal systems were constructed in its place?

(2) how was method affirmed, and caused to function as
     true?

These concepts are given practical form in the case-study
which comprises Chapters Four to Eight. An introduction to
the case-study concept is sketched out in Chapter Four,
along with a background to the chosen planning authority,
the city of Coventry. The activities of the Department of
Architecture and Planning, especially during the period of
the Development Plan Review 1957-66, were a formative

moment in the appearance of both a local and national discourse on planning methodology. This hypothesis, made in advance of documentary search, was certainly proved by the results of that search.

The organisation and methods employed in the Department during the 1950s are the subject of Chapter Five. The Department's Planning Division lay fallow for much of the decade while the Development Plan was being approved; the centre of gravity moved to the implementation sections of the Department. Early experiments in projection, programming and time-planning were not followed through. After 1957, however, a period of staff turnover was entered, fresh thinking begun on the city region and methods of planning it, and the office strengthened its relationship with planning education. A platform emerged on which the Review of the 1952 Development Plan could begin.

Chapter Six details the form and content of the Development Plan Review. The Review was precipitated by the fear of unplanned industrial, population and traffic growth, and measuring and projecting growth became a preoccupation of the Review team 1961 to 1964. Antecedent calculations backing the Inner Ring Road proposal were taken over and drastically enlarged by a special roads study team. Similarly, the level of support to area teams and the

housebuilding programme was scaled up by a demographic model of the city. However, the requirement to start construction and direct mainstream spending programmes prevented this period of extended calculation from gaining any autonomy within the Planning Department. The Review Plan was drawn up hurriedly, and circulated less widely than its innovative and popular Reports of Survey.

Chapter Seven follows through by examining the impact of Coventry upon central government, other planning departments, the profesional institute and the planning schools. Until the Lanchester College of Technology opened its undergraduate sandwich course in 1965, the Planning Department played a major role in training students, disseminating methods and raising the level of competence in the profession regionally and nationally. The West Midlands Branch of the Town Planning Institute was dominated by planners from Coventry and grouped many junior staff impatient with contemporary planning practice. Through publications, guided tours, conferences and staff circulation, the Coventry experience was widely transmitted and admired. The Ministry of Housing and Local Government drew upon members of Coventry's Planning Division in formulating the regulations to accompany the new Developmemt Plan System after the Planning Advisory Group report in 1965. Coventry entered a subsequent phase of

corporate planning and management between 1969 and 1975 having already made a reputation as a progressive planning authority.

Conclusions to the case study appear in Chapter Eight, the essence of which are that the traffic and demographic and other calculations completely invalidated unsupported professional judgement in those fields. They displaced craftsmanlike activity of a skilled and personal nature with sets of instructions (ideally a flow chart or a computer program) that were public and could even be solved electronically. A 'pocket' existed for these zones of calculation because of the City Council's existing commitment to rebuild the devastated central commercial areas. But it took a critique of physical determinism by planners in the Department to exploit this opportunity and to turn the redevelopment into a central area component for what was really a city-regional plan.

CHAPTER   TWO

HISTORIES OF POST-WAR PLANNING

2.1   INTRODUCTION

It is a commonplace to say that in the 1960s British urban

and regional planning passed through a phase of profound

renewal of its objectives, methods and administration. Yet

the exact character of that phase (and have we now left

it?) remains strangely elusive. Apart from the phenomenal

explosion of documentation that surrounded the changes,

there have been only occasional attempts since then to

interpret the period, and even so it has proved difficult

to explain events without simply repeating the reformers'

original objectives. Still less have there been historical

studies of transformations in the means and methods of

planning during the 1960s, studies that could establish the

specificity of methodological change and changes in the way

planners   organised   their   work. Even   the historical

researchers need reminding that

        'the 1960s represent a remarkable era in the
        development of planning in Britain and one which
        will continue to offer rich possibilities for
        research'.

(Marshall and Masser 1981 p.129).

As a result, it would be difficult to argue that any well-founded interpretations or established schools of thought have come into being as concerns planning in the 1960s. On the other hand, certain areas of specialised research have emerged around particular topics, and they will form the basis for the literature review in this chapter. Six such areas can be identified:

1. The origins of planning legislation in the Second World War (Cullingworth 1975, Ward 1975, Backwell and Dickens 1978).

2. The 'Achilles Heel' of post-war British planning (Hebbert 1981, 1983).

3. Planning education between 1950 and 1970 (Healey 1980, 1985; Thomas 1980).

4. The TPI membership debates of the mid-1960s (Faludi 1972).

5. The spread of systems and rational choice ideas (Batey and Breheny 1982).

6. The origins and diffusion of urban modelling (Batty 1975, 1979a, 1979b).

Each of these research literatures will be touched upon in the remainder of this chapter.

Although this entire thesis is about how 'method' came to be defined as a branch of knowledge, some preliminary attention will need to be given to the definition of terms. The term 'methodology' has conventionally been taken to cover three related areas of activity: (1) the construction of linked and systematic methods of calculation, (2) the development of procedures of rational choice, and (3) the application of substantive theories of socio-economic behaviour. This is a modern understanding of method in planning, and differs from a craft definition of planning technique. However, because this is a study of the planning office and the planner's capacities, 'methodology' will be taken to mean the first and second definitions, and not - unless otherwise stated - the application of substantive theories about the planning environment.

Precisely because there has been no authoritative summary or balance sheet of the events of the 1960s, everyone begins an analysis of the period with certain preconceptions.

The chief deficiency is to regard the 1960s as a transition period between two paradigms of planning practice, each of which finds expression in a single idea. For instance, it is common to hear the 1960s described as the period when 'blueprint' or 'end-state' planning was replaced by

'systematic' planning and the concept of the 'planning process'. But this approach (a) exaggerates the homogeneity of planning practices before and after the transition, and (b) places too much emphasis on the centrality of a paradigmatic idea and the intellectuals who express it. In fact, systems planning of the 1960s had real and significant antecedents in the forms of control and calculation adopted by British local authorities in the 1950s, and it was precisely the uneven development of planning practices across the planning department that gave rise to projects defined by method. Similarly, at a time of substantial change in the boundaries and terrain of planning activity during the mid-1960s, it would be difficult to argue that the planning schools and researchers or planning's specific intellectuals played the decisive part in replacing the guiding ideas of the profession. Developments in office practice were never just lagged expressions of development in planning theory; they also incorporated elements thrown up in a planning authority's own work, or exchanged between authorities.

The sequence 'blueprint-then-process' seems to create more problems than it solves. It exaggerates the success of intellectuals in changing the course of planning history; omits the influence of relations between planning authorities; fails to account for discrepancies and

variations in the way ideas were copied and acted upon; and passes over the mix of planning practices to be found in departments at the beginning and end of the 1960s. It cannot be denied that by 1970 it was much less possible to defend 'blueprints' as against 'processes'. But the distinction blueprint/process is itself an item for historical research, rather than a tool of it.

The approach taken in the next three sub-sections will be to make a historical review of planning methods and organisation in the 1950s and 1960s, drawing upon a variety of secondary and interpretive literature, and commenting upon its adequacies and inadequacies. Where necessary, new material and arguments will be introduced. This approach will allow the assembly of a number of disparate and partial histories, while maintaining a properly critical perspective on them. Chapter Two will thus double-up as historical background to the case study proposed in Chapter Four, and as the empirical reference for theorisation of planning practices in Chapter Three.

2.2   CONTROL AND CALCULATION IN THE 1950s

Planning historians have united in their deprecation of plan-making in the 1950s, and a generation of professional

planners has been encouraged to believe that the 1950s fall below the threshold of modernity. The critique has been mounted in the name of science, and the allegation is that pre-1960s planning lacked a proper relationship to science. Thus Batey and Breheny (1982 p.19) comment that Development Plans drawn up under the 1947 Town and Country Planning Act were

> 'singularly unadventurous in terms of the planning methodology they used. The optimism expressed in the 1940s about the potential role of social and economic research in planning was not born out by the practice of the 1950s'.

Hebbert confirms this diagnosis in two detailed papers, arguing that planners in the 1950s betrayed the intellectual and social-scientific investment of their wartime predecessors, thereby causing a 'collapse' into routine administration and under-researched policy rules (Hebbert 1983 p.14, 1981). According to Walter Bor (1974 p.696), much of the planning undertaken in the 1950s was

> 'hit-and-miss "hunch planning", based on subjective guesses and a set of well-intentioned but often quite subjective "do's" and "don'ts" rather than on scientific methods and objective criteria'.

Both Alison Ravetz (1980 Ch.7) and Brian McLoughlin (1982) argue that contemporary planners themselves experienced the absence of science as a lack. According to McLoughlin (1982 p.2), the spectacular success of the introduction of new ideas on planning methodology into Britain in the 1960s can be ascribed to the outstanding need of the profession to

> 'justify its intellectual and bureaucratic

existence... by having... a solid theoretical
foundation on which to build its supposedly unique
practical skills'.

Other commentators have elaborated on the precise
implications of a lack of science for the particular tasks
and instruments laid down under the 1947 Act (eg. Hall
1975, Broadbent 1977).

'Science' has become the aperture through which planning of
the 1950s is viewed. Modern planning histories have done
little more than repeat the original objectives of the
reformers and document the obstacles to rationality in the
field of human affairs. Not surprisingly, the most
noble origins have been sought for systems planning and
systematic methods, and the historians have obliged with an
impressive genealogy: general systems theory, cybernetics,
information science, decision theory, corporate management,
and so on.

A rather different approach is taken here. The origin of
planning methods needs to be disentangled from claims about
the progress of reason, and situated more precisely in the
practices and conflicts in which they actually emerged. The
emergence of method is difficult to relate directly to the
application of science. Planners have often made claims to
truth for their descriptions and calculations, but only
from the 1960s did these claims make a detour via science.

Therefore, the claims and boundaries of methodology have to be established separately from the history of reason in human affairs. The origins of method in planning are altogether more 'ignoble', as the following four sections will indicate. Section 2.2.1 explores the 'social' content of planning during and after the Second World War, and shows how a social insurance strategy for town and regional planning inhibited quantitative studies of the type favoured in the USA and promoted in the UK by American observers such as Lloyd Rodwin. Section 2.2.2 considers the administrative implementation of the 1947 Act and draws out the connections between planning administration and the movement for efficient and mechanised public offices in the 1950s. In Section 2.2.3 this argument is extended by describing how planners took advantage of the office reforms to meet their obligations under the social insurance strategy, culminating in the method of land use accountancy. The uneasy relationship between craft and

machine assisted practices is sketched out in section 2.2.4 where an indication is given of the latent craft/science divide that underlay the more famous inter-professional struggle of the mid-1960s.

2.2.1   Planning as social insurance

It is true that in the 1940s 'an active collaboration
between social scientists and planners started to occur'
(Batey and Breheny 1982 p.18). However, what is of interest
here is not so much that 'scientists' were involved, as
that the scientists who were involved were scientists of
the 'social'. We tend to forget now the absolute novelty in
the wartime period of a 'science of the social', and pass
over the proliferation of post-war disciplines that took
'social' as their prefix: social science, social policy,
social administration, social planning, social work. Yet
town and regional planning was re-cast for the 1950s as a
branch of the welfare state, addressing social objectives,
and included in the broad sweep of 'social insurance'. It
was because of leadership supplied by intellectuals and
deputies of the social that planners could not continue to
conceive of the town or region as primarily economic units,
nor planning as the means of ensuring industrial efficiency
within them. Instead, town planners were to take the family
as their emblem and make its security and stability the
basis of all their interventions. (For a detailed analysis
of the trajectory of the social discourse before and since
the war, consult Donzelot 1980, Meyer 1983, Armstrong 1984,
Garland 1985.)

'The idea that planners are concerned with social as well as physical aspects of towns is relatively new.' Ruth Glass (1944 p.20) told the 1944 Town and Country Planning Summer School.

> 'As a result there is as yet no consensus of opinion as to which social aspects have to be taken into account, how and in what detail they deserve inquiry, and what weight they should have in relation to all the other considerations which concern town planners.'

For many years the activity of planning had been justified in economic terms, first as a means of enlarging national efficiency (Long 1982b), and then in the 1920s and 1930s as an economic and geographical project for the functional renewal of the older urban areas and regions in structural decline.

However, in the middle and later 1930s this latter project received a challenge in the form of a strategy for the defence of the social and its chief inhabitant, the family (Long 1982b,c). In particular, the Barlow Report on the Distribution of the Industrial Population drew attention to the threats posed social cohesion and continuity by the modern overcrowded city.

> 'When conditions affecting the health or well-being rather than the wealth of the state demand attention, when slums, defective sanitation, noise, air pollution and traffic congestion are found to constitute disadvantages, if not dangers to the community, when the problem, in fact, becomes social in texture rather than economic, then modern civilisation may well require a regulating authority of some kind to step in and take

reasonable measures for the protection of the general national interest.'
(Royal Commission 1940 p.194)

The defence of the social realm was rehearsed by the planners under two main headings. The first was the neighbourhood unit. Born of a reaction to the atomising tendencies both of surburbia and the slums, it was presented as a 'new way of life' (Wolfe 1945), fostering the growth of families by a local cluster of shared services.

> 'Essentially the aim of town planning today is to create communities, fully equipped with the physical means needed for satisfactory social life... Right at the centre of the social picture must always stand the idea of a healthy and happy life for families.'
> (Fogarty 1948 pp.72, 119-20).

The neighbourhood unit attracted support from the pre-war community centres movement (Stephenson and Stephenson 1942), the campaign for adult education started in the armed services (Summerfield 1981), socialist planners and organisers of collective living (Cole 1944), and from within the ranks of the planning profession itself (eg. Tubbs 1942, Tyrwhitt 1950a). In a long process of assimilation, planners came to identify with the resident and the worker at rest, and to plan a certain social solidarity against the irresponsible developer of land.

The second defence of the social consisted of industrial

diversification and a regionally balanced structure of employment. The working population was to be protected from loss of livelihood by ensuring a suitable diversity of jobs should any particular enterprise or branch of industry suddenly fail. '"Single industry" towns are dangerous to social stability', argued W. Harding Thompson (1941) in a TCPA sponsored statement on 'planning principles: the present measure of agreement'. This implied working backwards from the work needs of individuals and their families to the structure of industry compatible with them - a complete reversal of inter-war restructuring. Post-war regional planning rested on an alliance of planners and workforce for a distribution of employment without discrimination by area, trade, age or sex, if necessary against the location trends currently observable.

Town planners were not alone in reconsidering the fundamental basis of their interventions. Representatives of the pre-war planning movement (cf. Maier 1970, Addison 1975), fortified by wartime experience of a mobilised society, were already reporting as fact an advanced and non-liberal form of the state, and in particular a new official responsibility for popular welfare. Karl Mannheim (cited in Gutkind 1943 p.19) concluded

> 'the state no longer confines its attention to the
> three spheres of legislation, administration and
> jurisdiction, but is changing into a social service
> state'.

Gutkind (1943 p.2) himself described the changes underway as 'the end of "economic man" and the emergence of "social man"'. It was on this basis, of a strategically successful social discourse, that the social sciences formed a rapprochement with the planning profession. According to Gunner Myrdal (1953 pp.222, 214), a chief characteristic of the new society was

> 'the continuous growth in the volume of public, quasi-public and private interventions in social life"

and as a result,

> 'the social sciences are increasingly called upon to develop a social technology, a set of tools for social engineering'.

Sociology and social administration in particular began making making extensive claims on the subject-matter of town planning. 'Planning is essentially a social service', argued the Liverpool University Social Science team commissioned to survey Dudley BC; '... every social service for which a local authority is responsible is relevant to the planning process' (University of Liverpool 1951 p.7). Almost simultaneously, sociology mounted its historic critique of town planning. David Glass was cautious in his estimation of the neighbourhood and new town concepts.

> 'The policies recommended, though evidently of substantial interest, had not been tested or even subjected to rigorous examination before being formulated'.
> (Glass 1950 pp.22-3).

Ruth Glass extended this critique more than anyone,

initially in a review of development control returns
carried out by her team at University College London. She
complained that

> 'the barest statistical information is published
> about the handling by local authorities of the
> great majority of applications for permission to
> develop which are not the subject of appeals'
> (Glass 1954 p.7).

She later generalised this finding into a criticism of the
lack of self-evaluation in planning.

> 'Unless an administrative system is set up from the
> start so as to be 'self-conscious' in its
> operations, it will resist subsequent sporadic
> attempts to introduce analytical devices'.
> (Glass 1959 p.396).

She envisaged evaluation in planning, however, as the
professional project of the university-based sociologist,
and this reflected on the contemporary definition of
sociology as an independent questioning power that
represented the lay public to officialdom while resisting
arbitrary power and routine administration (Hebbert 1977).
Self-evaluation in this sense, although requiring 'a
continuous record of... operations,... to provide the
necessary series of data' (Glass 1959 p.408), was not
compatible with later ideas for a self-monitoring planning
agency because it split the planning function across two
independent institutions: government and the universities.

The re-emergence of an economic discourse in the 1960s, and
the way it encapsulated without refuting the social

discourse, will be described below in section 2.3.2. What can be concluded for now is that the prevalence of social objectives, and the priority given them over economic objectives, was crucial for the direction of post-war planning practice and especially the methods embedded in that practice. The social discourse led planners towards a social and legal description of settlement, and typically, to the production and enforcement of 'planning standards'. Planning standards were not only a methodological choice, they also provided a sociological judgement with the force of law. As a result, practical research and academic inquiry was drawn into the measurement and calculation of standards, especially in the area of population and housing density (eg. Martin 1957, Cullingworth 1958). It is clear, then, that the intervention of science did not bring scientific planning method in its trail; rather, it expanded the scope of sociology and offered planners more comprehensive support in design and layout.

This was not a favourable starting point for the quantitative re-description of population, land-use or industry. The low status, and indeed lack of necessity, of systematic quantitative description within the social discourse helps explain the 'Achilles Heel' (Rodwin 1953 p.22). Far from being the absence of trained social scientists in local government that caused the delay and

uneven development of planning studies, it was precisely the model of social science on offer that was the problem. It could not support re-description of town and region except in terms of its original brief, the defence of family life against irresponsible economic forces. This essential prejudice against the economy left it unwilling and unable to develop appropriate methods of economic measurement and calculation. One result of this unwillingness was that the sociologists were not the first to learn about and adopt the new methodologies of the 1960s, and as we know, they actively resisted them. Another result was the appearance of a sub-academic network across the planning authorities and later the planning schools, that could provide the necessary methodological support. If social science in the 1950s cannot provide the origins of methodical practice in planning, then other origins will have to be found, perhaps nearer the planning office.

2.2.2   Experimental administration

Considerable attention has been paid to the origins of the post-war planning legislation (Cullingworth 1975, Ward 1975, Backwell and Dickens 1978, Newman 1980). However, very little attention has gone into the system of administration created by the the 1947 Town and Country

Planning Act. If anything, the 1950s have been treated as a screen upon which the provisions of the 1947 Act could be projected unproblematically. This has removed the system of administration as a source of variation in planning practice. Therefore, this section explores the relationship between administration and plan-making, and argues that a post-war strategy for efficient and mechanised government administration created some of the preconditions for a discourse on planning methodology to appear in the early 1960s.

Efficiency in government administration of the 1950s descended in two main streams. The first was the collection of experience and ideas on the well-run office, and the second consisted of technical interventions in office work.

Historically, scientific office management stems from the application of Taylorism to the American business office (cf. Braverman 1974). However, it did not challenge traditional office practices in British public administration until World War Two. While there had long been a demand from senior levels of the Civil Service for better supervision and control of staff (eg. Royal Commission 1914, Haldane Committee 1918, Bradbury Committee 1919, Royal Commission 1931), the outbreak of war found Whitehall quite unprepared for mobilisation of staff on

historically new scales of activity. In 1942 the Select Committee on National Expenditure condemned the Treasury's 'almost complete failure to foster the systematic study of organisation as applied to government departments', and called in a panel of businessmen to advise on a new approach (Select Committee 1942 p.18). As a result of their investigations, the old Treasury Investigating Section employing two people was abolished, and an Organisation and Methods Division created within the Treasury, flanked in the major service departments by satellite O and M Units. O and M was given the dual objective of rationalising employment and mechanising clerical work. By 1947 the O and M Division had an establishment of 224 (compared with only 46 in 1942), and was being praised by the Select Committee on Estimates (1947 p.xxi) for its 'engineering and analytical approach' to the structure and machinery of government. O and M typically involved a close study of working practices, paper flow, chains of command and office management, leading to recommendations for staffing, intensity of work, job sequence, design of forms and levels of managerial control (Organisation and Methods Division 1947, 1954).

O and M entered local government quite slowly after the war, due to the smaller size and complexity of local authorities, and the cost of maintaining specialist

administration units (Foster 1959). In 1950 Kent CC introduced work study and O and M as advisory services to the County Treasurer, followed by Lancashire in 1952 and Devon in 1954 (British Productivity Council 1962). An O and M Unit was set up in 1951 to service the London boroughs, while in 1953 the London County Council created its own unit, which with 25 staff was the largest at that time for any local authority. The Local Government Manpower Committee noted progress in 1952 and proposed cooperative arrangements between local authorities to support joint O and M services. The turning point came in 1952 when Coventry's Town Clerk was instructed by his Council to invite the HM Treasury's O and M Division to make an exemplary study of Coventry Corporation's functioning.

The reported conclusion that administrative and technical improvements could save the Corporation £50,000 per annum galvanised other medium and large sized authorities into action. In 1954 the Royal Institute for Public Administration's O and M Group embarked on a programme of O and M training courses primarily for the local government officer, and in their first year they attracted staff from 13 county councils, 5 county boroughs and 7 district councils (Nottage 1954). Local authorities with their own full-time O and M staff grew from about 12 in 1954 to 40 in

1959 (Nottage 1954, Foster 1959). A further 150 local
authorities invited management consultants to undertake
assignments and overhauls during the decade (Foster 1959
p.245).

Although in central government the O and M Division was
attached to the Treasury and combined with staff
inspection, in local government O and M was invariably
placed with the Town Clerk as the only figure capable of
examining departmental structure and responsibilities from
the outside; moreover, administrative review was kept quite
separate from establishment control, in order to win the
workforce's consent to efficiency objectives. O and M
efficiency reformers had a homogenising tendency across
local government and especally the medium and larger size
authorities. They reinforced the powers of the Town Clerk
vis-a-vis the departmental chief officers, while
encouraging both to evaluate services in terms of
objectives and performance. Finally, O and M made work of a
mental, managerial or professional nature fall within the
scope of planning. The direction of administrative labour
became a definite problem and task from this moment. O and
M left the question: how do we plan the planners?

The second antecedent of efficient office management
concerned the use of office machinery.

Office appliances and the trade in them entered a boom period after the war. Whereas in 1935 the monthly output of typewriters had been £34,000 and for accounting machines £49,000, by 1949 sales had reached £272,000 and £717,000 respectively (Accountancy 1950 p.305). In 1952 the office equipment industry had an annual turnover approaching £40m a year. Office machines were employed chiefly in response to crises in the accumulation and retrieval of documents. The explosion of business documents was due in various proportions to the post-war increases in national and international trade, the increasing scale of enterprise, and bottlenecks and spare capacity arising from previous rounds of investment in office machinery (Rhee 1968, Lockwood 1958, Delgado 1979).

Two waves of office technology are of particular interest, and they demonstrate the close relationship between public and private office practices. The first wave involved the accounting machine, which combined the typewriter keyboard with an adding-subtracting unit (Curtis 1934). As their name suggests they were employed primarily in recording financial transactions, and in producing regular balances. For this reason, they were purchased not only by banks and insurance companies, but also by the Treasury Departments of large local authorities. The second wave of office

technology was closely related to the first, and concerned punched card machinery (Long 1984a). The punched card represented a new form of business document, with this difference, that it was machine readable. The commonest form of appearance of punched cards was in alliance with the accounting machine, data being entered on the former and stored or manipulated in the latter.

Again, the larger local authorities were significant users in the inter-war years. Coventry's Treasurer Sydney Larkin installed punchers, sorters and tabulators in 1927 to handle his Department's calculation of wages, stores and costs. Other local authorities followed suit, including Norwich, Kingston-upon-Hull, Manchester and Cardiff (ICT 1960). Whereas the first punched card machines had been electro-mechanical in operation, and restricted to sorting and tabulation, the machines produced immediately after 1945 were electronic and capable of all four arithmetical operations. These calculators functioned as control units for a suite of sorters, tabulators, summary punches and printers. Jobs with up to 160 separate instructions could be entered into these calculators, but the program was not stored with the data as in a computer. Technicians had to re-wire an external plugboard.

> 'When a new job is to be performed, the plugboards
> are changed and immediately the machine is ready to
> carry out the new task.'
> (Data Processing 1961 p.55)

Why might planning offices draw upon the movement for efficient management and mechanisation?

Essentially, because the existing means of planning were inadequate to the tasks laid down by the post-war legislation and plans. 145 planning authorities in England and Wales, and 57 in Scotland, were to have deposited their Development Plan with the Minister by July 1951. This was a highly ambitious administrative programme. At the first conference of the British Sociological Association in 1953, Lord Silkin argued that

> 'a revolution had taken place at the level of legislation, implying a revolutionary change in ideas, but... administration had proved unable to adjust itself to the task of executing the new type of policy and was now revealing many forms of weakness'.
> (Cited in Marshall 1953 p.205)

The significance of the Schuster Report in this context is that it explicitly exposed the administrative weaknesses in the post-war system. Therefore it was necessary to make provisions for 'studying, interpreting and applying the lessons of experience' and for 'learning from error' (MTCP 1950 p.43).

Planning historians of this period have correctly perceived a 'backwardness' or 'uneveness' in 1950s planning practice, but incorrectly (and in a historicist manner) contrasted it

with the 'forwardness' and superiority of planning practice in the 1960s and 1970s. A better contrast would have been with forms of management and method to be found elsewhere in local government in the 1950s. The real uneveness to be explained is between contemporary office practices. A whole string of conclusions will be flagged here by saying that the cause of this uneveness was the conflict of craft and system in the organisation of work. If planning could not be immediately assimilated to the movement for efficiency and machinery in public affairs, it was because of the relative strength and durability of its craft traditions.

2.2.3 Record keeping and land use accountancy

When tracing the history of calculation in British planning there has been a general consensus that calculation could be reduced to modelling, and modelling could itself be reduced to copy of an American original.

> 'The motivation behind land use modelling in Britain was and remains much the same as in the United States,'

writes Batty (1979a p.88),

> 'and the diffusion of ideas from North America made an impact as soon as the literature on modelling became available'.

> 'Essentially, the techniques for these early studies - and often, too, the personnel - were imported from the United States, where they had been developed in early exercises like the Detroit

and Chicago area transportation studies'
(Hall 1975 p.186).

The priority given to formal methods and to American
imports imposes a particular chronology on historical
acounts of methodology, and notably a baseline in the
early-mid 1960s, or as precisely as 1963 with the
realisation of urban complexity supplied by the Buchanan
Report (Batty 1982). The origins of a discourse on
methodology are then invariably included in a specifically
American process of discovery and experiment (Batey and
Breheny 1982 pp.20-2).

However, this emphasis on formal mathematical modelling
creates a very high threshold for calculation in planning,
much of which never took this form in the decade to 1963.
In particular, a high threshold has the effect of excluding
indigeneous forms of calculation developed in local
planning authorities. These domestic methods culminated in
the methodology of land use accounting prescribed by
central government after 1955, as reinforced by the
increasing use of punched card technology in records based
planning systems. Perhaps calculation in planning has
altogether less noble origins than mathematics can supply;
there was only a crisis of paperwork in the new development
control system that reacted back upon the procedures of
planning in a startling manner. It is not supposed that
land use accountancy prefigured the concerns of urban and

regional modelling or occupied a similar, if cruder, intellectual space. But it did create some of the preconditions for modelling to appear, in particular it pioneered records based and survey driven types of plan-making. That planning bore a special relationship to information, and that planning information could be stored to assist future choices, are products of the 1950s.

The 1947 Act inaugurated a new era of planning control, in which most development operations and changes of use became the subject of permission from the local authority. The scale and scope of planning control was quite novel, even after wartime licensing restrictions had been lifted. Typically, the development control officer experienced the new system as a mass of paper.

> 'The labour of finding things is a fruitful source of delay as well as the most wearisome task of clerical and junior staffs in planning offices',

wrote Michael Smith (1959 p.236).

> 'The volume of information in every office is now so bulky that a speedy and reliable reference system is not only desirable, but essential.'

This was a widely confirmed experience.

> 'Any authority which has to make decisions about land is faced with the problem of keeping track of the ever-increasing number of cases... in such a way that the case history of any particular piece of land is readily available'.
> (TPI 1955 p.114).

An immediate solution was the more structured filing of material. Tom Clarke of the MHLG revealed the Ministry's

own Land Records System at the 1955 Town and Country
Planning Summer School (TPI 1955, O and M Bulletin 1963).
The system's novelty lay in cross-referencing text records
and index maps with an OS grid number. Text and map could
then be filed separately but within a single numerical
code. The records themselves were highly standardised and
reduced to transparent forms for purposes of photocopying.
The Ministry's original objective was to supply Inspectors
with adequate briefing material for the 12,000 or so
appeals handled each year. However, several local
authorities became interested in the potential of land
records systems for supporting their plan-making
activities. The correspondence of caseworkers with
applicants, and its storage as a case file, provided an
ideal method for refreshing the survey base map - if only
it could be stored in a form suitable for rapid retrieval
and analysis.

At Middlesex CC, T.E.Parry and A.Morris (1955 p.65)
developed

> 'a permanent system of records which will provide
> up-to-date statistics on land use whenever called
> for, and provide the bulk of the land use
> statistical data for any subsequent Review Plan
> without the need for any special survey and
> analysis'.

Their method was to build a double-entry accounting system
recording acreage gains and losses between six broad land
use categories. At first, the system was map-based,

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requiring the manual plotting of all changes of use, and measurement from the map of all gains and losses. Later, Morris (1959) criticised this method as too laborious and labour-intensive, and described how instead the data could be transferred to punched cards. He estimated about 50,000 cards would be needed to record every 'minimum land parcel' in the county. The system was said to be 'extremely flexible' and able 'to produce statistics in almost limitless combinations and permutations' (Morris 1959 p.163).

In fact, the earliest British application of punched card technology to a planning problem came in the late 1940s as a by-product of the Max Lock Group's plan for Portsmouth district. Assessing the potential for decentralisation, the Group's planners surveyed housing and population densities in the town.

> 'In order to save time and money the information on these forms was then transferred to Hollerith cards for electrical tabulation'.
> (Layfield 1950 p.185).

Other applications soon followed. The East Sussex Development Plan was underpinned by a comprehensive rural community survey between 1952 and 1955 that Leslie Jay (CPO, East Sussex) had put onto cards. At first, they were needle-sorted by hand (Jay 1958), but in the second half of the 1950s employment data from three towns was processed on

Hollerith machines (Jay 1966a). Jay reported a 50% saving in man-hours over manual processing, though this conclusion concealed extensive preparatory work in writing coding manuals. In the mid-1950s, Peter Wood of the Birmingham Public Works Department was engaged in research into company relocations after clearance, and also in maintaining an inventory of available industrial land: both were coded onto punched cards. Wood claims 'that was perhaps the first rudimentary use of computers in planning in this country' (P.Wood, interview, 4.5.83). Slightly later, T.B.McKenna and R.E.Nicoll (Glasgow City Planning Department) prepared a complex use classification code to describe every land parcel in the city. The system's primary purpose was for 'punched card processing of data and is capable of almost indefinite extension' (TPI 1961 p.25). In Hertfordshire, the County Planning Officer Ernest Doubleday presided over a land use records system that stored information on development and use changes on 80 column punched cards, and routinely updated a stock of cards covering the county's planning area (Hall 1963).

By the end of the 1950s, punched card technology and the reliance on records based systems represented leading practice in large authorities. In his TPI Branch address on 'punched card analysis techniques', J.D.Wallis noted it was

possible to store as many as 400 facts on one card.

> 'There were many possible applications of such a
> system, for instance, a single card could contain
> the complete history and details of a particular
> planning application... It could be adapted to
> almost any survey, administrative or research
> problem which involved the collection and storing
> of facts.'
> (Wallis 1958 p.27)

By the late 1950s there was a much greater willingness
among planners to define their work in relation to
information. Planning involved the collection, processing
and supply of relevant land use information. The President
of the TPI, U.Aylmer Coates, asserted in 1958 that the
function of the planner was

> 'the collection and analysis of information -
> social, economic, technical and aesthetic - which
> enables him firstly to determine problems and
> subsequently to formulate solutions'.
> (Coates 1958 p.7).

This redefinition coincided with the cycles of British
development planning.

> 'The first record was of a given point in time, but
> in future it will be possible to record the rate
> and direction of change in the use of our land.
> This distinction between the synoptic and the
> kinetic view of survey will mark the essential
> difference between the first report and the second'
> (James 1955 p.97).

The object was the same: to bring irresponsible developers
of land to account. But the basis for accountability had
shifted, from the enforcement of standards to the detection
of trends. This was the essential basis for the method
mounted on land use records known as 'land use accounting'.

'Land is the basic raw material of the planner', wrote
Parry and Morris (1955 p.65),

> 'and in the same way that any efficient business
> maintains accurate and detailed accounts, so ought
> the planner'.

J.R. James of the MHLG repeated this claim.

> 'Accountancy for the rates and ways in which our
> resources of land are being used is the direct
> responsibility of all planning authorities, and
> though we are slow to realise it, is just as
> important as accounting for financial expenditure'
> (James 1960 p.191).

In the context of a suspected but unknown loss of
agricultural land to suburban uses, the British Association
passed a resolution in 1955 calling for a 'land budget' to
determine the use of all land, and Sir George Pepler
expressed a wish for a periodic Land Use Balance Sheet
(cited in Abercrombie 1956 p.35).

Then in 1955, the Ministry replaced Table III (as requested
in Circular 97/50) with a new Table 3 (Circular 9/55),
called 'Changes in land use in Town Map area'. The new
table represented

> 'a complete balance sheet of of all land uses
> within the Town Map area, including not only the
> main urban uses but also agricultural and
> undeveloped land, so that gains and losses in the
> several items can be set against one another'
> (James 1955 p.99).

As land use estimates were now required for 6 instead of 20
years ahead, statistics of land use change based on survey

rather than assumption would become available.

It is clear from the experiences of planning officers of the 1950s that information triumphed over document as principle of office management. Once, materials had been separated by kind. Map was filed with map, and text with text. However, land records systems accumulated documents only from the point of view of the information contained within then. They standardised and correlated individual particles of information until ideally a binary logic of present/absent governed every attribute. This was the opening to machine representation of planning information, and to a serious deepening of the technical content of the planning office.

Planners not only consumed information, they also produced it. The production of information by means of information culminated in the method of land use accounting, applicable equally to Ministerial returns and the Report of Survey. Such accounting practices were an example of how past learning was coming to dominate planners' current responses. Planning technique was driving the office towards a more records-based type of plan-making and control. It included a positive attitude to out-dated information which, instead of falling progressively into uselessness, was recuperated as a measure of change. Thus

concepts of 'change' and 'rate of change' were only grasped historically after the introduction of an apparatus of record-keeping and the evaluation of the first cycle of development plans.

2.2.4   Craft and profession

Although the professionalisation of town planners has been well served by historians (Cherry 1974, Hawtree 1975, McHardy 1978), the actual performance of professional planners after their institutionalisation has been strangely neglected. This section proposes that for much of the 1950s planning displayed all the characteristics of a craft, and that planners performed as craftsmen. When, at the end of the 1950s, machine and procedure-oriented forms of planning activity first appeared, the crafts in planning were put on the defensive.

The post-war planning and industrial legislation opened up a vista of unparalleled social control over irresponsible development. For town planners in particular, there was a sudden enhancement of their powers and scale of operation.

> 'When the purpose changed over to one of positive or constructive planning, the planning authorities... found themselves charged with a function for which their organisation... was not fully adapted'.
> (MTCP 1950 p.11).

In part this was a problem of administration; but it was also a problem of professional competence.

> 'With the passing of the Town and Country Planning
> Act, 1947, the planner became in central government
> and in local government, with the sad exception of
> many county boroughs, a master craftsman in his own
> right. Unavoidably, this newly won recognition and
> newly acquired importance could not deprive the
> planner of the habits and outlook acquired during
> his bondage. He possessed a "trained incompetence"
> for the tasks ahead. His need now was to define
> planning functions and determine the territory of
> which he was the new master'. (McCulloch 1952
> p.26).

By implication, the planning function was still undefined and the territory uncharted. To the question, what is planning, planners gave

> 'varied and different answers, each reflecting an
> interest acquired by training, hard experience or
> optative, and often, unrealistic exercises'
> (McCulloch 1952 p.27).

The standardisation of skills and the creation of a definite minimum level of competence was the rationale behind extensive professional activity of the 1950s. The official structures were duplicated with an unofficial structure of debate, advice, testing and organisation. The Town Planning Institute's Journal was expanded during the decade: submitted Development Plans were summarised in a standard format, the letters page was greatly enlarged, Branch meetings and activities were reported in full, and numerous review essays were published comparing and contrasting plans by selected topics. It would be relevant

to mention Paul Kreisis and his article on the role of survey. He was very critical of the isolated production of survey reports and plans.

> 'It should not surprise anybody, when surveys based on the intuition and idiosyncracies of their authors, without any but the most elementary check from any coordinating authority, do not render themselves capable of coordination'.
> (Kriesis 1954 p.228).

He argued for stricter controls on the methods used for formulating planning policy, and the development of a theory of planning survey.

The TPI itself became more involved in the promotion of planning practice. A Research Register was opened (and published in 1961), and Council requested its Planning Officers Committee - which had replaced the old TPO Section (Thomson 1950) - to collect members' opinions on the working of the 1947 Act. Six new Branches were formed during the 1940s: Irish 1941, South West 1945, South Wales 1946, East of England 1948, and in 1950 the North and West Midlands and South Eastern Branches. They were financially supported by the Institute and after 1954 enjoyed representation on the Institute's Policy and Finance Committee.

The increase in depth and intensity of professional culture reacted back upon the official structure of planning. J.R. James was careful to ensure that the Ministry's important

series of Technical Memoranda, detailing deficiencies and
areas of improvement in development plans so far completed,
was pre-circulated through this unofficial culture before
general release.

> 'In this way it will become possible to put
> together the various memoranda in an improved and
> and more solid form which will be responsive to the
> growth of knowledge and experience in town and
> country planning.'
> (James 1955 p.100).

J.N.Jackson (1958 p.217) criticised those planners who saw
survey as a matter of intuition or common sense, when if
fact it should be

> 'formulated on the basis of cumulative knowledge,
> the approach is scientific and methodical, and the
> results must provide the basis for any competent
> planning scheme'.

However, standardisation of skills, and making the
craftsman accountable to science, introduced a certain
tension into the performance of planning duties. Until now,
every standard had presupposed an interpreter, and this
alliance of craftsman and 'tool' had successfully preserved
the creative dimension to plan-making. Guided by experience
and 'craft secrets', the master craftsman of McCulloch's
description did not freely accept the degree of
conditioning demanded by the representatives of science.

Take, for example, an exchange of letters in the TPI
Journal during 1961. 'Pragma', the Journal's pseudonymous

commentator, complained that planning authorities were not sending out regular staff on land use surveys, merely inexperienced juniors.

> 'How wrong all this is!... The person or team
> preparing the plan must be the same people that do
> the land use survey. How else can they get to know
> intimately the area for which they are preparing a
> plan? How can they get the feel of the place?'
> (pragma 1961a p.155).

A planning officer who had himself conducted survey work on such a basis replied:

> 'by use of a coding system and a comprehensive
> "book of rules" I can produce an accurate and
> detailed field survey following only a couple of
> days' practice provided that the survey staff is
> reasonably conscientious'.
> (Harper 1961 p.213).

He argued that it was quite possible to understand a locality simply by consulting the detailed survey maps. Pragma remained unimpressed.

> 'The town map man must see these things for
> himself, and his approach to the land use survey
> will have a slant... which reflects not only the
> recording of information... but will enable him to
> produce a more sympathetic town map.'
> (pragma 1961b p.226).

What was at stake in this argument? Pragma wished to defend the autonomy of the craftsman against a division of labour, and the personal appropriation of knowledge against impersonal coding systems. He abhorred the thought of an office-based planner, whereas his correspondent freely accepted such a fragmentation of survey work and the reduction of his knowledge to a stream of statistics. The early 1960s was probably the last time that the all-round

craftsman could dispute specialisation and data-handling in the planning office, but the terms of this argument (personal, sympathetic representation of the people) were to re-appear later in the decade around the PAG report, and Thomas Sharp's defence of cartographic certainty and the public's right to know. Thus the threat to craftsmanship posed by new working practices preceded the inter-professional disputes of the mid-1960s, and is a better predictor of professional unease amongst planners than 'bids' (Faludi 1972) for leadership of the planning function by the non-planning professions. Struggles around the value of the crafts in planning define this period.

2.3   PLANNING CRAFTS IN TRANSITION

During the late 1950s and the early 1960s, the appeal to science and scientific method rested on a particular process: the breakdown of the compromise between craftsman and cartography. The assertion of planning methodology alongside new technologies of calculation was dissolving cartographic representations, and making it possible for the first time to develop planning policy other than through a map. The promotion of a domain of impersonal knowledge, crystallised in transferable techniques, attacked the very basis of craftsmanship: its

non-repeatable and personal skills, its specific and non-transferable experience. This was a crucial moment of transition in planners' mode of work.

The return of calculation in the 1960s, this time embraced by economic and geographic disciplines, caused a profound renewal of planning's complement of instruments. In particular, it rephrased planning's commitment to the social, and allied social and economic objectives in a form more favourable to the latter. Re-calculation of the social, and the eclipse of the craftsman, mark a definite 'threshold of modernity', which planning began to cross in the early 1960s. The concept of a threshold is taken up in the next few sections under three headings. Section 2.3.1 re-examines the history of the map in planning, and indicates the kinds of mutation that entered into it as fresh demands for policy guidance were made of it. Then section 2.3.2 sets out the alternative: quantitative description and projection. Quantification was not an end in itself but a means of asserting the centrality of economic processes, and of capturing their impacts inside a calculation. Finally, section 2.3.3 sets out the background to the politics of transition, and especially the role of American planners in re-articulating the anti-craft planners in British planning departments.

2.3.1 Planning as guidance

Throughout the 1950s and into the 1960s, planners wrestled with the form of the map as an instrument of planning. Successive mutations in the map form, induced by unavoidable local needs, prepared the way for an argument that repetitive mapping inhibited the making of policy. Plans as maps had to be supplemented by other documents, at once discursive and quantitative. This argument was successfully directed back upon the official structures of planning by the reform campaign culminating in the report of the Planning Advisory Group.

The 1947 Town and Country Planning Act required that a planning authority

> 'shall include such maps and such descriptive matter as may be necessary to illustrate the proposals'.
> (Town and Country Planning Act 1947, s.5(2))

The Act authorised a long series of maps that were to constitute the Development Plan: County Maps, Town Maps, Comprehensive Development Area Maps, Supplementary Town Maps, Programme Maps, not to mention maps generated by the obligatory Report of Survey, and modification maps produced to ammend the submitted Development Plan. The articulation of maps constituted the day-to-day work of the planner, and supported a discourse on cartography as its 'methodology'.

'The essence of survey is presentation in map or diagram form', wrote Lewis Keeble (1950 p.147), and though numerical tabulations could be 'elaborated indefinitely', survey maps were 'the basis for practically all of it'. The production of survey maps was a skilled activity, especially where original field surveys were required.

> 'Much of the information to be obtained from inspection needs the exercise of judgement if it is to be recorded correctly.'
> (Keeble 1950 p.118)

Recording data and mapping it were closely related activities; Keeble suggested using

> 'colours and notations approximating roughly to an extremely simplified version of those to be used on the final map', as supplemented by 'written notes and inset sketches'.
> (Keeble 1950 p.118)

Survey work was thus highly individualised, and relied on continuity of personnel within the planning authority. The final survey map consisted essentially of a series of expert observations. Maps that contained more information than the expert planner could digest fell into uselessness. It was to combat redundancy in survey maps that the technique of sieve-mapping was invented. Buchanon (1943), Madge (1946) and Tyrwhitt (1950b) had proposed what amounted to an 'arithmetic of maps', whereby compound survey maps could be divided into single-subject maps, and these subject maps added or subtracted as desired. This sieving of information was argued to be

> 'the only means available of reducing the numerous
> and complicated factors involved to comprehens-
> ibility'.
> (Keeble 1950 p.113)

Thus map articulation was designed to support expert personal judgement, and to enhance its grasp of the 'factors involved'.

Drawing up a plan took place literally at the drawing board. The technical problems of plan-making were essentially problems of drafting and presentation.

> 'The basic problem of presentation with most planning
> maps is to differentiate between areas used or to be
> used for different purposes, or to which a given factor
> applies with varying degrees of intensity.'
> (Keeble 1950 p.65)

The differentiation of the surface of the plan was a long and hazardous job, requiring an encyclopedic knowledge of colours, codes, hatching and lettering techniques. Initially, the MHLG had expected local authorities to submit development plans in line with a standard MHLG colour notation, but this proved costly and often uneconomic for the small production runs required.

> 'For many purposes - for example the preparation of
> modification maps - it might well prove that for a
> small capital outlay local planning authorities
> could equip themselves to deal with true-to-scale
> representations in say three colours, utilising
> their existing staff.'
> (Thorpe 1953 p.206)

The Ministry issued a black and white plan notation in Circular 92/51, but its detail and clarity were considered problematic.

'Where... a monochrome notation is used, the
replacement of the Circular 92 hand-drawn detail by
a more attractive notation, based on the large
range of machine-drawn hatchings and stipplings...
may well be worthy of consideration.'
(Kelf 1954 p.38)

In this phase of craftsmanship, therefore, cartography

greatly deepened and extended the planner's skills, while

lending a precise cartographic reference to every

discussion of policy. Conversely, there was little textual

support for planning policies. The 1948 Development Plan

Regulations were explicit that the Written Statement

accompanying the submitted plan should not amplify or

expand upon the map. The Written Statement was referred to

in Circular 59/48 as primarily

'descriptive and illustrative.... It is not desired
that the Statement should contain any reference to
arguments for or against the proposals'.

Instead, a Written Analysis accompanying the Report of

Survey was set aside for evaluation and discussion of

policy proposals. This was not a satisfactory solution when

administrative delays were taken into account.

'It must be remembered that the proposals contained
in a plan submitted in 1951 are probably based upon
surveys made two or three years earlier, and that
the time-lag between the technical formulation of
the plan and its final publication may in effect be
as much as five years.... Programmes devised in
1949-50 in many cases will have been completed by
the time the plan is published in 1953.' (Thorpe
1953 p.205)

From the mid-1950s a certain non-correspondence of plan and control began to appear. This non-correspondence took the form of a surplus of judgements, planning judgements that could not accumulate within the official planning system. Two kinds of surplus are of relevance (McLoughlin 1973 pp.121-6). The first appeared wherever a map description incompletely specified land use. For example, a Town Map recorded site boundaries and location, but did not specify the height, mass or orientation of buildings, the means of vehicular entry and exit, or the management of traffic generated by a new and more intensive use. In these cases, supplementary decisions had to be made by control caseworkers. The second surplus occured when a series or hierarchy of maps was not articulated in a coherent manner. For example, in rural areas the benefits of a large scale Supplementary Town Map were not available and control had to be exercised on the basis of the County Map, at a scale of 1:63,360. For regulating settlements of less than 2,500 people this was quite inadequate. Therefore, planning decisions for these settlements passed into the discretion of individual officers, or followed informal plans.

An inability to articulate planning maps, the dating of survey by cumbersome approval procedures, and the obscurity of planning policy within the development plan, all

contributed to a weakening of confidence in the map, and the ideal of a hierarchy of planning maps.

'Following the publication of the Barlow Report in 1940', wrote James Atkinson (1950 p.273),

> 'the idea became widely held that before a local plan could be prepared it was necessary to have a regional plan and before a regional plan could be prepared it was necessary to have a national plan'.

This idea, it transpired, represented 'a too common misunderstanding of the meaning and objects of planning' (Wells 1951 p.2). In fact, a national plan would have shackled local planning in a rigid code, could not have given guidance for specific construction projects, and was bound to be left behind by changing economic circumstances. Far preferable was a national land use policy, that produced decisions independently of any particular cartographic representation. The Schuster Committee (MTCP 1950 p.20) came down on the side of policy against design in its definition of planning, claiming that

> 'policy precedes in point of time the question of settling the technical means for giving effect to what {the local planning authorities} want to do'.

As McCulloch (1952) had observed, it was the equipping of planners with positive powers of development that enabled them for the first time to evaluate the need for a development ('value planning') as against its mere compatibility with a site ('place planning'). 'In logical analysis', he argued (McCulloch 1952 p.29), value planning

'precedes the function of the place planners'. The inevitable result of a shift to value planning, and its associated calculations of need, was to distance the essential planning activities from the drawing board, or at least to sandwich the development plan between a book of calculations and a programme for its implementation.

> 'A plan on a base map was still an essential end
> product, but its vitality as a technical document
> depended in part on the survey supporting it, and
> equally on the measure of order and feasibility
> contained in the programming.'
> (Lovett 1952 p.77).

Gillie and Hughes (1950 p.4) wondered if the 1947 Act required the planning authority to draw up a plan at all, for the Development Plan was only one of several ways of 'forming a policy in the light of which intelligent day to day decisions can be made'.

This radical critique disaggregated the plan hierarchy, prioritised policy decisions as against implementation decisions, and reclaimed surplus judgements in a more fluid planning capacity. Development plans were failing because of their inflexibility and narrow scope. From the mid-1950s planning authorities began to prepare informal, non-statutory plans as a way of absorbing decisions made in the gaps between official plans, and to avoid delay and imprecision in matching the rate of development. These 'bottom drawer' plans included redevelopment plans for areas of complex physical change (Lichfield 1956), plans

for small towns and rural settlements (Seale 1961), and specialised subject plans. Their advantages over official maps included a choice of scale, non-statutory land use classifications, and freedom in the form of associated written texts.

In 1962 the MHLG and MoT jointly authorised the new Town Centre Map. Its immediate objective was the replanning of central areas under pressure from commercial developers and the growing volume of urban traffic. But it was also an attempt to formalise non-submitted plans and to return accountability to decisions made in their name. The Map provided a quick assessment of the problems and possibilities of the town centre, as a basis for more detailed decisions. It was not a plan for submission to the Minister, but a document for storing the process of survey, analysis and policy-making that would lead up to the detailed decisions. The Town Centre Map was a strange, hybrid document. Policy had entered the map as far as it could go without breaking it asunder.

> 'The Town Centre Map... was intended to reflect more closely the actual planning process... It should emphasise that the thinking behind the proposal in an evolving plan was more important than the line on the map... Experience has shown... the importance... of presenting survey results and the thinking behind the plan as well as the draft map itself... It was important to emphasise the map as a planning process and not a finite plan.'
> (Scott 1963 p.60).

Lovett (1960 p.143) put this point succinctly:

> 'one of the lessons of post-war experience is that
> land use plans need to be sharpened by expression
> of policy in matters where cartography cannot
> suitably represent the planner's intention'.

However, it was never just a matter of finding a more suitable medium for 'the planner's intentions'. The new emphasis on policy went further, to question the nature of judgement, and the competence to judge of planners. The object of the planner had long been to reduce choice, to eliminate it, to present fully-formed the best solution to a defined problem. Craftsmanship was hostile to the intervention of lay people in the choice of means. The development plan system was designed to preserve a private and professional zone of judgement in the preparation of proposals. It was precisely this craft domination of the plan that came under attack from the early 1960s. In an article titled 'Regional science and planning in Britain', H.W.E.Davies (1962 p.316) argued that when faced with a laboriously prepared comprehensive Town Map, a planning committee had

> 'to choose between acceptance, without knowing
> anything of possible alternative plans, or
> rejection, knowing how much time has already been
> spent on the map.... It would surely be better to
> exercise the power of choosing a planning policy at
> a much earlier stage when a series of sketch plans,
> each showing a broad policy that seems technically
> possible, could be compared'.

The PAG Report of 1965 proposed extending the principle of the Town Centre Map over the whole country. High-level plans would no longer be responsible for detailed land

allocations, becoming instead written statements of policy. These statements would govern the low-level plan and equip it with the same survey and policy opportunities as the original Town Centre Map. The 1968 Act effectively legalised a situation where unofficial plans and judgments were playing as central a role as official plans. But in the process the craftsman's function was irredeemably socialised.

2.3.2   Calculation and the eclipse of the social

The introduction of new planning procedures and forms of calculation into the planning office has usually been taken to mean the adoption of distinct packages, to which could be attached an author or an acronym (the Lowry model, PPBS, linear programming, etc). But before the first generation of mathematical and computer packages we can point to an earlier series of calculations, which has enjoyed a certain anonymity because its members cannot be individualised by author. In between the craft skill and the computer model lie fragments of expertise split off from the craftsman and forced to circulate anonymously, as 'methods' without a 'methodology' to master them. The greatest cluster of methods concerned the measurement and projection of change. Planners embraced time as a measure of change, and purged

their professional contempt for change as a threat to stability. In the early 1960s, these methods were pressed into service by a re-emergent economic discourse. The post-war boom in production had thrown a new perspective on social defence. It was no longer enough to restrain and condemn development; economic forces had to be harnessed and directed towards social objectives. In this sense, the new methods were doubly significant: they made economics an object of study as well as a target of planning.

Planning's relationship to the economic had peaked in the middle and late 1940s when it looked as though, for the first time, physical planning would be reinforced by economic planning. While economic controls were abandoned very swiftly after 1945, nevertheless planners collected valuable experience of combined planning operations in drawing up programmes to implement the first Development Plans. What was novel in the programme was its domination by public sector investment, to the extent that construction consisted solely of disposal of these resources over time.

> 'Time zoning is now as important as use zoning...
> During the war the importance of the time element
> has given many people the opportunity to gain
> experience of logistics, to use the American term.
> Such experience must be used to the full in
> reconstruction'.
> (Pugh and Percy 1946 p.91).

Time planning was necessary to keep apart non-conforming

time uses; to reserve particular periods for development; to separate rounds of investment; and to combine building operations and ensure their simultaneous completion.

During the 1950s, as we know, the economic discourse was subordinated to the social. However, in the late 1950s and early 1960s a concern re-emerged with economic growth and its implications for planning, a concern still couched in the language of time. Only now, the concept of time had been rendered passive, an instrument of measurement rather than of investment. Its significance was condensed into the single word 'change'. Time was at the root of every planning problem: obsolescence and the lagging rate of replacement, clearance and overspill, and peak periods in traffic.

> 'Many of the changes in towns for which we must plan become problems mainly because we are not in full control of their timing. Time is as much an ingredient of planning as are land use, building development, or traffic, and must equally be brought into planning technique and policy.'
> (Littler 1962 p.201).

In fact, the planner's main hope lay in foreseeing the forces that gave rise to change and coordinating their timing.

Once, change had been a threat to plans and a cause of their failure. Now change was to be embraced and its forces mapped, measured and guided.

'We need to establish, measure and understand
distributions, relationships and trends: in order
to define problems more closely, to project trends
as part of forward planning and to discover how to
influence those trends.'
(James 1964 p.10).

Measured time was the precondition of an important

technical enterprise, namely, projection. Projection

summoned up an imaginary zone of calculation in which the

values of variables could be plotted and compared,

irrespective of current values. Thanks to projection, the

future ceased to signify an unwelcome excess over planned

provision and instead functioned as a space of comparison

between competing trends. Plan-making was to become

conditional on evaluation of these trends.

The implications of measured time were first explored in

the interpretation of urban traffic.

'Does a factual survey of existing traffic provide
sufficient information on which to base a
projection for twenty or more years ahead?'

asked F.H.Clinch (1961 p.229).

'There would be no greater folly than the
preparation of a highway plan to satisfy current
traffic needs only... Is it logical to project
ahead by an empirically fixed percentage or should
a more scientific assessment be made?'

Ideally, it seems, traffic growth could be broken down into

a series of growth factors, and projected individually.

This presented certain problems: a common space of

comparison was lacking.

'The wider the scope... the more complicated are

the calculations, and one hesitates understandably
to attempt to set off all such factors, with their
differing units of measurement, against intangible
concepts such as appearance, amenity and sense of
community.'
(Smart 1960 p.241).

The novelty of Traffic in Towns (Buchanan 1963a) is now

immediately apparant. It offered just such a space of

comparison, in the form of a cost-benefit calculation.

Buchanan's approach was to monetise all units of

measurement, and then make environmental quality a function

of investment in physical alterations. Areas could be

defended from excess traffic by an increase in investment

or a revision of standards. On the basis of a planning

calculation, then, the environmental quality of an area

with various combinations of investment and standards could

be directly compared.

'Nothing can detract from the service rendered by
Buchanan in bringing cost-benefit analysis into the
forefront of this debate... With the vast sums of
money at stake which Buchanan undoubtedly implies,
it is especially important that the financial
people on one side, and the planners on the other,
should find some common language in which to
converse.'
(Woodham 1964 p.300).

It is typical that projection was rehearsed in the context

of an economic calculation. If money provided a metric for

such calculations, then it also rehabilitated economics as

a tool of planning. For many years, planners had been

motivated by

'a danger that planning policies... will be finally
overwhelmed by "economic" pressures and popular

demands, and that the problems of excessively large
and excessively congested cities and connurbations
will be intensified'.
(Reynolds 1961 p.282).

Buchanan reversed this argument, by requiring the social

discourse in planning to state the costs of social

insurance. Traffic in Towns retained the traditional social

objective of 'environmental areas', or neighbourhoods fit

for families, but on an entirely new basis.

Buchanan did not abandon the goal of accountability when

envisaging a motorised future. He still supported the

original social objective of neighbourhoods fit for

families. The novelty of Traffic in Towns, however, lay in

the way neighbourhood planning was given a monetary

evaluation. The costing of 'environmental areas' injected

social insurance into an economic discourse. This method

provided a basis for choosing between different types of

neighbourhood on grounds other than the defence of family

life. For instance, one could now include reference to

trends in traffic and congestion, or to the resources

available to implement a traffic plan. In this way the

social strategy in planning was encapsulated, without being

completely refuted, by the economic discourse of the 1960s.

'Thus economic forces, which are often regarded as
the enemy of town and country planning, can, if
suitably corrected, be aligned to support that
policy, at least in the sphere of urban congestion
and urban planning.'
(Reynolds 1961 p.286).

The economic entered planning twice, once as method and again as target. In the first case, it allowed planners to go beyond the social discourse and to tackle urban diversity quite explicitly. The urban and regional planners had long been puzzled by the superabundance of individual characteristics displayed in settlements, apparantly defying enumeration. The problem was how to make them comparable; in what field of comparison could they be placed?

> 'Comparisons must be made between as many aspects of the plan and of its alternatives, as possible, and these can only be truly rational when, as far as practicable, like is compared with like.'
> (Smart 1960 p.241).

The most efficient solution was quantification.

> 'Provided a series of comparable numerical measurements can be devised which will effectively describe the characteristics of each of the individual objects to be compared, then a common measure can be calculated for them, even though the original set of measurements may be numerous and varied.'
> (Brenikov 1962 p.243).

In the early 1960s this was not necessarily an easy step to take, in fact, it was quite divisive within the profession.

> 'Certain shortcomings of the classical mathematical education of our earlier years are quickly spotlighted in professional life when we are confronted with the problem of classifying and interpreting masses of related numerical data'
> (Treacy 1960 p.52).

George Allen (1958 p.167) claimed that geography in Britain was sadly lacking in the necessary analytical tools, and

decided a

> 'major step forward would be if theoretical and
> applied economics and statistics, somewhat slanted
> towards the special interests of geographers,
> replaced much of the training in physical geography
> and especially geology which many undergraduates
> now receive'.

In the second case, the economy was reclaimed as a legitimate sphere of intervention. 'It is the job of the land planner to control the urban economy,' stated D.F.Harris (1962 p.290).

> 'No other administrator is concerned with the
> welfare of the economy as such... By formulating
> realistic planning policies and collaborating
> closely with other interested bodies, he should be
> able to maintain a reasonable balance of
> employment, population and housing in the urban
> area, and so ensure the orderly evolution of the
> town'.

Davies and Haggar (1961) isolated three pertinent economic measurements, and their implications for planning:

1. Size of labour force, which determined the size of the dependent population and therefore yielded land requirements for houses and services.

2. Employment structure, which implied a certain income structure and therefore demand for transport, retail and other services.

3. Employment distribution, which conditioned the journey to work and migration.

The economic discourse thus provided a basis for disaggregating settlements into a series of forces. Each

force could be both measured and guided. The settlement as a series of mutually enhancing and inhibiting forces defined the planner's sphere of intervention.

'A town does not exist as a separate entity in any but a physical sense... A town is merely a special event in a region... The first essential step is to determine the social and economic trends (population, housing, employment structure, journey to work, etc.) of the whole framework of settlements in a region.'
(Thomas and McLoughlin 1961 p.295).

It is necessary to remind ourselves that before the great intellectual inventions of the later 1960s, a lower strata of calculations had been invented that were no less essential. The making of unlike, alike; the incorporation of time; the creation of multiple forces; zones of imaginary calculation; choice from comparison - all these are the anonymous products of an economic discourse in planning. They represent so many preconditions of a rigorous mathematical treatment of urban and regional systems. At the same time, the economic discourse reversed the historic domination of planning by the social insurance strategy. Planning had to be made accountable to a broader range of forces in society, and this was only possible if the social was costed. The defence of social life now took place in the apportionment of 'public' and 'private' costs.

2.3.3   Craftsmanship and 'modernisation'

As the craft planners saw their historic leadership of the profession slipping away from them, there were renewed attempts to impose a craft model of activity upon the mass of planners. This professional and political crisis has so far been analysed only in highly abbreviated form as the TPI 'membership' debate of 1964-65. Even this episode has been carelessly reviewed because of the retrospective requirement to prove that town planning was a profession. Hence the limitation of analysis to the single question, could the planning profession lead the planning process in its own right, without external support or internal concessions? Explanation of the debate in terms of the membership and education policies of the major qualifying associations (eg. Faludi 1972) evacuates the planning office from analysis and ignores work-based divisions between planners. But what at one level was a conflict of professional allegiences, was at another a conflict over the erosion of traditional craft practices in the workplace.

It will be recalled from section 2.2.4 that during the 1950s, British planning was organised on craft lines. This meant, on the one hand, that techniques of planning were idiosyncratic and personal, developing within a subjective

division of labour between fellow craftsmen; and on the other, that new planners were recruited and trained on an apprenticeship basis, learning the all-round skills of the craft on the job and through personal instruction. The post-war planning schools hoped for nothing more than to emulate a successful planning office and the rule of a competent master craftsman.

From the early 1960s, it became less and less possible to sustain this model.

Externally, it was proving difficult to retain support for the precise implementation of social objectives developed by planners after the war. Town planning suffered from association with now discredited economic controls, and according to Kriesis (1961) the profession could make no advertisement for the virtues of a planned society out of the actually realised plans for neighbourhood, city and region.

> 'The term "the planners" has become one of
> opprobrium and we have reached the stage where
> anything that is unpopular is blamed onto the
> planners though the planners have no voice in it.'
> (Littlewood 1957 p.158)

Planners themselves were disillusioned at the loss of wartime momentum, and the reduction of democratic survey and plan to a long list of regulations (Lock 1964). At the same time, the planning environment was making new sets of

demands upon planners.

> 'The scale of town and country planning must be
> adjusted to meet changed conditions of industry and
> transport',

wrote Michael Wise (1960 p.35). Lichfield (1961) considered

this 'adjustment' to turn upon three questions: how to

remodel the town for the motor car, how to renew the 19c

housing stock at a faster rate, and how to create a

planning machinery adequate to these tasks. It could not be

assumed that the profession, as it was currently equipped

and staffed, could rise to the challenge. John Jefferson,

TPI President for 1961-62, did not hesitate to speak of a

crisis,

> 'a fork in the road - one path leading to fame, the
> other to oblivion.... At the present time there are
> not enough qualified men and women to cope with the
> volume of work in this country.... Therefore if
> planning is to go forward as it should do we must
> recruit more men and women to the profession'.
> (Jefferson 1961 p.317).

Internally, the craft content of the profession was being

diluted by new sources of recruitment. There were more

entrants coming through the undergraduate and postgraduate

planning courses, and geography and economics were

supplying a greater proportion of graduates. A survey of

staff employed in County Planning Departments in 1961

showed that of 1,776 people working in 63 authorities, 303

(17%) had completed a university education, and of these

303 graduates, 167 had taken geography, 27 economics and 26

planning. 43% of graduates had entered planning in the last

2 years. Whereas only 5 heads of department possessed
degrees, at least 12 deputy heads were graduates (JTPI
1961). These figures indicate a progressive youthening and
diversification of the profession by means of a larger and
more varied intake of young planners.

In considering this complex picture, one school of thought
has seized upon the increase in graduates and geographers
to propound a theory of external propulsion.

> 'When planning again turned to geography around
> 1960 it coincided with the "invasion" of geography
> by mathematical modelling, cybernetics, and the
> "systems approach" introduced through American-
> style transportation planning. These various
> computer-aided techniques and the whole systems
> approach invaded planning and promised to fill any
> voids that might exist in its ideology or
> performance.'
> (Ravetz 1980 p.204)

This interpretation has the effect of exaggerating the
contribution of higher education and the 'new geography',
while minimising the role of the planning authority in
selecting or training staff. To be precise, it neglects
the determining value of planning work itself. The question
would be better put: how was any particular learning used
or altered by planning authorities? How were academic ideas
translated into practice, and which ideas were selected for
translation?

What actually happened in the early and mid 1960s was a
re-aggregation of planning personnel around a different and

recognisably modern model of planning, in which experience succumbed to information, personal judgement to a procedure, and manual computation to an electronic calculation. This extended (and unfinished) process of replacement can be analytically divided into two great phases: the external tutelage of a section of the profession in systematic planning methods, and then the transfer of leadership to an indigeneous grouping.

While new staff entered planning in the early 1960s, that of itself did not pose an alternative to the crafts in planning. The task fell instead to the advanced planners and planning agencies of North America. From the early 1960s a small number of British planners acted upon their own problems by searching for an American example.

> 'In recent months, judging from articles in technical and professional journals, an increased number of British planners, engineers and architects have been crossing the Atlantic, and they have contributed to the general fund of information useful to planners here.'
> (Robinson 1962 p.162)

It became necessary to supply brief histories of American progress to a British audience.

> 'In the mid-1950s the major transporation studies demonstrated how mechanised methods could make the accumulation and analysis of large masses of data systematic, searching and above all productive.... Almost as a by-product new approaches were suggested to the broader problems of analysing and forecasting urban growth.... As planners became more involved in and familiar with these studies, opportunities were sought to express general development relationships in a similar fashion, in

> other words to produce land use models.... Complex
> relationships, such as those between traffic and
> urban development, are best expressed in
> mathematical terms as a series of equations which
> together comprise a mathematical model.'
> (Juster 1963a p.272)

It was in a discourse on traffic that mathematical

calculation and project procedure first entered British

planning practice; and conversely, it was to solve traffic

problems that mathematics and procedure were first applied.

> 'Just as the problem of traffic is evolving,
> methods of study are becoming available which
> hitherto have been well-nigh impossible. Data
> processing, computers, punched cards, are fast
> becoming everyday words in the vocabulary of the
> traffic planner.... American methods must be
> studied and applied to English situations.'
> (Wood 1963 pp.265, 271)

Before 1963, local authority engineers, public transport

operators and workers at the Road Research Laboratory could

all have pointed to a substantial body of British traffic

measurement and projection in the form of the Origin and

Destination study (Knox 1954, Coburn 1962). But what the

land use/transportation studies promised was a unification

of town and transport planning at the level of method. The

turning point was the London Traffic Survey, begun in 1962.

> 'The projected traffic survey will be on a scale
> far greater than anything known to have been
> previously attempted even in the United States of
> America.'
> (Clinch 1961 p.229)

London County Council did not have the skills available to

mount such a study itself, and commissioned an experienced

American consultancy, Freeman Fox Wilbur Smith and Partners, to organise it. They in turn secured the services of IBM (UK) in writing a computer program for the traffic model, a program which was mounted on IBM's two latest machines, the 1401 and the 7090 (Miller 1963, Solesbury and Townsend 1970). The scale of the London survey was a complete novelty: 900 traffic zones, 135 cordon counts, 50,000 household interviews, a census of commercial vehicles and taxis, and 400,000 punched card records (Gebbert 1963). The study's brief, to review transport needs, assess modal split, project travel patterns and test alternative regional transport networks, led the consultants to choose 'sophisticated techniques of analysis and traffic projection based on the gravity model' (Juster 1963b p.302).

Land use/transportation models of this kind depended on an exogeneous input of future land use allocations, which - it began to be realised - created a golden opportunity for planners to intervene.

> 'Planners will have to meet the traffic engineers
> on their own ground and not merely sketch out
> theoretical, intuitive circulation systems on
> paper.... We surely need to put our ideas on urban
> form and design on a sound quantitative basis first
> of all.... The planner could bring the architect
> and traffic engineer together.'
> (Hillier 1963 p.51)

The American reliance on abstract and external sources of authority prompted British visitors and admirers to

question their own craft traditions. In particular the hope
was voiced that planners might be made formally accountable
to a general theory of planning. For example, Dakin (1962
p.229) argued the need for a

> 'complete overall theory which would be a
> justification for the academic and professional
> independence of planning'.

He cited Davidoff and Reiner's 'choice theory of planning'
as a possible contender; while Guthrie (1964 p.456) claimed
that

> 'the integration which is taking place within the
> conception of computers and cybernetics gives an
> indication of what might be possible in land
> planning'.

A general theory had tactical uses in the early 1960s: it
announced as fact a new sphere of intervention, and claimed
proprietorial rights over it. The craftsman was debarred
from entering. The chain of revisions to planning theory
reached its outermost limit with McLoughlin's definitive
statements on the nature of planning in 1965 to 1967. Here,
planning was defined as essentially a control activity,
parallel to a rapidly changing planning environment.

> 'The emphasis in planning is therefore likely to
> shift yet further away from the "master plan"
> concept which derives directly from the
> profession's history and which lays considerable
> stress on physical form, building and construction,
> rather than on interaction, behaviour and change'
> (McLoughlin 1965 p.260).

American leadership was necessarily external. It provided
the unity and shared identity British planners were

seeking, without actually organising those planners. It generated concepts and applications which British planners adopted as their own, but without direct control over their use or context. Finally, it attracted a wide range of planners and specialists, irrespective of their disciplinary origin, when in local planning authorities they were denied cooperation by a craft division of labour. This is why Americanisation of the planning concept and its detailed application was the crucial factor in detaching a body of planners from the craft majority in the profession. And conversely, this is why in the early-mid 1960s there was a constituency within the profession that lacked adequate representation within the structures of that profession.

The debates within the TPI during 1964 and 1965 both reflected and further complicated this transition. Colin Buchanan's scintillating Presidential Address of 1963 revived the problem of the historic division of labour between planners and architects and other professions in the development process. His intervention was widely seen as approving an express route to TPI membership for the architectural profession, and therefore the consolidation within the Institute of design modes of working. In October 1964, TPI Council proposed a two-tier membership structure to accommodate professionals whose first qualification was

not in planning, and a relaxation of entry requirements. But in rather less time than Wilson's modernising government enjoyed, the statement was decisively defeated at an Extraordinary General Meeting in January 1965, and then in the June 1965 elections the reformers were swept from the Council and Lewis Keeble, symbol of 1947, placed in the chair.

Membership reform attracted criticism from not one but two camps within the profession. The first consisted of the original protagonists of the 1947 system, who wished to retain a craft model of work but on the basis of a definite separation of duties between planner and architect. For Keeble (1965 p.358), the planner could call upon other workers up to a point, to establish the real facts and limitations of a site,

> 'but from then on one is inevitably on one's own with a drawing board and a lot of maps, diagrams and tables. No-one else can help except by way of amplifying or clarifying information until a draft plan has been prepared and is ready for evaluation'.

The second camp has been mentioned already, and grouped together planners with a greater interest in systems and their analysis. These planners resented a return to architectural methods of work and a fixation on buildings and places, at precisely the moment they were attempting to extend the life of the profession into an era of systems

control.

> 'The planner's skill must be firmly based on the
> understanding of locational relationships, the
> projection of these on the basis of different
> assumptions, the evaluation of alternative courses
> of action thus derived and the making of consequent
> decisions'.
> (McLoughlin 1965 p.261).

An identifiable core of calculations and procedures defined

planning as a guidance system, and it was more necessary

for the Institute to represent these high-level specialists

in systems guidance, than to incorporate low-level

specialists (in housing, transport, urban economics, etc).

It now seems a somewhat bizarre alliance, of corporate

planners and methodologists, against the traditional

sources of the profession. What Keeble and McLoughlin

shared at the time was a desire for a unitary profession

and a codifiable base of knowledge. This alliance was

sufficient to see off those planners who wished to share

tasks on a project-by-project basis with other development

professions. Yet as an alliance it was quite impossible to

maintain for long. This was manifest even as Keeble took

the chair of the Council, when Walter Bor delivered a

stinging retort to the President's Address.

> 'Planning... is not a drawing board activity for a
> single individual. In a great city it is a highly
> complex operation where such things as primary road
> networks, modal splits, social satisfaction,
> employment difficulties, housing standards and
> leisure problems are all interwoven and require
> complex analysis to formulate properly a
> comprehensive plan.'
> (Bor, in Keeble 1965 p.363)

He continued:

> 'planning is certainly a profession; the argument
> must not be on this score but rather on what is the
> best way of training planners to work on the new
> type plans'.

With the publication of the PAG Report in 1965, further

cracks appeared in the alliance. Thomas Sharp (1966 p.210)

mounted a defence of the craftsman at work, observing

critically that PAG replaced definitive maps by imprecise

written proposals, and detailed land allocations by

> 'simple   cartoons;   mere   broad   elementary
> illustrations; mere blobs of colour placed on
> sheets of paper completely innocent of all precise
> information as to the towns to which they refer'.

In terms reminiscent of the 1940s social discourse, he

argued that the loss of cartographic certainty ruined

forward planning, and prevented the public from knowing

what was planned for their area or how they would be

defended against irresponsible economic forces. Once again,

Walter Bor took responsibility for answering. He accused

Sharp of 'fighting a rear-guard action, trying to defend

the status quo and resist emergent new ideas' (Bor, in

Sharp 1966 p.214). Sharp responded as though he were still

fighting the battles of his youth: systems planning

reminded him of nothing so much as perpeual interim

control, planning without plans as practiced under the 1932

Act. McLoughlin's (1966 p.344) famous jibe at 'the

Luddites coming to smash the computers with their 6B pencils' should confirm for us the generational nature of the difference between the two partners of the alliance. These were generations defined not so much by age (witness Bor's participation in the system planners' cause), as by possession of a concept; and in several ways the apogee of this concept had yet to be reached.

The second major phase of the transformation of planning in the 1960s consisted of the delegation of leadership from the American planners to a British leading group.

Precisely because the craft organisation of planning authorities prevented the adoption of a new model of plan-making, the systematic planners were forced to duplicate the official structures of planning with structures that were more amenable. The establishment of research centres, sub-regional study teams and new planning schools and curricula led to fresh associations between planners isolated in their other work, and offered them new leverage on existing practice. At the same time, it domesticated the American experience and raised the possibility of a transfer of competence. The delegation of leadership to an indigeneous grouping can be followed under two headings. The first is research, and the campaign for research within planning and about planning. The second is

education, and the movement for systematic planning teaching.

The initial demands of the systematic planners were for a national research organisation, research into planning methods, and socio-economic research itself. The cybernetic definition of planning required that an organisation could control only so much of its environment as it was able to ingest as information. Thus research extended and refined the degree of control planning organisations exercised over their environment. For many years, planning research had been tied to the craftsman's demand for standards. Such comparative information formed an inert stock at his disposal, useful only as it could be skilfully interpreted and employed. All this changed in the 1960s. What kind of system could produce the information needed for planning? How could the influence of the planner upon his stock of information be limited or excluded? The planner had to bear a relation of exteriority to his knowledge of the outside world. This new objectivity pulled attention back from land use to the methods for knowing and guiding land use.

Mercer (1962 p.14) was the first to call for an 'operational methods agency' with a 'methods development section', which would generalise methodological advance from one office to another. A selection of local

authorities would participate as 'testing stations' for new methods.

The TPI, through its Research Committee, took up the idea of a Land Use Research Trust to be financed by the development professions, and got as far as negotiations with RIBA, RICS, ICE and IME before settling for

'A central coordinating body deriving funds from government sources, trusts and industry... free from changing party political pressures' (TPI 1964 p.164)

In September 1963 the Institute hosted a Conference of Urban Research Workers, attended by 160 people including 60 from the research staff of local authorities.

'This was probably the first attempt to bring together on a national scale a representative group of people concerned with research for urban planning.' (TPI 1963b p.4)

and it endorsed the need for a national research council, an expanded planning team including economists and sociologists, and new priorities in applied research.

'The aim of research... should be to establish models of the function of planning... together with the study of the control system for the whole process, so that the effects of decision-making could be understood.' (MacKenzie, in TPI 1963b p.14)

In 1964 Wilfred Burns assumed the chair of the TPI Research Committee and radicalised its objectives to include joint meetings with research workers, and a project for the

standardisation of data collection, 'to ensure that modern techniques including computers are used as widely as possible' (Burns 1966 p.126). A successful Summer School workshop on 'The use of computers in planning' (Cowley 1963) was the stimulus for a Computer Sub-Committee to the Research Committee, chaired from 1965 by Leslie Jay. This marked the highpoint of purely professional influence, however, and thereafter advances were as likely to be made by private or public initiative as by the TPI.

There was resistance within the Civil Service (as described in Lichfield 1966) to research foundations that grouped research by its point of application *rather* than by its scientific origin, so the TPI and central government planners around J /ℳ/ James reconsidered a private research agency. This group arranged an international seminar on urban research in Cambridge in October 1965, backed by the Ford Foundation and chaired by the Minister of Housing and Local Government, Richard Crossman. Crossman's personal support for a research institute confirmed the opinion of his own Ministry's Urban Research Advisory Group that certain topics, such as urban structure and planning methodology, enjoyed no tradition in this country. As a direct result, the Ministry assisted in the formation of the Centre for Environmental Studies in 1966, with the backing of a five-year grant from the Ford Foundation (Lichfield 1966,

Llewelyn-Davies 1967).

Also in 1965, Crossman anticipated a new city-regional unit
of government by asking Leicester, Nottingham and Coventry
to set up special teams outside the normal political and
planning process that would apply the lessons of the PAG
Report and indicate the potentialities of a new mode of
plan-making. These sub-regional studies have received
considerable attention elsehere (Leicester/Leicestershire:
see McLoughlin 1969, 1974. Nottingham/Derbyshire: see
Thorburn et. al. 1970, Steeley 1982. Coventry/Solihull/
Warwickshire: see Wannop 1982). In this context it is only
necessary to say that their novelty lay not only in their
output but also in their favoured position beyond
day-to-day pressures. McLoughlin for one, concluded that
the sub-regional studies had been less successful in
structuring the growth of their regions, than in
stimulating the intellectual growth of the study team
members.

> 'This as much as anything was the result of being
> able, both as individuals and as teams, to consider
> the function of planning, an opportunity rarely
> afforded in general local government work'
> (McLoughlin, in Hurrell 1972 p.55).

This was an important justification and one repeated
elsewhere. Harry Noble, founder of the Planning and
Transport Research and Computation Company in 1966, argued
that while planners were increasingly aware of the

contribution of systems analysis and computer science,
there was also

> 'a wide sense of frustration at the lack of time,
> expertise and resources in the average planning
> office to enable these techniques to be taken very
> far'.
> (Noble 1966).

PTRC offered a supportive environment outside the planning
office, where computing and programming could be performed
on behalf of local authorities, seminars and training
courses conducted, research registers maintained, and
information relayed amongst PTRC subscribers. Similar work,
at a distance from the planning office, was carried out by
the Building Research Station. After a successful symposium
in 1965 on urban planning research, which included reports
on network analysis and the urban design process (Dick
1966), an Urban Planning Division was created. Headed by a
mathematician, it sought to develop the use of mathematical
techniques within planning, most notably in P.H.Levin's (eg
1967) OR studies of the planning process.

The net effect of these and lesser research initiatives was
to erect a research superstructure across the planning
activity in Britain. It assumed rights of independent
review and correction in the name of a theory of the
planning process. The research superstructure shifted the
centre of gravity of the profession outside of itself, and
made it accountable to groups other than the planners

themselves. The difference between the early and late 1960s can be summed up by looking at the changing content of TPI Branch meetings. At first, speakers tried to interest members in the methods applied to other branches of government. R.A.Ward (1962) spoke to the South Eastern Branch on operational research in local government, and the uses of punched card analysis; L.F.Gebbert (1963) addressed the West Midlands Branch on automatic data processing in traffic surveys; and L.S.Jay (1955) attempted a matrix interpretation of East Sussex's journey to work for his South Eastern audience. In the later 1960s, however, speakers were able to concentrate on methodological renewal in planning itself, and were as likely to come from the research superstructure as from practice. Thus Peter Wood (1967) described the use of computers in planning to the Scottish Branch; McLoughlin (1968) previewed planning techniques of the 1970s for the West Midlands Junior Section; and John Friend (1970) spoke simply on 'Operational Research in planning'.

The domestication of leadership was completed by the defeat of craftsmanship in the planning schools.

Since the war, and no doubt before then, the schools had modelled their practice on the apprenticeship and the transmission of skills from master to pupil by practical

experience. The planning school of the 1950s idealised and duplicated the planning office.

> 'In the studio, problems very similar to those found in actual practice are examined and solutions are sought. In a school they may be arranged in a fairly logical order.'
> (Stephenson 1951 p.86)

Teachers combined tutorial supervision and lecturing with consultancy, so planning education consisted of a high magnification of a craftsman's work, an opportunity for a professional to turn aside from the board and explain his work.

So long as the craft model of plan-making held sway, the performance of planning remained a personal skill and unavailable as an object of analysis. Only the external-isation of craftsmanship in a number of definite rules permitted the teaching of planning as an impersonal rule-governed activity. It was no accident that educational reform and the application of systems ideas came in the same package. 'Education, office work and research are seen in isolation', argued Travis (1964 p.98). Ideally, they would be united by a common theory of planning. Why theory?

> 'Good practice in any profession rests on sound theory, which is something more than a mere description of practical aims,'

wrote Holliday (1966 p.289). There was a necesary distinction between 'genuine theory' and the kind of theory which practitioners themselves produced, the latter being

'no more than the transmission of practical experience'. It could hardly be more explicit: the craftsman must be made accountable for his actions, he must be made to account for his actions in the name of 'theory'. And this theoretical foundation for planning was, by definition, public property. In their demand for planning theory, then, the new researcher-lecturers hit upon the craftsman's weakest link. Planning theory dismantled the private transmission of skill; a credentialist route to professional competence undermined the apprenticeship and the teaching style embodied in it. Planning theory shifted planning education from duplication of the site of work to simulation of the activity of planning.

Moreover, as guardians of planning theory, the planning schools of the middle and later 1960s reserved the right to diagnose and prescribe for practice. This manifested itself in a series of interventions by the more progressive planning schools, especially the public sector colleges and polytechnics, in the re-training of qualified planners. For example, the Town Planning Department at Lanchester College of Technology (Coventry) arranged a number of seminars for professionals, beginning with 'Town planning and the computer' in March 1966. Peter Wood (Liverpool) and Ted Osborne (Coventry) described data storage and analysis in the Architecture and Planning Department in Coventry, while

Alan Wilson spoke on 'mathematical urban models'. Also in March, the Lanchester school took over the 'Current practice notes' in the TPI Journal. Expanding the title to 'Current practice and research', the new editors criticised the lack of an essential core of professional knowledge, and proposed to turn the review page into 'a valuable source of reference of planning technique' (JTPI 1966a p.105). Subsequent courses and conferences at Lanchester included 'Social objectives in town planning' (October 1966), 'Town planning and data processing' (March 1967), and 'The computer and town planning - mathematical models' (June 1968). Other short courses at Brixton, Twickenham and London Polytechnic reveal their content in their title: 'Computer techniques in town planning', 'The application of new techniques to town and regional planning', and 'Computers for town planners'.

The new generation of lecturers within the planning schools was integrated with practice less by consultancy than by research. A survey of current research in the schools in April 1966 revealed only a modest output (JTPI 1966b). It included work at the Leeds School's new Planning Research Unit on employment forecasting, modal split and design models; a retail market potential model for Haydock Park at Manchester University; and the application of statistical and computer techniques to the Coventry sub-region at

Lanchester. However, in 1969, Anthony Goss (1969 p.205) was able to report research activity in 12 schools. He acknowledged the problems of pursuing research while financially insupported:

> 'There is a limited tradition of research allied to planning education; this has yet to be built up.'

This period of 'building up' began with the addition of planning and postgraduate grants to the Social Science Research Council in 1967, and ended with the formation of the Education for Planners Association in the early 1970s as the researcher-lecturers' caucus within the education system. Huw Thomas (1980) has provided useful evidence that the planning schools absorbed a large proportion of social scientists in the late 1960s and early 1970s. They generally had less experience of planning practice than their colleagues, and were not usually members of the planning profession (or any other). They attracted impressive sums of research money for quantitative and computer-based projects (see also Eversley and Moody 1976).

Neither the traditional sources of the profession, not the non-technical craftsmen who allied with McLoughlin in the 'membership debate', could withstand the erosion of the crafts at its very roots, in the apprenticeship. At the same time, the researcher-lecturers claimed the right to test planners and to set standards for the planning process. Here too American guidance was usurped. With a

coherent constituency in the planning offices, and an emergent research community in the schools and research centres, the complex assumption of leadership from US practitioners was almost complete.

2.4   COMPUTERS AND INTELLECTUAL MACHINES

Planning in the middle and late 1960s entered its most dramatic phase with the introduction of computers and the systems they made possible. Strangely, historians of this recent period have had little to say about the use of machines in planning. Instead, they have preferred to give an account of the ascent of reason, or 'rational choice' (Marshall and Masser 1981 p.127), or 'the rise and fall of rationality in British planning practice' (Breheny and Batey 1981 p.117). One would not suspect a technological development lay embedded in the turn to reason, or that previous rounds of investment in technical aids had prepared the planner for the computer. Perhaps the computer was something more than a dutiful servant in the planning authority; perhaps it was also a means of reorganising its relations of work.

In fact, in the notion of a 'planning process' the computer provided the metaphor of the decade. Was it possible,

asked the first systematic planners, that an organisation could be programmed like a computer? In which case, the program for a planning organisation would take the form of a sequence of instructions directing it to collect data, analyse it, consider alternatives, evaluate them, and choose the one most consistent with the organisation's objectives. The chief novelty, then, of the discourse on methodology was the discovery of the programmable organisation, with the 'planning process' as its first stored program.

Section 2.4.1 begins by exploring the genesis of the concept of the 'planning process', and how computer-based systems were envisaged as operating. Section 2.4.2 looks in more detail at local government's acquisition of computers, their relation to earlier forms of calculation technology, and the circumstances in which planners first met and employed computers. Finally, section 2.4.2 traces the lines of convergence between the computer and record-based land use accounting, in the form of the data bank.

2.4.1   Planning as stored program

Under craftsmanship, learning accumulated as a sum of personal experiences. Methods of working could be

exchanged, but they were strictly incommensurable. Choice

between them lay in personal preference. Similarly,

information was never refined to any greater degree than

the craftsman could handle unaided. The significance of

survey material or statistical data depended on the skill

and dexterity of the planner. A few mutations in the craft

model have already been noted: standardisation of

documents, comparative information for standards, regular

map notations, punched card computation, etc. However, it

was the arrival of the computer and systems analysis that

most disturbed the crafts in planning. With the computer

came 'machine-like thinking', thought expressed as a series

of executable instructions.

> 'We know that planning is generally practised under
> manual, traditional methods,'

wrote Anthony Catanese (1967 p.451), but

> 'we must evaluate the success of this practice and
> try to see how automation could improve upon it'.

Evaluation implied shifting the balance back from the

self-documentation of the craftsman to the impersonal

descriptions of the observer. Planning was to become an

activity for others, not just oneself, and therefore a

universal object that all could see before them and discuss

candidly. It was the threat (or promise) of computerisation

that first prompted the enumeration of activities in the

planning office.

> 'It is the use of computers that brings about the
> need for rigour in carrying out the planning

> process.'
> (Cripps 1969 p.195)

> 'Planners will have to analyse their systems and
> produce the instructions for these machines to work
> on.... The utilisation of computing power by
> planners will involve them in taking a stock of
> their knowledge. It will also require them to state
> their objectives and their methods of work
> clearly.'
> (Gaits 1967 pp.102,101)

Extreme scepticism was reserved for the planner who claimed

to operate satisfactorily without stated objectives or

clear methods of work: such work had no definable structure

nor any means of enhancing its efficiency. It was suspected

that craft forms of work rested too strongly on unsupported

personal judgement. The craftsman's personality created

excessive variation in the fields of knowledge and action.

> 'The plea... was for the introduction of a systems
> approach... for quantification where possible and
> less blind reliance on professional judgement.'
> (Stewart, Armstrong and Eddison 1968 p.57)

What was absolutely decisive was that the systematic

instructions so produced did not return to the craftsman as

a guide to practice, a kind of external constraint on his

personal performance. Instead, they were invested in a

discourse on methodology. This discourse had as its target

not the individual planner, but the relationship of all

planners to their 'means of production'. Methodology was an

impersonal discourse on the management of technical

relationships. Its sole objective was to purge plan-making

of personal variation, to plan planning. To this end, the

trusted professional craft planner was continually abused

as 'untrustworthy', 'speculative' and 'inconsistent'.

> 'New methods aided by enormously improved
> calculating machines will soon allow us... to
> prepare plans with much of their speculative
> element removed as the result of previous
> experiments with artificially constructed models.'
> (Brown 1966 p.9)

> 'City regional planning may deteriorate into an
> exercise in graphics if it is not based on adequate
> data and the use of more sophisticated analysis and
> design techniques.'
> (Reece 1966 p.151)

In March 1962, the TPI's South Eastern Branch heard a talk

from Richard Ward on 'Operational Research in local

government - the use of punched card analysis and related

systems and their application to planning'. A bemused

member of the audience suggested 'Town Maps in ten minutes'

as a better title (Ward 1962). Yet only five years later,

Catanese (1967 p.448) was arguing that

> 'automation is... the best term to describe what
> has been happening to town planning in the United
> States and Great Britain since World War II'.

Other planners were not slow to forecast the plan of the

future.

> 'Mathematical models can be built up and have
> proved useful in the projection of information....
> Perhaps most astonishing were the possibilities of
> designing a new town by computer and evaluating the
> costs of variable allocations of uses.'
> (Wood 1967 p.111)

> 'It is not beyond the realms of possibility that,
> suitably programmed and fed with the information
> detailed above, a computer could produce an urban
> plan. This plan would define both the location and
> the quantity of functions to be provided, and it
> would remain only for the planner to detail the

> design of these functions for a complete and complex development plan to be produced.'
> (Simmie 1967 p.454)

The actually existing planning systems to which these possibilities were addressed were, of course, nowhere near as automated. The immediate problem for them was the uneven development of technology across the planning authority.

> 'If part of the system is to be automated, eg. the data bank component, equal attention has to be given to the automation of other components if we wish to receive the full benefits of computer-based systems.'
> (Cripps 1969 p.189)

It is this human-technical hybrid object which attracted the term 'planning process'. Imagine the planning authority as a computer. What would be its first stored program? A sequence of instructions, with many loops, inputs and outputs, directing the authority to set objectives, collect data, examine alternatives, evaluate them, implement the selected option, monitor it and revise objectives. Or more realistically, we can conceive of a planning authority that unevenly transfers to machines mechanisable sub-procedures of the planning program handling data processing and associated tasks. Whether as an object of the imagination or as an actual project, the computer provided the most daring metaphor for the planning authority's function. It is not necessary for a computer-based planning system ever to have come into existence: the discourse on methodology redescribed planning 'as if' organisations were programmable.

2.4.2   Technology transfers

The historians' indifference to the technical content of planning has led to silence surrounding the introduction of machines into planning work. Were new machines compatible with preceding rounds of investment? What new functions were carried into the planning office on the back of the computer? Perhaps exaggeration of the potential of the computer by contemporary planners has combined with the very real technological advances since then to give the impression of a significant resource at the planners' disposal. Yet for several years the entire land use record of London County Council was carried on a mainframe with 14K RAM (Simmie 1967a p.12). Because of the small gap between electro-mechanical and electronic calculating machines, the conditions of technological transfer are important for explaining why planners preferred computers to punched card tabulators, and the positions new technology occupied in the planning system.

Hidden from history by the immense prestige of the electronic computer is the punched card machine. Punched card technology was already 70 years old by the time computers entered commercial production in the 1950s, yet it did not yield immediately to electronic machinery. Many local authorities replaced their punched card installations

for the second time in the 1950s, and only switched to a computer in the early 1960s. In Cardiff, for example, the Treasurer's Department passed through two generations of electronic calculator in the 1950s, before inviting three computer manufacturers to make a fesibility study of a computer-based accounting system. In 1960 an ICT 1202 machine was purchased for £76,000 together with two large calculators, to use on payroll, stores and eventually rate demands. Similarly, in Kingston-upon-Hull, a calculator was bought in 1957 and only on the success of its performance was a computer installed in 1961. Finally, the City of Manchester's Treasurer employed two calculators in the 1950s before securing an ICT computer in 1960. In all instances (ICT 1960), the deciding factor in installing a computer was continuity of peripherals, records and operational knowledge with preceding generations of punched card machinery.

In December 1962 some 24 local authorities had acquired or ordered a computer. This figure doubled each year for the next two years, and a new wave of purchases after 1968 lifted the total of computer-owning authorities in 1972 to 252 (Table 2.1). In 1962 the county councils accounted for half of all computers in local government, with the county boroughs second and the non-county boroughs close behind (Figure 2.1). However, by the mid-1960s the county councils

TABLE 2.1   Computers ordered or acquired by UK
                   local authorities 1962-72

Class of authority	1962	1964	1966	1968	1970	1972
County Borough	6	18	36	55	69	77
County Council	12	28	36	45	58	65
Borough	5	10	29	34	58	83
Urban District	0	1	6	11	32	49
Rural District	0	0	0	4	19	28
Joint Computer Committee	1	1	1	4	13	16
New Town	0	1	1	1	3	6
TOTALS	24	59	109	154	252	324

FIGURE 2.1   Distribution of computers acquired or
                    ordered by UK local authorities 1962-72
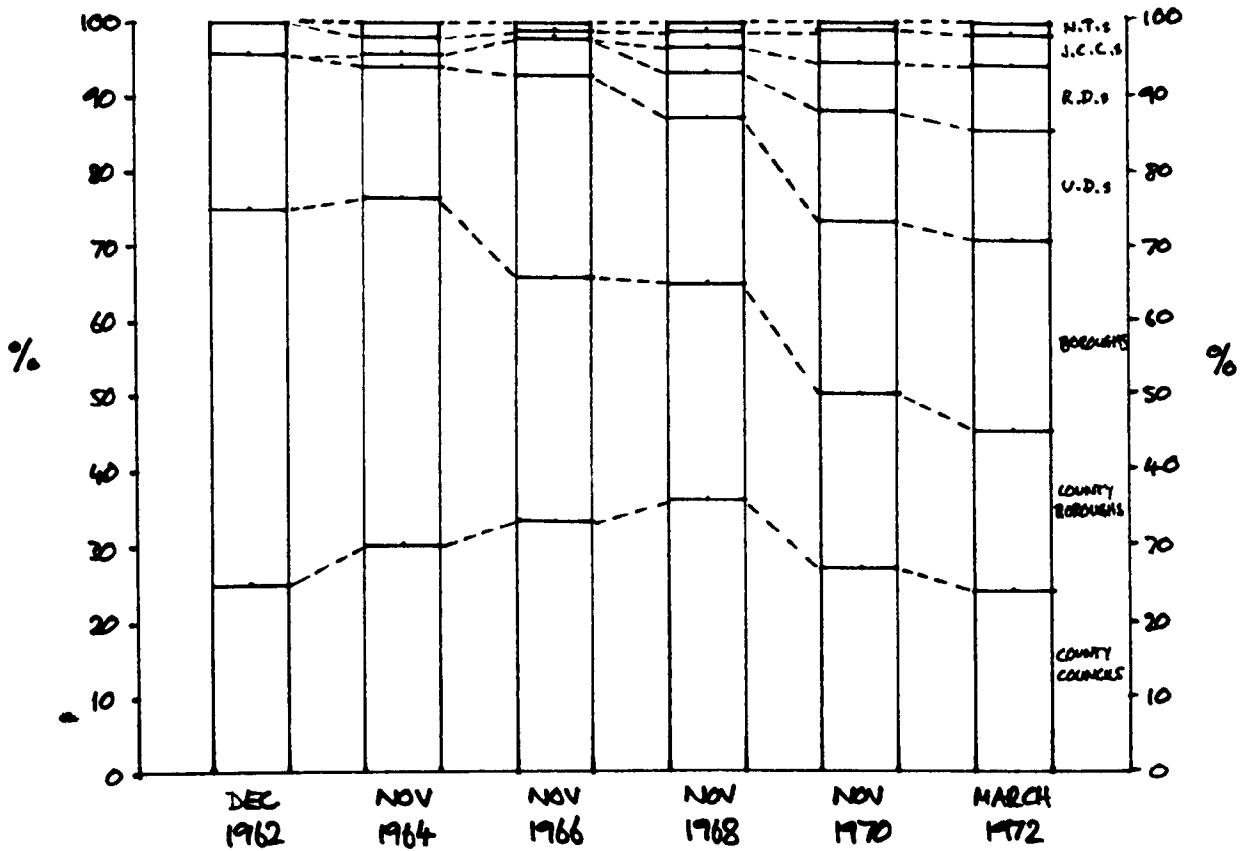
Source: As Table 2.1

lost their lead to the county boroughs, who in turn had peaked by 1968 and were overtaken by the smaller non-county boroughs and urban districts. By 1972, the counties owned only 21% of computers in local government, whereas the county boroughs held 24%, the non-county boroughs 26%, the urban districts 15% and the rural districts 9% (Table 2.2). The descent of computer technology down the local government hierarchy is consistent with the evidence from North America (Kraemer, Danziger and King 1978).

Planners, therefore, first encountered the computer in the county council, and in the context of the development plan and referred development applications. By the time of the first survey of computer applications in planning, counties made up 8 out of 9 current or proposed applications (Hall 1963 Table 2.3) - the exception was Coventry. 7 of the authorities were attempting traffic survey analysis, 3 were compiling land use records, and 3 were processing development applications. These were labour-intensive applications that required a large investment in survey and coding of data. L.S.Jay calculated that in East Sussex the coding of areal population data took 6 man/days per 1,000 people, while in Hertfordshire the analysis of land use survey data took 8 man/years (Hall 1963).

During the 1960s the development of computer applications

TABLE 2.2   Distribution of computers ordered or acquired
                  by UK local authorities 1962-72

Class of Authority	1962	1964	1966	1968	1970	1972
County Borough	25	30	33	36	27	24
County Council	50	47	33	29	23	21
Borough	21	17	27	22	23	26
Urban District	0	2	5	7	13	15
Rural District	0	0	0	3	7	9
Joint Computer Committee	4	2	1	3	5	5
New Town	0	2	1	1	1	2
TOTALS (%)	100	100	100	100	100	100

Source: As Table 2.1

TABLE 2.3   Computers in local planning authorities 1963

Planning authority	Type of computer	Application (C = current, P = proposed)
Cheshire	IBM 1401	Traffic survey (C)
Coventry	IBM 650	Industrial survey (C) Traffic survey (C)
Dorset	ICT 1301	Traffic survey (P)
Durham	IBM 1401	Traffic survey (P)
Hampshire	NCR 315	Circular 52/61 returns (P)
Hertfordshire	NCR 315	Development applications (P) Traffic survey (P) Land use records (P)
London	IBM 1401	Land use records (C) Development applications (P)
Northants	NE 803	Traffic survey (P) Development applications (P)
West Sussex	IBM 1401	1961 Census (P) Traffic survey (P) Land use records (P)

Source: Hall (1963), Table IV

in planning was closely bound up with the fortunes of IBM.
In the early 1950s, IBM had a 90% share in the punched card
tabulating business. It avoided production of digital
computers until manufacturing processes had been made
reliable, whereupon it took 78% of the computer market by
1957 (Greenbaum 1979). The first Model 650 computer, as
with the subsequent transisterised 1401 model, took IBM's
punched card users with it by retaining compatibility with
existing input/output devices. IBM's new users looked
increasingly for software support, until by 1965 the
company invested as much in operating systems, programming
and the development of packages as it did on the hardware.
Both in the United States and in Britain, IBM was
responsible for identifying areas of software development
and promoting its own packages. The best example is the
transportation model produced by V.E.Miller of IBM(UK),
which was the most advanced model to pass the experimental
stage in the early 1960s. His model, or modifications of
it, were used in traffic studies of SELNEC, Glasgow,
Lancaster, Devon, Dewsbury, Coventry, London County
Council, Liverpool and Birmingham (Miller 1963, Harwood
and Miller 1964)

At the time of the next survey of computer applications in
planning (Simmie 1967a), there appeared to be little
advance on the numbers involved; but there are reasons for

believing the list provided by the Ministry of Technology understated the numbers (Table 2.4). Firstly, it omitted several authorities found in Hall's survey, and secondly, it excluded 'management and information systems', to which planners were often the most committed. The survey does reinforce certain conclusions, however, including the small size of machines in use, the dependence on batch processing and the retention of punched cards as I/O medium. Simmie (1967a p.12) commented on the RAM available:

> 'To do any real research or to cope with the future applications of EDP at least 40K will be required.'

The spread of computers in local government and the sporadic attempts by planners to harness the machine led the MHLG Urban Systems Unit to publish a report of a survey of 16 planning departments (Table 2.5) known to be pursuing computer techniques (Struthers 1968). While not a comprehensive survey, it corroborated certain lines of development: the prior acquisition of a computer by the Treasurer's Department, planning applications as a residual after financial work had been completed, a correlation between programming/analysis skills and the scale and scope of usage. A wide range of machines was in use. In southern England alone, Surrey CC had an ICT 1903; Wiltshire CC, Hampshire CC and Southampton CB had NCR 315s; Portsmouth CB an IBM 1401; West Sussex CC an IBM 360-40; and East Sussex CC an ICT 1902.

TABLE 2.4   Computers in local planning authorities 1967

Planning authority	Type of computer	Application (C = current, P = proposed)
Coventry	LEO II	Planning (C)
Hertfordshire	NCR 315	Planning applications (C)
Lancashire	ICT 1301	MHLG returns (C) Planning statistics (C)
London	IBM 1401	Land use records (C)
West Sussex	IBM 1401	Land use survey (C)

Source: Simmie (1967a), Table 1

TABLE 2.5   Computers in local planning authorities 1968

Planning authority	Type of computer	Application (C = current, P = proposed)
Bedfordshire	H 200-120	Land use survey (C) Census data (C) Employment survey (P) Planning applications (C) Land use/transport survey (C) Population forecasts (C) Retail forecasts (C) Land use forecasts (P)
Birmingham	ICT 1904	Land use survey (P) Census data (P) Retail forecasts (C)
Bournemouth	H 400	Land use survey (C) Land use/transport survey (C)
Cardiff	ICT 1903	Planning applications (P) Land use/transport survey (C) Retail forecasts (P) Land use forecasts (P)
Cheshire	IBM 360-30	Census data (C) Planning applications (C) Population forecasts (C)
Coventry	LEO III	Land use surveys (C) Social surveys (C) Census data (C) Land use/transport survey (C) Population forecasts (C) Network analysis (C)
Durham	IBM 360-30	Land use surveys (C) Planning applications (P) Land use/transport survey (C) Population forecasts (C) Retail forecasts (C) Network analysis (C)

Glamorgan	ICT 1903	Land use/transport survey (C)
		Population forecasts (P)
		Retail forecasts (P)
		Land use forecasts (P)
Hertfordshire	NCR 315	Planning applications (C)
		Land use/transport survey (C)
Liverpool	ICT 1904	Social surveys (C)
		Land use/transport survey (P)
		Network analysis (C)
Manchester	LEO III	Land use survey (C)
		Census data (C)
		Employment survey (C)
		Planning applications (P)
		Land use/transport survey (C)
		Population forecasts (P)
		Retail forecasts (P)
		Network analysis (C)
Newcastle	ICT 1908	Social surveys (C)
		Land use/transport survey (C)
Stoke-on-Trent	IBM 360-30	Land use survey (P)
		Employment survey (P)
		Planning applications (C)
Sussex, East	ICT 1301	Land use survey (C)
		Social survey (C)
		Census data (C)
Sussex, West	IBM 360-40	Land use survey (C)
		Census data (C)
		Planning applications (P)
		Land use/transport survey (C)
		Population forecasts (C)
		Network analysis (C)
Yorkshire (West Riding)	H 400	Social survey (C)
		Census data (C)
		Employment survey (C)
		Planning applications (P)
		Population forecasts (C)
		Retail forecasts (P)

'This incompatibility between different computer
systems has meant that the prospects of introducing
standard package programs for local authority
applications are not good.'
(Struthers 1968 p.6)

The pressure for standardisation had to come from local
government itself, and in June 1965 the Local Government
Computer Committee was set up, which became in October 1967
the Local Authorities Management Services and Computer
Committee (Barnes 1974). Its 30 Application Groups and
Working Parties became an important focus for
simplification, standardisation and information exchange
amongst local authority computer users. The number of new
orders for computers peaked at 98 in 1970 and declined to
72 in 1972. By this time, 324 local authorities possessed a
computer. LAMSAC's appearance contributed to the shift from
extensive to intensive uses of the computer (Mallinson
1968). While some local planning authorities (eg.
Bedfordshire) could afford to second programmers and system
analysts to their planning department, with visible results
in the complexity of their planning process, others had to
wait for standard packages and an informed management
service within local goverment itself, before they could
make similar claims on computer time. Finally, it is clear
that computer usage varied not only by kind of authority
but also by department within authorities. Financial,
engineering, statistical, management and health
applications were all much further advanced than planning

(Baxter 1972). This reflects not only on the differential access of departments to computer time, but also on the non-automated and discretionary content of much planning activity of the period.

2.4.3   Data banking

The preceding sections have established the essential truth about systematic planning: that it was a strategy for impersonalising planning practice. This implied the structuring of intellectual work so that unwanted variation in performance was eliminated; and the mounting of structured work upon machines so human limits could be exceeded. We know that in planning, this transfer of work to routine and machine took place in several stages: the construction of records-based systems and the one-off use of computers in special studies are two of the most important stages. This section considers the most important fusion of records and computers, in the form of the data bank. The data bank was the first example of planning information routinely mounted on machine. As a concept it preceded its application by several years, and it is fair to say that it is now forgotten in favour of late 1960s and early 1970s management information systems. It is also less glamorous a subject for planning historians than the models

serviced by the data banks. But what the data banks episode reveals is the equally important revolution in planning's raw material: stored information. The data banks spoke a non-human language, and retained information in a non-human memory. The convergence of land use accounting and computing was a precondition of any other kind of manipulation of data.

Stored information first appeared as a problem in the accumulation of demographic and transport records after 1961. The TPI's Research Committee (1960a p.309) noted that the 1961 Population Census was going to be larger than any previous census, therefore 'the information will this time be electronically analysed'. Once checked, all household schedules were transferred to punched cards (in Scotland alone it took 32 punchers 6 months to make 200 million holes), then recorded on magnetic tape for analysing and processing on the War Office's computer (Taylor 1963). Programming problems delayed output for over a year, but an advantage of computer processing was that summary data at Enumeration District level could be parallel punched on cards or copied onto tape and issued directly to users. This permitted local authorities to make their own specialised tabulations. It also introduced a category of data management problems hitherto unknown in local government.

The same problem arose with the origin and destination studies performed for the first round of development plan reviews. Even the simplest studies required explicit treatment of survey design, sampling, coding and analysis, and generated immense volumes of data. 'What seems to be needed is a technique which will allow a local authority to get the measure of its traffic problems', observed the TPI Research Committee (1960b p.40), referring in passing to the use of 'electronic machines'. The traffic studies made in Coventry (Wood 1963), Leicester (Smigielski 1965) or Liverpool (Bor and Shankland 1965) were not method-ologically complex: their novelty lay in the once-and-for-all production of a vast mass of inter-related survey data. Rather to their surprise, planning departments found they had inherited an archive.

It was in the first attempts to manage this archive that planners developed the concept of a concentrated, general-purpose store of plan-related information.

In 1963, following the completion of David Hall's (1963) thesis, an evening study group of the Town and Country Planning Summer School was set aside to discuss the use of the computer in planning. G.W.Cowley (1963 pp.67-8) argued

'it might be possible to keep a constantly up-to-date record of land data for an area, by

first storing in a computer the information derived
from a normal land survey (including uses.
acreages, and other code-able or quantifiable
details) and then revising this record by
continuously feeding in details of changes
resulting from the implementation of approved
proposals for development.'

Hall's thesis had already explored the precise
implementation of this concept in a planning department.
The obvious candidate for refreshing the land use records
system was development control. A development control
system which was based on punched cards, as Hertfordshire
had been for several years, tended to face the problem of
limited record lengths. Hence the advantage of the
computer. With Tom Clarke's support from the MHLG, Hall
developed a specification for a computer-based development
applications system that not only managed applications but
also created and maintained up-to-date records of land use.

As a result of the Summer School meeting. the TPI's
Research Committee was persuaded to set up a sub-committee
on the use of computers in planning. It first met in July
1965. chaired by Leslie Jay and subsequently by John
Stevenson (West Midlands Regional Study). The group was to
consider

'how information can best be recorded for computer
analysis, to see what kinds of analysis are
possible and to list the computer programmes that
are gradually becoming available'.
(Burns 1966 p.126)

It had not been appreciated at first how important the

format of information was for data processing. Hall had
written optimistically:

> 'computers have brought within reach the
> possibility of complete and speedy comparability of
> all available planning data'.
> (Hall 1963 p.37)

But automatic aggregation and disaggregation of data
implied a minimum land unit, with a locational reference
independent of its neighbours. A massive recoding of
records was required, forcing a documentary break with the
past. In Coventry, stocks of demographic and transport
information were merged and expanded in a project for a
comprehensive planning and design system.

> 'One prerequisite of planning at any scale is a
> comprehensive information bank. Such a data bank
> would be the information core of any planning and
> design system.'
> (Reece 1966 p.151)

Liverpool was another city that constructed a comprehensive
records system. Property and ED information was punched
onto 200,000 cards under such headings as the Census, Land
Use, Transportation, Economic Studies and Planning
Applications (Wood 1965).

From the mid-1960s, the data bank concept circulated more
widely. The MHLG opened a data bank in 1966 to compare the
immigration patterns of 13 Mark I and Mark II new towns,
with a view to mounting population projections on the data
(Burnett 1968). Upon the formation of the Standing
Conference of Planning Authorities for the Yorkshire and

Humberside Economic Planning region in June 1966, a data bank was begun to store the mid-term census, a regional industrial land inventory, and employment data (Fraser 1967). Data banks were especially important to the sub-regional planning teams. The Nottingham/Derbyshire study was set up in February 1968 and made the host of the East Midlands data bank. It was the basis for sub-regional employment and population projections, and later supplied information for traffic generation and land use models (Thorburn 1969).

Data-banking led the assault on all that had claimed until now to be 'information'. In fact, non-digital location references, conglomerate land parcels, disconnected and incomplete records and systems that did not update themselves, had no right to be regarded as 'information'. In general terms, the data bank encroached upon and abolished private stocks of information in the planning office. It generalised a public store of data across the planning team and the authority as a whole. In particular, it committed the planners to geocoding and activity classification. H.W.E.Davies wrote:

> 'Until we have in Britain comparable sources of data, we can only look with envy at American analyses and use makeshift techniques in assessing the problems and likely consequences of planning.' (Davies 1964 p.459)

Envy for the Americans, distrust for the British craftsmen;

the problems and potential of data banking in Britain typified the planning office in a state of partial de-personalisation.

C H A P T E R   T H R E E

PLANNING AND CALCULATION

3.1   INTRODUCTION

A number of concepts appeared unannounced in the preceding
chapter: craftsmanship, division of labour, mechanisation,
discourse, the status of truth, impersonalisation... and so
on. The objective of this chapter is to clarify and assess
these concepts, as part of the larger project of
determining the specific character of post-war planning
methodology. Already, a broad division of concepts has made
itself felt. On the one hand, concepts relating methodology
to the break-up of craftsmanship in the workforce of
planning, the employment of machines and abstract
intellectual routines, the programming of organisations and
the management of documents. And on the other, concepts
relating methodology to a history of slippages between
cartographic and policy discourses, new cycles of theory
and education, an imbalance of social and economic
discourses, and the status of science. This broad
separation of 'labour' and 'discourse' is - for the moment
- respected in the descriptions that follow.

In section 3.2 an account is given of what is meant by a labour process, whether planners engage in labour processes, and the consequences for an analysis of the history of planning processes. Then, in section 3.3, an account is given of discourse, the nature of planning discourses, and how a history of calculation bears upon the post-war planning authority. In section 3.4 a preliminary attempt is made to reconcile parts of these two traditions of analysis and to situate planning methodology within the replacement of craft by systematic modes of planning.

3.2   PLANNING AND LABOUR PROCESS THEORY

In a planning office, the purchased labour of a specialised workforce is used to set in motion a range of means of production, with a view to producing a number of intermediate and final goods and services. This minimum definition of the work content of planning entitles us to turn to that body of knowledge known as labour process theory, so as to analyse more precisely the nature of planning as work and to appreciate the planning authority as a site of production. Of course, it remains to be seen whether this is a sufficient definition of the planning authority. After tracing the roots of labour process theory to Marx, and to Braverman's appropriation of Marx, some

applications of the theory to mental work in general and planning work in particular are appraised. Finally, the strengths and weaknesses of a labour process approach are discussed.

3.2.1   Marx and Braverman on the labour process

The foundation for theories of the labour process is Marx's account in Capital of the dual nature of capitalist production, as a valorisation process for enhancing the sum of capital thrown into production, and as a labour process for transforming materials into products. In describing the labour process, Marx resorted to three general conditions of production.

> 'The simple elements of the labour process are (1)
> purposeful activity, that is work itself, (2) the
> object on which that work is performed, and (3) the
> instruments of that work.'
> (Marx 1976 p.284).

These three elements - labour, object, instrument - are taken to characterise all types and epochs of production. In addition, when all three are commodities, the characteristic dual circulation of capital and labour becomes possible.

According to Marx, in a well-known quotation,

> 'it is not what is made but how, and by what
> instruments of labour, that distinguishes different

economic epochs'.
(Marx 1976 p.286)

What distinguishes one form of production from another is the specific combination of the three general elements: labour, object and instrument. Three such combinations were of historical interest to Marx.

(a) Handicraft. In this form of the labour process, the individual worker is both tool-bearer and motive-force of production. Labourer and tool are combined in a personal relationship governed by skill. Human skill and knowledge are the horizon on productive capacity, and the personal transmission of abilities via apprenticeships perpetuates this limit.

(b) Manufacture. In this labour process, the tool is no longer driven by the labourer but mounted in a machine. The number of tools brought into play is now independent of human limitations on strength and replenishment. Nevertheless, the labourer retains control over the machine as a whole and directs its actions. With manufacture, the factory appears for the first time. It concentrates workers and subjects them to a division of labour, therefore creating necessary sequences and flows within an extended labour process.

(c) Machinery and large-scale industry. Mechanisation completes manufacture by replacing the labourer's motive-force with further machines: notably, new sources of power. The combination of labour and

instrument typical of handicrafts succumbs to the direct combination of tool and raw material, with labourer 'in attendance'. Machines cooperate in series, and materials are mechanically transported from one process to the next. A division of machinery supercedes the division of labour as organising principle for the factory. With skill coded into the machine, the craft hierarchy is flattened into a mass of machine-minders. Meanwhile, the application of knowledge to production is now governed by an applied science of technology with its own technical representatives.

The key event, according to Balibar (1970 p.242), consists of the new combination of tool, material and labour inaugerated by machine production. Both manufacture and handicrafts combine tool and labour in a relationship governed by craftsmanship; but machinery combines tool and material directly in a relationship governed by the science of technology. This transforms the unit of production from a workshop of cooperative labourers to a factory housing a number of linked machines. Similarly, direction over work passes from the self-directed activities of craftsmen to a scientific plan of production imposed by management on behalf of the owner (see Table 3.1).

Put schematically, this is how labour process theorists have read Marx: for an account of the transitions between

TABLE 3.1   Differences between manufacture and
                   machine labour processes

Manufacture	Machinery
Unity of tool and labour	Unity of tool and materials
Craftsmanship	Technology
Personal concept	Plan of production
Direction by labourers	Direction by management
Labour cooperation	Machine series
Labour workshop	Machine factory

forms of production, and in particular, for descriptions of (a) mechanisation, and (b) scientific management, at the moment of their emergence in industry. Braverman (1974) traces these two processes into the 20c. He begins by noting that in the modern corporation the division of labour has been pushed forward so relentlessly that even management has taken on a whole departmental structure. Clerical and managerial workers sell their labour-power to the capitalist on the same basis as the shopfloor workers. The difference is that the latter produces goods and services, while the former produces records of those goods or services.

Braverman likens clerical work in its early stages to handicraft production. In the late 19c tools were simple, and record-keeping was entrusted to master craftsmen (book-keepers, chief clerks) and their apprentices (clerks, etc.). As enterprises grew, so did the demands upon office work. Scientific management was applied to office work as early as the 1910s. The objective was the standardisation of clerical work and the conversion of discretionary judgment into routines. Most attention went into the streamlining and simplification of paper flows.

From the 1930s and 1940s, though, rationalisation gave way to mechanisation as the motor of change. Hand tools, such

as the typewriter or calculating machine, could carry or process information only through a very short part of their total cycle before requiring the operator again. The novelty of punched card machines, invented in the 1880s, was that they made data machine-readable and printable without human intervention. In fact, the binary coding of information made human interpretation of intermediate results extremely difficult. Punched card installations reached their zenith in the 1940s and 1950s, displaying all the characteristics of a craft. Installations were small, and the craftsmen worked in turn on all machines: sorter, collater, tabulator, calculator, etc. Machines were programmed by wiring a panel board, and this represented the highest skill of an all-round activity.

The introduction of computers into office work after 1950 quickly demolished craft relations of production. The craftsmen's all-round skill was split into three. System specification went to the systems analyst, system coding to the programmer, and system running to the computer operator. Increasingly, information passed through the office via a machine. The resulting labour process had a very high technical content and its structure was planned and managed from above. Braverman takes this to be a description of the most advanced forms of office and a

model for all other office work.

What Braverman attempts is a re-interpretation of the office as a factory. The office is then subjected to the same processes of mechanisation and management as the factory. While he regards both factory and office as capable of machine modes of work, the factory has in practice preceded the office as the site of transformation. In the case of office work, machine labour processes replaced not one but two craft traditions: the old 'general office', and the pre-electronic data processing office. Since Braverman completed his book, other authors have described post-Taylorist strategies of production in industry (cf. Aglietta 1979, Palloix 1976), but these await their application to office work and the control of management. It is the lag between factory and office innovation that explains why it is possible to describe office work in terms drawn from what is now largely industrial archaeology.

3.2.2 The labour process in mental work

Braverman provides a general overview of the organisation of office work this century, but for specific analysis of the organisation of mental and professional work we have to

turn to other and more recent studies. This section examines two case studies: one is Mike Hale's (1980) account of middle management and scientific labour in ICI, and the second is by Burchell and Hill (1980) on the role of calculation in the construction industry.

Hale's particular interest is the division of mental and manual labour, to the point where each is a complex labour process in its own right. Where an organisation encapsulates both mental and manual labour, therefore, it encounters the problem of how to connect and manage two types of labour process. This problem typically appears in stages, as the division of labour grows and develops. Knowledge which had previously been contained within the all-round ability of the labourer is taken out of a given labour process and put in the possession of a set of design workers. Thus the intellectual work necessary for the completion of the task increasingly enters via a layer of specialists.

The name 'preconceptualisation' is given to the relationship between these two labour processes of design and manufacture. In the design process, the labour of the design team and and its instruments and technique are set to work on the requirements of engineers, scientists, production managers and commercial and sales staff. The

result is a design (eg. for building, production, prices).
While some of this design work is retained as subjective
learning within the design team, the remaining design
documentation is forwarded to the manufacture process,
where site workers apply their labour and tools as
preconceived by the design. In practice, both design and
manufacture are subject to continuous disaggregation as the
division of labour is pushed further and further. 'All the
modes of deskilling which operate in transforming manual
work have their analogues in mental work' (Hales 1980
p.107). The deskillers are themselves deskilled, and so on.

The total effect is a relatively self-contained field of
labour processes, which in their entirity denote the forces
of production purchased and produced by that enterprise. In
the case of ICI,

> 'the concept ("the design") is given objective form
> first in calculations and drawings and models, then
> reproduced in specifications and drawings, once
> more in equipment and components, and finally in
> the operational reality of the plant at start-up'
> (Hales 1980 p.52)

Within this field, we can speak generally of the production
of labour processes by means of labour processes.

Burchell and Hill take this a step further by examining the
relations between labour processes when they are not all
contained in the same unit of production. Like Hales, they
emphasise that considerable work is expended on the design

of buildings and of the construction process itself.

> 'The construction of a building presupposes the prior production of considerable quantities of technical information covering the materials to be used, how they are to be combined, where in the building they are to appear, the process whereby they are to be combined in the appropriate form and manner etc.'
> (Burchell and Hill 1980 p.17)

However,

> 'What is singular about construction is not the division between mental or manual labour or between different branches of mental labour but the fact that relations between the branches take the form of exchange relations ie. the different branches are all separate commercial units.'
> (Burchell and Hill 1980 p.18)

As a result of the tender system, builders receive work which was not designed with them in mind; and as a result of professional divisions, the final design is a sum of additions rather than a single plan. These problems include

> 'excessively fragmented control and the use of conflicting and incompatible ways of specifying things, both between designers, contractors and clients, and also among clients and other contractors'.
> (Burchell and Hill 1980 p.16)

In the construction industry, therefore, the forces of production are partitioned by the boundaries of competitve enterprise.

In discussing mental labour, the emphasis of Burchell and Hill is less on the introduction of machines and management, and more on the consequences for production of

extensive and heterogeneous labour processes. They show
that it is possible to include mental labour within such a
heterogeneous field, but that it is indeterminate in its
effects. The effects of mental labour depend very much on
the other practices with which it is combined.

3.2.3 The planning process as a labour process

Only in the most general sense has all planning activity
taken the form of a labour process. Analysis begins when
account is taken of particular combinations of these
elements and their historical sequence of appearance. This
is a problem of periodisation, and it has already been
suggested that planning work was conducted in three
periods: handicraft, manufacture and machine.

Handicraft planning implies, first of all, a negligible
pre-processing of its 'raw materials'. Information enters
the planning authority as a personal impression, a survey
return or a statistic culled from official publications,
and it accumulates within the office in a manner unrelated
to the performance of planning duties. Similarly, the tools
brought to bear on this information are the most general in
society: implements for writing, drawing, filing and
displaying. The outputs of planning include many

intermediate and final maps, because the specific skills in question are of design and the cartographic representation of population, territory and wealth. What marks out handicraft planning is the predominance of personal, professional skill in the organisation of work. An ancillary category of draughtsman may be called into being to undertake certain semi-skilled tasks, but craft planning typically involves an investment of the body in cartographic labour and the acquisition of a working knowledge of notations, drafting technique and map-making. The lack of specialisation within the office implies mobility between tasks and the cultivation of all-round competence over a lifetime of service. Thus planning work receives its unity within a well-formed career than by detailed management of the division of labour. In comparison with other offices, the planning authority is only as strong as its craftsmen. The subjective strengths and weaknesses of the expert planner determine the capacities of the authority and the services it can offer. The association of craftsmen in a validating body maintains and standardises skill, while a system of practical training (apprenticeship, in effect) transmits skills between generations of planner.

There were two passages from handicraft to manufacture, the first taking the planner beyond manual labour to

power-assisted systems, and the second abolishing judgement with routine.

A number of generic technologies have intervened on all office work, including the typewriter and telephone. But there have also been more relevant technologies including the desk-top calculator, the punched card machine and the offset litho printing method. Numerical manipulation by machine abolished a mass of intermediate mental calculation between the data input and the final results, while litho printing permitted the routine duplication of finished or semi-finished maps in relatively large batches, with considerable saving in the work of tracers and copy draftsmen. In both cases, the removal of human fatigue errors and the speeding up of production freed a portion of the working day for other activities (only some of which consisted of controlling the new technologies). These power-assisted tools were not autonomous of the skilled operator in producing results, nevertheless they radicalised the field of results of skilled work. A final point of interest is that around these tools accumulated intermediate outputs, finished items for despatch, etc., and control over these stocks came to form a definite problem of office management.

Secondly, handicraft planning was superceded by the

intellectual equivalent to a power-assisted tool, namely, bureaucracy. Repetitive tasks of a mental character were perfected as a routine equally applicable to every case of the same type. The conversion of discretion into a set of routines greatly increased the volume of decisions it was possible to make, while improving the precision and timing of control. The bureaucratisation of development control was one example, but it also included the survey of development and elementary projection on a routine basis. Thus competence was partly redefined as a mastery of routines: even design decisions were modulated by the imposition of minimum or average standards of layout.

Under manufacture, the division of labour prejudiced the exercise of craft skills. Certain planners now had to conform to the input and output routines of the technologies they operated; or if they were less directly involved, they had to learn to specify their requirements (and interpret the results) to a specialised group of operators. These routines might include the numerical coding of information on a punched card record of an application, or the preparation of a site plan using machine-reproducible colours, hatchings and notation. To the extent that individual planners became familiar with these routines, and tended to concentrate on their use and improvement within the planning authority, then new

'one-sided' skills appeared, to complement the all-round craftsman.

The adoption of bureaucratic routines and specialised technologies both contributed to the birth of functional areas within the planning office. It was possible to imagine the planning team as engaged simultaneously in a range of complementary tasks, rather than moving as a cohort through a sequence of tasks. The office became opaque, it could not depend for its unity upon the all-encompassing vision and command of the master craftsman. Instead, all instructions and responses passed indirectly along a more or less formal chain of command. Cycles of paperwork within and between departments intensified impersonal management and leadership procedures. The meeting and the internal report concentrated planners' attention once tasks became too large or complex to remain the subject of one person's undivided attention. To this end the craftsmen released one more fragment of skill to a specialised worker: the office manager.

Planning in its manufacture period was not a stable labour process, however. Reforms that had modified craftsmanship were now exploited to unseat it. This occurred in two areas: firstly, office management was used as an engine of

productivity against irregular and unaccountable members,
and secondly, further machines were employed that also
incorporated craft skills or superceded those skills.

In the transition to machine modes of planning, the
arrangment of functional areas becomes problematic, not so
much from the point of view of their technical content, as
their isolation, their lack of connectedness. The speed at
which power-assisted tools operated, and the rate at which
they received, processed and transmitted items, were all
independent. Manual workloads, characterised by the
production and circulation of semi-structured documents,
suffered similar discontinuity. It was to eliminate
independence in the office that scientific management
proposed a plan of production for the whole process. This
typically entailed an exhaustive study of all or part of
the office's functioning, its organisation and methods.
These studies directed office management towards (a) the
integration of related labour processes, and (b) the
automatic transmission of materials from one process to the
next. In planning offices this pressure made itself felt as
a demand for an organisational process of planning, and the
use of computers with a common stock of information.

The main barrier to an organisational process of planning
was the rigidity of craft skill, locked into a professional

and departmental hierarchy. One of the first methods for dissolving these hierarchies consisted of project work, employing staff drawn from a wide range of backgrounds. Tackling highly technical subjects, project management provided a model to the department as a whole of how to subordinate skill to a single technical objective - running a traffic survey and analysis, for example, or planning the distribution of housing and facilities on an out-of-town site. They also showed how the new technologies could be exploited for complex and extended data processing.

Later, attempts were made to recover these initiatives for the planning department as a whole by viewing project work as a sub-cycle of a larger plan-making cycle. The concept of a 'planning process' was the ultimate example of productivity in office management. It extracted effects of utility from the planning team by subjecting their work to an extreme degree of organisation. The planning process attacked discretion and publicised error. Ideally, it would structure performance so that information on the area was not lacking, the plan did not omit its objectives, alternative methods for reaching objectives were not ignored, the value of each method was not reached on idiosyncratic grounds, and implementation could not ignore changing circumstances since the plan was drawn up. The target every time was independent judgement, unspoken

priorities, manual skill - in short, the idiosyncratic, unaccountable craftsman.

The second process unseating the craftsman concerned the use of machines. If, under manufacture, the human operator had retained his powers of memory and judgement and forwarded to the tool simply his powers of endurance, then in the case of machine modes of planning even this degree of control was surrendered. First with the punched card machine, and then with the electronic computer, memory was reduced to a set of files, and judgement stored alongside it as a coded program. The human operator no longer had to intervene in the process applying judgement to data. Judgement itself developed a division of labour, as sequences of instructions were translated from natural to machine language, and thereby made inaccessible and incomprehensible to the planner. The externalisation of knowledge for purposes of data storage and calculation caused a mass of skill to disappear from the office.

Meanwhile the computer integrated such machines as were in use in the authority, and exerted a centripetal pull upon all data handling operations. The latter were increasingly called to account by the most routinised operations. In this final drastic socialisation of a planner's duties, it was the computer (on virtual machine principles) that

powered and resourced the operator. Where individual skills could not be automated they were routinised, and where they could not be routinised they were residualised. Of course, important and non-mechanical judgements of a professional or political character continued to be made. But they now had to meet certain standards of viability before they could be taken seriously as planning judgements; and this was the overall effect of a machine mode of planning.

3.2.4   Evaluation of labour process theory

To some extent the previous section offered a caricature, because no labour process interpretation of the planning function has yet appeared, other than a few exploratory comments by Beauregard (1983). However, it does rest upon an interpolation of the labour process literature into the subject matter of planning history, and provides some basis for assessing the value of that literature to planning history.

Before taking up any criticisms of labour process theory, two essential advantages can be claimed for it: the first theoretical and the second historical.

The theoretical advantage of labour process analysis is

that it breaks decisively with the myth of the creative planner who can make something out of nothing. This can come as a refreshing change after reading page after page by planning historians who assume planners exist in mid-air suspended by their own concepts (on the legacy of idealism in planning history see Long 1981). Labour process theorists are explicit that all outcomes are contingent on certain conditions of production, of which the person's intentions are only one condition (and not necessarily the determining condition). This opens the way to a history of the means of planning.

The historical value of labour process research into planning is that it shows alternative roots for the concept of the 'planning process'. It is not only a concept peculiar to the planning profession, or even to the generic discipline of planning; it is also a tool drawn from office management. As a tool its first target has been craftsmanlike working practices. The role of office management in redistributing labour and calculation within the planning office has for a long time been obscured by the systematic planners' claim to represent science as against error in the drawing up of plans. This epistemological emphasis has drawn back from working arrangements to consider the larger question of truth and validation in plans. Perhaps a labour process approach

redresses the balance.

This said, three broad criticisms have to be made. Firstly, an endemic difficulty of this type of analysis is its resistance to consciousness and ideas. A materialist mode of analysis is taken quite narrowly to mean an analysis of materials. Hence the careful studies of machines, mechanisation, man-machine relations and so on, and the metaphorical appropriation of thinking as intellectual production. This narrowness of approach creates the following problems:

(a) The contents of planning materials (plans, reports, calculations, etc.) are never discussed on a par with their process of production. We learn very little of the vocabulary, thought and culture of planners, except that they are subsumed in a definite set of relations of production. This means, for example, that the planners' own targets of planning (such as redevelopment, traffic management, etc.) do not figure in the description of the labour process; planning goals in themselves cannot attract and organise planners.

(b) Because of this emphasis on function it is not possible to clearly separate planning methodology from

other types of office routine, or indeed from office management in general. Method is significant only as it arranges planners in offices, and not as it contributes to a form of understanding.

(c) Intellectual work is discredited as a source of variation in planning practice. There is a preference for internally generated change in terms of management and machinery. As a result the spread of ideas concerning method is not included in the description of change, or in the reformulation of skill.

The second criticism concerns the mechanism introduced to account for the transition betwen periods of planning activity. Because of the origins of labour process theory in Marx's account of capitalism, and Braverman's subsequent analysis of labour in an age of monopoly capital, the driving force in transitions between labour processes has always been structural and directly related to the accumulation of capital. As applied to the transformation of manufacturing emterprises in the 19c this has some credibility, but it is problematic to introduce the same forces into transformations of office work by professional staff, supplying non-commodity services, in the years after 1945.

In the case of British local government, one can certainly point to expenditure constraints on administration during the 1950s and 1960s, but it was not the constraints themselves which triggered the adoption of planning methodology. As planning lacked a service structure (a product, manual workforce, capital budget, etc.), it was under no obligation to accept reforms as dramatic as other service departments. The relationship was more indirect, in that as service departments, and especially accounting, made use of the new technology, so planners referred to it in their own work for special purposes. Thus the employment of machines was a secondary act, unrelated to the original reason for purchase. Planners employed techniques and technologies of calculation to pursue distinct technical or professional goals, not to achieve a budget constraint. A purely economic account of transition fails, therefore, because it underestimates the degree of professional autonomy planners enjoyed in defining their work. This is also a common criticism of Braverman's work (see eg. Elgar 1982), inasmuch as he omits the control workers have over the labour process through bargaining and struggle.

The third criticism concerns the claim that office management and mechanisation caused the deskilling of craft planners, the loss of craft skills and the appearance of both machine-tenders and specialists besides the

all-purpose planner. In the case of Braverman, deskilling has been questioned on historical grounds (eg. Wood 1982), and a very much more uneven accomodation of craft and machine is now accepted. In the case of planning, it has to be asked if standardisation and specialisation have caused skills to alter, or simply to change their mix. Skill change implies a cohort of planning officers moving through a process of collective learning and adaptation. Changes in skill mix imply a more complex picture, in which planners with traditional skills are displaced over a period of time by a combination of retirement, promotion, colleagues' learning, and new in-take. This holds out the possibility of alliances across the generations, and of individuals bridging incompatible modes of planning.

Labour process histories ignore ideas, rest on a logic of capital, and exaggerate skill change. A less economistic and materialistic type of analysis is required to complement its undoubted insights, and to articulate the small world of the planning office with the larger movement of ideas and politics. The next section considers the value of a history of discourse in this respect.

3.3   PLANNING METHODS AND THE HISTORY OF DISCOURSE

Methodology announces itself, at least in the first instance, as a mass of statements. It is to the production and circulation of such statements that this section is addressed. More precisely, it raises the question of how to account for the appearance of methodological statements within the planning office, how to account for their formation and transformation, and finally, how to account for the division of methodological statements from statements of any other type. These are questions for a history of discourse to answer, and the possibility of such a history is firmly associated with the name of Michel Foucault. After a brief introduction to the novelties of Foucault's analysis, attention is drawn to Goldstein's (1984) essay on professions, and the implications for a discourse analysis of the planning profession. Then another interpolation of theory into planning history is offered, generating some hypotheses as to the circumstances in which a methodological discourse arose. A general assessment of Foucault's relevance to planning history concludes the section.

3.3.1 Foucault on the history of discourse

A history of discourse as Foucault conceives it is not an inventory of mental contents and the persons they originated in. And neither is it an attempt to close retrospectively the gap between truth and error by ridiculing one's ancestors or regretting the loss of wisdom. Instead, it is a way of plotting the trajectory of 'things said', of describing formations and deformations of discourse. It treats of discourse as discourse, without any epistemological detours. To an English-speaking audience, the direction Foucault has taken may seem strange and contrived, though we do now have the benefit of trans- lations (cf. Foucault 1977a, 1979, 1980) of his earlier works. This section draws upon those texts to illuminate the character of discourse analysis, its philosophical preoccupations, and the concepts pertinent to the history of discourses. Fuller background to Foucault's work will be found in: Sheridan 1980, Gordon 1980, and Smart 1983.

If there is no tradition of discourse analysis in the English-speaking world, it is because of an enduring prejudice against knowledge detached from persons. Both commonsense and philosophy have defined 'knowledge' as a sum of personal experiences. However, drawing upon quite different sources, Foucault argues that in fact no-one has quite the 'right to knowledge' this definition implies. Individual knowledges have to be conquered and possessed

before they can be enjoyed by a subject. Therefore rivalry and conflict embroil all knowledges. Foucault denies that knowledge, in the form of 'experiences', forces itself upon the passive recipient. All bearers of knowledge have to establish rights over knowledge, and this is essentially an act of aggression by the subject.

Because no-one is naturally entitled to possess knowledge, all appropriations of knowledge perpetuate an injustice. Knowledge in our society is essentially domination and relations of domination. Far from being 'neutral', a medium for our imagination, born of isolation from struggle and passion, knowledge is in fact directly constituted by and for power. Thus 'power produces knowledge... power and knowledge directly imply one another' (Foucault 1977a p. 27). The analysis of discourse as an articulation of knowledge and power is central to Foucault's work since 1970.

It has led him to question the status accorded truth and the ways in which it is marked off from error. What motivates the desire for truth is not the abstract need to avoid deception, but the practical and preservative needs of the subject embroiled in rivalry. In this sense, 'truth' is less an abstract or philosophical concept than a means of fixing one's knowledge in a certain schema so as to win some advantage. This non-epistemological interest in the

formation of truth re-state's Nietzsche's (1967a p.552) thesis, that

> 'truth is not something which is present and which has to be found and discovered; it is something which has to be created and which gives its name to a process'.

Foucault's object of study is not the subject as such, but the consequences for knowledge of subjects embroiled in rivalry. The constant flux of possession and dispossession ensures a discourse is only briefly linked to its author before it takes on an independent existence. Foucault challenges sharply those who regard an author as essential to a history of discourse. He regards the 'author' as the merely contingent bearer of discourse. In historical terms, it is more important to group discourses by their mode of formation or appropriation, than it is to place them under the heading of their author (1977c).

In The Archaeology of Knowledge (Foucault 1972), some rules are suggested for identifying more precisely the 'modes of formation or appropriation' of discourses. In lieu of a longer exposition, these rules are gathered together under four heads: the objects of discourse, the concepts describing them, the subject who speaks, and the choices dissolving each of these into another formation.

(a) The formation of objects. Every discourse addresses an

object. For example, land use planning addresses land use as the object of its discourse. Domination enters into the formation of these objects:

(i)   by determining its 'surface of emergence', the region of society in which the object can be found.

(ii) by the choice of authority competent to delimit and govern the object, and

(iii) by establishing a 'grid of specification' for describing and allocating the object.

As the precise dominations alter and succeed another, so the object of discourse is replaced by other objects. Foucault's first rule, therefore, is to trace the life history of a discursive formation through its objects.

(b) The formation of concepts. An object of discourse is described by that discourse's concepts. To use the same example, land use is described by means of activity classifications. The history of concepts is by no means the same as the history of objects they describe. Concepts are transmitted through three types of domination:

(i)   the succession of concepts, meaning the ways in which they are ordered, combined and dependent upon each other.

(ii) the coexistence of concepts, as in statements awarded presence, those in concomitant discourses, and concepts retained in memory, and

(iii) the procedures of intervention, which are the methods for rewriting, transcribing, translating, transferring or systematising concepts.

Independently of the object, then, concepts of discourse are subject to revision and overthrow. Foucault's second rule is to identify a discursive formation by the concepts that endure it.

(c) The formation of subjects. Each discourse generates positions from which subjects can address their object. For instance, the land use planner is the subject of the discourse on land use planning. This introduces the function of 'enunciation'. It is more complex than sociological notions of 'role', because several different types of enunciation can reside in the same role. The planner can speak of activity classifications, land use models and the law of development notification without once repeating the 'modality' of the enunciation. Here, too, the subject is embroiled in rivalry, and rivalry dominates enunciation in:

(i) the status of the subject, the criteria that qualify one person or group and no other to

speak,

(ii) the site of the subject, the place or institution
      in which one must reside while speaking, and

(iii) the relation of the subject towards the object,
      meaning the kind of attention which may be spared
      it.

Struggle around subject positions reformulates the
discourse as a whole, and therefore its effectiveness
as a means of domination. Foucault's third rule is to
identify the modes of enunciation that characterise a
discourse.

(d) The formation of strategies. Discourses which share the
    three rules of formation as described above are known
    to Foucault as 'strategies'. He invokes a fourth rule
    to explain why strategies appear and disappear, or more
    precisely, how one strategy replaces another. He
    ascribes replacement to 'strategic choices' concerning:

    (i)   points of diffraction between rival discourses,

    (ii) reduction of all possible combinations of rival
          discourses to a smaller, more intelligible set,
          and

    (iii) appropriation of discourse by political and
          economic authorities.

Foucault's fourth rule rephrases as a generality what
has been rehearsed in their particularity by the other

rules. To the extent that discourses are blocked together as strategies, sharing the same conditions of formation, then they replace one another by strategy.

Foucault himself was subsequently unhappy at the static interpretation it was possible to place upon his analysis of historical discourses, feeling he had perhaps run together the question of how a regime of statements was governed with the different matter of a discourses's logical structure or 'paradigm' (Foucault 1980 p.113). A more optimistic summary has been offered above, in which rivalry and domination are placed to the fore in accounting for the governance of discourse; and this is certainly the direction Foucault himself has chosen since 1970 (cf. Foucault 1977a, 1979). The next section takes this set of rules and tries to embed it in a recognisably historical form of analysis: the emergence of planning as a profession this century.

3.3.2   Disciplines and professions

It has been established that Foucault, in the manner of Nietzsche, regards all knowledge as domination and relations of domination. The play of dominations governs the discourses possible in any one time or place. From

Foucault's latest writings it is possible to extract descriptions of two broad strategies that have dominated the production of discourse in the field of town and regional planning. Whereas the first holds to the body as the prime value - a body to be disciplined and utilised - the second seizes upon whole populations and directs them to a safer and healthier life. The profession formed to implement these two strategies is discussed by reference to Goldstein's (1984) essay on the origin of the professions.

In Discipline and Punish (1977a), Foucault develops the concept of the 'disciplines', by which he means a particular combination of power and knowledge formed around the turn of the 18c and devoted to the inspection and control of the body. The disciplines of the body subjected schools, factories, prisons, hospitals and armies to a meticulous and personal form of scrutiny, which also doubled up as a means of control. Hence the proliferation of discourses on supervision of pupils, workers, inmates, patients and soldiers-at-arms; and the training and examination of these individuals.

The provision of housing and the layout of city quarters were not exempt from the critical attention of the disciplines. Phillipe Meyer (1983) and Jacques Donzelot (1980) have documented the extraordinary interest taken by

the disciplines in the control, inspection and planning of working class quarters. This interest came to a head - in Britain - in the plan for 'model towns'. Both Robert Owen, in his commentary upon the functioning of New Lanark, and James Buckingham, in his speculations upon the new town of Victoria, sought a modelling of the urban population that preserved and enhanced all the productive powers of the body (Long 1982a). In the model town all haunts of depravity were to be unravelled or erased. Homes would be built far from the debilitating fumes of industry, and open to the healthful and soothing influence of nature. The separation of children from their parents would ensure a regular and virtuous education of the young, causing an accumulation of people as continuous as the acumulation of wealth in the well-ordered factory. The model town was ideally a swarm of model institutions.

The disciplinary discourses deposited a certain approach or vocabulary with the first town planners at the beginning of the 20c. It included the tradition of meticulous street surveys ('those small techniques of notation, of registration, of arranging facts in columns and tables' - Foucault 1977a p.190); the preference for open plans and low density; and a durable belief in the virtues of cooperation. Planning was not destined to become a state function, even after the 1909 Housing, Town Planning, Etc.

Act. This hesitation amongst planners bears upon the disciplines' distrust of law, as too blunt a tool of regulation (Long 1982b). How much better, that civil society might retain its measure of autonomy and be ruled not by the sovereign power of law, but by the reassuring and corrective power of the norm.

As Goldstein (1984) notes, the origins of the disciplines in Foucault's account appear to be close to conventional accounts of the appearance of the professions in historical sociology. A profession can be defined as (a) a body of esoteric knowledge, (b) exclusive competence over a domain to which its knowledge refers, (c) autonomous control over its work, and (d) a commitment to the work beyond payment for it. Typically applied to learning, law and medicine, but now also extended to many areas of discretionary white-collar work (including planning), there is a good deal of overlap between groups cited by sociologists and the disciplinary personnel mentioned by Foucault.

Goldstein argues that in sociological accounts of the professions, the intellectual core figures only as it is implemented.

> 'Professions must have knowledge, but they treat
> these as givens, placing the constitution of
> professional knowledge outside the purview of their
> investigation.'
> (Goldstein 1984 p.177).

However, following Foucault, it would seem that group membership is not enough to define a discourse, there has also to be a demonstrable mechanism for forming statements of a certain type and function. It is at the level of statements, for example, that planning has developed its relation to science and sought to engender effects of scientificity in its practice. So the problem with the sociology of the professions is that it omits the constitution of discourse. Hence the superiority of Foucault's analysis, at least as it links directly the power of the professions/disciplines, and the knowledge embedded in their discourses.

Foucault's second strategy describes a cluster of discourses that appeared parallel to but somewhat later than the disciplines. They took as their object the correlation of territory, wealth and population. The problem was not how to calculate and control individuals, but how to deploy a power that

> 'exerts a positive influence on life, that endeavours to administer, optimise and multiply it, subjecting it to precise controls and comprehensive regulations'.
> (Foucault 1979 p.137).

In the first instance, this new type of power announced itself via a series of observations on the demographic processes peculiar to whole populations: the variation in birth and death rates, migration across countries and

regions, the great processes of rural depopulation and urban concentration. The abrupt appearance of the industrial city added a second theme, the accumulation of wealth. We are used to thinking of the formation of an industrial proletariat as an achievement of capitalism. And yet it was only the intervention of a whole machinery for the regulation of populations (from immunisation and public sanitation to free libraries and electoral reform) that delivered the 'traditional' working class to the 20c.

At the turn of the 19c. when planning first appeared as a verb, an institute and a programme of work, the urban population was still hostage to a discourse on national efficiency, racial superiority and social imperialism (Long 1982b). The case against cities rested on the damage they did to the working population, and thereby the level of production and political leadership Britain could offer the world. Hence the appeal of those strange plans from the 1880s to deport the 'residuum' from London to labour colonies over the south east; and later, to test the 'fitness' of urban inhabitants, at school or in the army. For its part, town planning was not slow to offer its services. Every Garden City and Suburb was an advertisement for national efficiency and the new civic realm. The state was now a facilitating instrument of fitness in the people; the strategy for regulating whole populations did not

ignore it.

After 1945, this state stood on the threshold of a new world: social insurance. Donzelot (1980) in particular has indicated to us the scale and scope of social insurance, and its special evaluation of the family. What the social discourse summoned up was not the fear of racial degradation by perpetual in-migration to the cities, but the damage done to society by the increasing isolation and fragmentation of the family. The family doctor, the social worker and the psychologist were witness to this discourse (Long 1982c, 1982d). The architect and the town planner were ideally placed to respond, with their plans for a comprehensive re-integration of the family in new communities and towns. We must be frank about the total complicity of the planners in this vision of a democracy of families, caused to function 'normally' by a panoply of social specialists.

Not the least effect of the social discourse was a profound distrust of the law, and of its inability to differentiate cases brought before it. It was pointless accepting or refusing applications to develop a site if a forward plan did not guide that decision and in some sense pre-empt it. The planner had to be present in the law, in the courtroom, in the terms of legislation, in the vocabulary of oficial

planning, in the classification and judgement of cases. The planner thereby gained the mantle of judicial authority, while still exercising his special power, his special discourse. Since the war, the reign of the normal (as against the indifferent category of the 'legal') has grown from haphazard lists of use classes and forbidden combinations or juxtapositions, to a barrage of demands upon irresponsible members of society. It is the sign of a social discourse, and also of the insertion of norms between law and its target, that long before unwanted development is checked by due legal process, a planner can freely denounce it as 'anti-social'.

What can be gleaned from Foucault's last works, therefore, is that town planning is not a homogeneous profession, but has been occupied by at least two discourses. Moreover, the latest and most successful discourse has depended for its efficacy upon a large measure of autonomy from the operation of the law. This discretionary space represents the knowledge and practices peculiar to planning as a profession, including, of course, planning method.

3.3.3   Planning methodology as discourse

The next step is to examine the individuality of planning

discourse. More precisely, what domination and relations of domination caused a discourse on methodology to prevail? Foucault has left no precise indication as to what such a history would look like, so as in section 3.2.3 an interpolation is made from the general texts to the particular situation in planning. With regard to the distinctions drawn in section 3.3.2, the question of domination in method will be treated under the three headings of object, concept and subject. These headings can be re-described as:

(a) the identification and segregation of method,

(b) the assimilation of time into method, and

(c) the overcoming of judgement by method.

The first type of domination and rivalry in method concerns its distribution. Where can methods be found? What falls in the domain of planning method is not a (human) constant, but is determined by the possibilities of borrowing, by the authoritative delimitation of planning technique, and by the classifications used to describe and place the different kinds of method.

Before town and regional planning assumed the right to speak of methodology, it borrowed from (at least) four quarters: sociology, economics, public administration and

cartography. Sociology supplied methods of social survey, and typical targets for survey, including the 'community' and the 'region'. If post-war planning sprung to the defence of the resident and worker against irresponsible economic forces, it was in part because of a sociological preference for neighbourhood units and regional diversification. Planning borrowed from economics the means of describing the industrial population and the succession of trades. The case for the redistribution of industry to the regions rested on the false economies of concentration, just as the case for land zoning in the city centres criticised the economic turmoil of mixed use development. The third borrowing came from public administration, and the administration of offices in particular. The organisation and methods of office work provided an extra source of order for professional planners. This was especially true for the management of documents and the location of responsibility. Finally, planning borrowed from cartography (and also its architectural branches) many methods of mapping, notation and analysis. For a long time, planning has been literally plan-making, and methods of plan-making have been lifted directly from the drawing board.

These four surfaces, upon which method could be found, presented innumerable possibilities for borrowing and

incorporation. But these possibilities were reduced to manageable proportions by two means.

Firstly, not everyone in the planning office could freely borrow methods and presume to speak of them. In the post-war period the guardian of town planning was the professional institute, which functioned as an engine of qualification and validation amongst planners. The approved school curricula, and the Institute's membership policies, created a semi-permeable barrier between the sources of method and its destination. Because the profession did not embrace all the disciplines it borrowed from, its independence in the use of methods marked a rebuff to the scholars. The profession shared only with the law the right to speak of the methods of plan-making. As a result, the 1947 Act stamped its requirements upon the whole of the profession, and a legal framework of plan-making exercised a profound and durable influence on the process of planning.

Secondly, every borrowing had its original characteristics masked or defaced once it was incorporated in planning practice. By re-classification, methods lost their strangeness and gained in utility. Thus the pre-plan survey lost its 'democratic' and 'diagnostic' qualities in the first round of Development Plans, and was directed instead

towards the measurement of land requirements; it assumed official responsibilities. Similarly, economic calculation was subtracted from the discourse on economic planning so as to free it for description of industrial groups and trends.

What counted as 'method', however, within a distribution of methods? This was a conceptual problem, and it was met by the generation of concepts that more artfully attached method to practice. The second form of domination in planning methodology concerned concepts, therefore. In the first instance, it was a matter of clarifying the relationship of method to truth. For many years, up to and perhaps beyond the 1960s, a 'method' could not of itself produce true knowledge. It could only support or clarify the knowledge gained by experience. For example, the simple techniques of notation and transcription that obtained a land use survey map from a field visit could always be held to account by the fieldworker's own memory and perception of land uses. Similarly, the value of a standard of residential density stemmed less from the number of surveys of comparable dwellings on which it had been based, than from the judgement of the estate planner as to the correct modulation of that survey result to fit the circumstances.

It is clear that during the 1950s, the 'personal' content

of method was very high, and technique could not be invoked without also invoking a biographical commentary on its emergence into consciousness. Therefore, concepts of method, such as the concepts clustered around the manipulation of maps, the maintenance of housing records, or the control of casework, tended to be non-repeatable and differentiated between persons. It was not yet possible to individualise methods on methodological grounds, only by reference to their author and time of origin. Method was a 'concrete' and inexchangeable concept.

The new individualisation of concepts inaugerated by the discourse on methodology took two main channels. The first took the form of a response to the escalation of paperwork within the planning office. The accumulation of records and the management of information had become definite problems of administration ten years after the war. The novelty of the response was to stratify office materials so that each item was recognised and routed according to its information content, and not according to its physical form. This entailed the cross-referencing of maps and reports, mixed-media record-keeping, the assembly of documents in a single system of storage and retrieval, the transfer of information between different types of document; and as a result, the possibility of a 'system' of office work, and of work that took 'information' as its object. This might

be summed as an 'impersonalisation' of knowledge. Knowledge could now be classified by the system that produced it, than the person who authored it.

The second channel whereby methodology asserted itself was the content of method. In particular, the insertion into calculation of time as a variable and money as a numeraire. The appreciation that time could be divided, gridded, planned and programmed goes back at least to the 1940s. However, after the private sector overtook public sector construction in the late 1950s and early 1960s, many planners recalled their historic fear that unaccountable and unmeasured change endangered plans, dated survey information, and violated the principles of social insurance. For some, it was sufficient to re-state the argument for greater social ownership and management of the processes out of control. For others, it was more important to befriend change and to incorporate time as a method of forward planning. The incorporation of time followed several routes: the serialisation of planning data within the local authority and the MHLG, the distribution of demographic data and forecasts, extrapolations of vehicle ownership and local studies of the consequences, and the recording of national and regional increments in output, income and employment. The measurement of change observed the rule of a simple symmetry of past and future; the

future contained nothing that could not be said of the past as well. Propelled by structural equations, the traffic, population or employment projection marked out a fictitious space of arrangement of factors. They made concrete a moment of action that had not yet arrived. In certain cases, this 'space of arrangement' received its unity from a numeraire which was monetary. Calculations and projections then produced a costing of change, including the costing of items hitherto reserved for the social discourse: the public and private costs of planning, for example. Monetisation ensured the comparability of dissimilar processes of change, and might be seen to have unified methods of calculation much as office systems unified methods of information handling.

The third type of domination in the emergence of planning methodology centred on the subject positions available to planners. Who was competent (and incompetent) to speak of planning method? The starting point for new subject positions lay in the paradox of planning choice experienced in the 1950s and early 1960s. Since its formation, the planning profession had regarded choice and alternatives as impurities in planning thought. By successive reduction, all impurities had to be eliminated and a single decision advanced behind the plan. If a variety of plans was presented to committee, then the profession's grasp of

truth was radically undermined. The problem with purification of judgement and the hostility to choice, however, was that the system of development plans compelled planners to split judgements and make decisions surplus to the published plans. In so far as land use was incompletely specified by the plan, then a surplus of judgements was required to operationalise it. A mixture of ad hoc and unofficial studies and plans were able to absorb this surplus until the early 1960s, but at this point the elimination of choice came into contradiction with the surplus of choice.

The discourse on methodology attacked each of these problems. In response to the elimination of choice, it proposed two extra positions from which to appraise choice. The task of determining objectives, selecting alternatives and approving strategies was made the responsibility of a whole process of public consultation. Next, the planners were held to account by science for the idiosyncratic nature of their choices. The scientisation of truth established an autonomous sphere of supervision over planning. Together, public participation and scientific validation refuted the poverty of choice in professional planning, by expanding it into a visible arena of verifiable methods.

In response to the surplus of judgements, methodology found the 1947 system of plans doubly wanting. It required huge amounts of detailed policy to be considered by the Minister, while simultaneously under-specifying the character and functions of the land it wished to plan. Hence the conviction, which preceded official reform by several years, that only a division of choices into 'strategic' and 'tactical' with the former called to account by the Minister but not the latter, could preserve the relevance of planning judgement. This division of choices implied new types of decision support. Map scale and notation did not provide adequate grounds for describing policy, or distinguishing one policy from another, or relating current policies to future policies. On the other hand, the virtue of written statements with reasoned justifications was that they could summarise the whole process of public, scientific and professional choice that went into the policy base of a plan.

'Method' had begun as a humble accompaniment to the skilled performance of a professsional planner. But over a period of time it fled that role and began circulating as a general tactic of calculation and choice. In the 1960s the point was reached where planning on the basis of methods rivalled (in certain important areas) planning on the basis of judgement; and it was method which prevailed. The

crisis of the mid-1960s, the experimentation and confusion it gave rise to, signal to us the overcoming of autonomous judgement and the elements of a new discourse. As we have seen, the discourse on methodology (a) attacked the limits to the acquisition of method, (b) reversed the lineage of method to include impersonal procedures and the measurement of time, and (c) expanded autonomous judgement into a publicly questionable and verifiable process. It altered the whole relation of method to truth, making the impersonal calculation of change no disqualification in producing true statements. On the contrary, in the field of projection and modelling, the whole apparatus of truth was lined up behind method to hold all other types of knowledge to account.

3.3.4   Problems for a history of discourse

In its general application, the history of discourse has been considered both successful and productive, perhaps less for its historical insights than for its grasp of ideas, institutions and practices. Foucault has certainly stimulated discussion in the English-speaking world as to the nature of power, the relationship of power to discourse, and the distribution of discourse in social relations (eg. Gordon 1977, Minson 1980, Smart 1983).

Foucault's 'genealogical' method was never intended as just a means of writing better history. It was also always intended as an intervention in the historiography of thought, and therefore philosophy itself. This may help explain the scope of his concepts, their inheritance and claims, as well as the wide range of audiences by which they have been received (see Dews 1979, Sheridan 1980 and Smart 1983 for reviews of his reception in the humanities and across the political spectrum). Therefore, some modesty will be in order in criticising the history of discourse from the viewpoint of such a minor branch of social history as the history of planning methodology. Three specific points can be made.

Firstly, there is the problem of agency. A familiar 'humanist' (and perhaps 'commonsensical') critique of Foucault would consist of asking, how do individuals and groups of individuals relate to these unwieldy systems for the formation of knowledge? The short answer (which is also Nietzsche's answer), is that all knowledge is knowledge of a superior force. Human knowledge is not separate from power, and we do not have discretion whether to resist or utilise power. Knowledge and power represent an indissoluble field within which we are necessarily contained - even as we conquer it. This is a particularly important point where the history of science, reason or

planning is concerned. A well-known myth has it that truth is born only in isolation from power; that rationality represents thought purified of the passions. Hence the unsatisfactory histories that do no more that remove the obstacles to an ascendent ideal of reason in human affairs. In fact, science represents no more (and no less) than the latest conquest of truth, a strategy for systematically producing truth and judging truth. A history of planning methods is necessarily a history of the domination of a new type of truth and truthful man. To this extent, power is a positive and constructive force, and not the limiting force or impassable barrier of humanist accounts of truth.

A second observation on Foucault is that there is insufficient attention given to the difference between a programme for part of society, and the implementation of that programme besides and against other programmes. If section 3.3.3 displayed a slightly tenuated relation to reality, it was undoubtedly because of this indifference to outcomes. For example, the intelligibility of planning methodology as a discourse is given in its profound distrust of human variation and unrepeatability. But while this makes methodology intelligible, it does not make it invincible. What is missing is a description of how two (or more) strategies intersect and one replaces the other. How, for example, was the confrontation staged between

method and judgement, and with what results? If it occurred within the context of traffic survey and population forecasting, how did the victory of method over-ride or isolate judgement elsewhere in survey?

The third area of criticism is perhaps the most important, and pushes Foucault's arguments even further into the analysis of power. When Foucault describes subject positions, he does not say where human subjects come from to occupy these positions, nor what other (perhaps incompatible) subject positions they bring with them. His conception of power, in this regard, is too unconditional, because subjects are always recruited to a subject position and there perform obediently. This is a drastic simplification of the actual clash and rivalry of different subject positions within the same human subject (Minson 1980). It is certain that planning offices taken together have offered differential advantages for the adoption of quantitative and impersonal systems of plan-making, and this is no less true of individuals or groups. It would be a mistake to foreshorten this process of differential advantage by assuming that where it was possible to speak of methodology, then it was effective in its own terms.

The chief problem with Foucault is that we do not yet know how to 'use' him. Christine Boyer's (1983) remarkable text

on the origins of the American planning mentality makes
several turns to Foucault in its complex argument, but
perhaps suffers from a late addition of discourse-history
concepts to an account that could otherwise have functioned
quite well without them. But this bears upon the other
partner of the text, marxism, and the troublesome
relationship between Foucault and marxism shall occupy the
first part of the concluding section to this chapter.

3.4   MACHINES, DISCOURSE AND METHODOLOGY

A reconciliation of labour process theory and the history
of discourse, let alone Marx and Nietzsche, could produce
only the loftiest of philosophical generalities (but see,
for example, Miller 1978, Stern 1983, Deleuze 1983). They
are very different types of analysis, and have observed no
division of labour in the objects they claim to account
for. So there is a marxian account of consciousness and a
Foucaldian account of labour power. Nevertheless, it may
prove possible to subsume some parts of both traditions
under a broader heading. The objective of this section is
to show that they share a particular perspective on the
production of objects (whether physical or discursive), and
that both respect the contingency of outcomes on conditions
of production. On this basis, a typology of planning

activities is presented, including the transition between types. Methodology, as a discourse and as a form of work, can then be appropriately situated in the transition from the manual and personalised crafts to a systematic and machine-assisted type of planning.

Convergence between discourse and labour process theories takes place around the concept of 'production'. They both accept that the objects of which they speak are 'productions'; that production is necessarily opaque to its human participants; and therefore they reject the freely inventive powers of the individual in favour of 'conditions of production'. Both discourse and commodities have an 'economy'. They are produced and exchanged, take and lose value, and differ in kind and quantity. Both Marx and Foucault write extensively on the problem of economy. In the analysis of labour processes this approach to production is quite explicit: planners are workers because they produce a number of intermediate and final services, and these services have a value independent of the planners' intentions. Discourse theory is somewhat more reticent. We must recall the marxian division of social activity into a number of 'practices', each of which is a form of production in its own right, before recognising Foucault's appeal to 'discursive practices' in articulating power/knowledge relations.

Clearly, post-war planning practice has combined discourse and machine, and it has combined them in different ratios and modes. If we knew in which modes, and in which succession of modes, then we might possess the elements of a history of the joint production of labour and discourse in planning practice. Hence the significance of the concept of 'craftsmanship'. It is a bridging concept that describes simultaneously (a) a regime of truth in planning, and (b) a certain investment of labour and tools in practice. In the person of the craftsman is combined a technical grasp of his activity, and the affirmation of his judgement. This dual conception allows planning method to be situated quite precisely, in the craftsman's discretion. Method is a discretionary power, which may be realised in different ways depending on the balance of experience and standardisation within the individual craftsman. There is method; but no supra-personal 'discourse on methodology' to master it. In fact, it represents an impossible discourse.

Why, then, does craftsmanship falter in the 1960s? Because of new conditions of production, that attack and replace the conditions of craft planning. These new conditions are personified not by a person but by a 'process'. The subject of planning becomes hybrid, a man/machine, a locus of power and knowledge that invalidates craftsmanship in the name of

science and democracy. 'Systematic planning', therefore, represents a second essential bridging concept. In it are combined (a) the scientisation and democratisation of truth in planning, and (b) the installation of routines and power-driven tools in a planned office. Methods do not disappear from practice, but they alter their claims, their pertinence and their location. From swarming around particular local calculations they ascend the activity of planning to invalidate the master craftsman at its peak. The discourse on methodology becomes possible, on the proviso that it addresses the problem of engineering not just individual calculations, but entire planning organisations. The end result is not only negative, an act of hostility to tradition. It is also profoundly constructive. It affirms science and public scrutiny in planning decisions, and extracts high levels of productivity from the planned office.

Occasional reference to the 'externalisation' of craft knowledge, in methodologies and processes that 'confront planners as objects', is not meant to evoke memories of the humanist critique of work: work as alienation from self and nature, for example. Craftsmanship was never the simple expression of enduring human powers of creativity; it only existed as it could be codified in the body, in manual skills, in notations, and in cycles of documentation and

decision taking. In the same way, systematic planning did not occlude or split any natural powers, it simply required a different skill, notation, documentation, etc. Hence the reference to modes of planning and transition between modes. Here too, it should be emphasised one is not discussing a teleological process with an initial state, an end state, and a guided evolution from one to the other. The actual situation in 1957 and 1966 consisted of mixed mode planning practice. The object of analysis is the uneven development of systematic planning against craft planning. The historical problems are to establish the points of conflict, identify the specific mix of modes across the planning activity, and trace the consequences for planning of the altered mix.

The remainder of this thesis now explores a specific historical moment with these concepts and qualifications in mind.

C H A P T E R   F O U R

INTRODUCTION TO THE CASE STUDY

4.1   INTRODUCTION

This chapter introduces a case study approach to the transitional period of the late 1950s and the first half of the 1960s. It argues the case for a detailed examination of the organisation and methods of a single planning authority. The economic, demographic and political circumstances of the chosen town are then set out, followed by a resume of pre-1947 planning activity and its effectiveness. The methodology of the case study and the background information provide the setting for the case study itself, which takes up chapters Five, Six and Seven. They explore in detail the operations of the Planning Division of Coventry's Department of Architecture and Planning between 1947 and 1966. Conclusions to the Coventry case study as a whole will be found in chapter Eight.

4.2   THE CASE STUDY APPROACH

This section considers the problems and advantages of the

case study as such, and briefly mentions some features of historical inquiry with special reference to recent history.

4.2.1 Role of a case study

For a long time, the case study approach was controversial amongst students of politial science, policy analysis and public administration because it contravened the elementary rule of generalisation. It was argued that study of a particular instance did not allow the researcher to generate concepts with general application, not to test hypotheses of a general character. Furthermore, there was an element of arbitrariness in the selection of case study material which prevented rigorous analysis and spoiled comparative research (Heclo 1972 pp.88-97). Case studies were said to work best when mapping a pre-defined phenomenon, and therefore worked less well where theory was weak or data had accumulated in excess of the means of explanation.

However, such weaknesses could be traded off against the two undisputed advantages of the case study:

(a) its attention to change over time, to novelty and transformations, and

(b) its integration of a wide variety of analytical techniques, such as primary and secondary documentation, participant interviews, sample surveys, quantitative methods, and historical study.

Also, in recent years the use of case studies in accounts of planning practice has been championed by Ian Bracken (1981 pp.267-72) and Ian Masser (1982 pp.8-10). They confirm the value of single instances, but in the context of comparative research into all types of planning and policy process. At the same time, they are unable to point to any agreed framework in which such case studies might be embedded; and reliance on ad hoc typologies is widely acknowledged (eg. Heclo 1972 p.89, Cropper 1982). Still less can one point to any series of rigorous case studies eligible for such a framework.

The ability to generalise findings is probably the weakest defence of the case study, and persists only by virtue of empiricist traditions in the social sciences. Every case study has a specific object, and the problem is how to pose the specificity of that object, not how to dissolve it in a 'general theory of planning'. There are two errors here: the first is to treat concepts as accumulated experience, the second is to see the particular as a microcosm of the whole. In fact, a concept is nothing but accumulated concepts, compounded and refined by usage; 'experience' is

the concept of which we have 'forgotten' it is a concept.
The accumulation of 'experiences' tells us only that
concepts differ in the scale and scope of object they lay
claim to. Differences as such cannot invalidate case study
conclusions, they can only direct us to the existence of a
variety of objects to be explained. Specificity in a case
study is a theoretical strength.

On the second error, there is no reason to treat a specific
object as a 'pars totalis', a microscopically reduced image
of the whole, such that what is true of the part is true of
the whole, and vice versa. Differences between specific
objects, and their uneven development, are equally present.
If a case study reveals a special function or legacy, then
that represents its contribution to the whole rather than
its deviation from it. Hence the importance of specificity
in analysis.

There seem to be two ways of employing a case study. The
first is by way of policy analysis, in which analysts are
(rightly) concerned with history as a source of pedagogical
materials and lessons. They flatten historical events and
join them seamlessly to the present. The most one learns
about planning history from this perspective is that all
hitherto existing planners were wrong. Whatever the value
of policy analysis, it does not show how error was once

historically necessary (cf. Tribe 1977, Long 1981). The alternative use of case studies lies within historical analysis. Here not 'truth' but the value of truth is under scrutiny. What has been held to be true, and by whom? Which social relations are natural to this time, and how were they naturalised? To some extent social history, sociology and the history of philosophy have taken this route.

There is a third possibility, however, which evaluates historical analysis itself. What is the 'type' of the historian who would apply himself to history? Nietzsche reflected on this question in his essay 'The use and abuse of history' (1911). He identified three types of history:

(a) The monumental. The active historian looks beyond his contemporaries to his predecessors, for examples, teachers and comforters. Great men and great events are depicted, at the expense of causes, because events are sought that will have effects upon all ages. As a result, the past suffers wrong and whole tracts of it are forgotten and despised. Historians of the monumental decry contemporary arts and attempt instead an extreme administration of the past.

(b) The antiquarian. The conservative and reverent historian preserves everything that survives from older times. A careful attention is bestowed on the minute and homely. But there is no measure in this

preservation, equal importance is given to everything. Many things are not noticed at all, and the others are seen in isolation as though through a microscope.

(c) The critical. The strong historian deliberately breaks up the past. He brings it to the bar of judgement, interrogates it remorselessly and finally condemns it. For every past is worth condemning. The past is not inherited but invented, so as to gain an origin other than that from which he sprung.

In these three types of historian, three ratios of the 'historial sense' are displayed. The historian dominated by history can forget nothing and learn nothing. The historian who regrets and reveres history will never be cured of grandeur. And the historian convulsed by strong values wishes only to be free of history for good.

It is possible to supply examples from the history of town planning of the anti-Platonic histories Nietzsche describes. Of monumental histories there is no shortage. Every text generates a list of ancestors (Owen, Chadwick, Buckingham, Booth, Rowntree, Lever, Howard, Unwin, Parker,...). We are told we belong in their history, and not they in ours. The image of the Garden City is the most excessive, the most repetitive, not least because it summons up Utopia and the dawn of a new world. We bask in its glow. The antiquarian historian is noble, if faded, and

his task attracts curiousity as well as condescension. Sub-scholarly yet learned, the antiquarian piles up evidence chiefly for our amazement. The first planning histories were of this kind (for example, Bell and Bell 1969, Rosenau 1959, Burke 1971, Korn 1953). The critical and sacrificial historian enjoys cutting down to size the achievements of an age, as Mumford (1961) assaulted the industrial city, Reade (1982) disparaged the betrayal of planning since Howard, and Ravetz (1980) attacked the planned destruction of human environment since the war. We are incited to trample on the past and start afresh; history is a sign of weakness in the planner.

According to Nietzsche, there was a correct ratio between an excess of history and a contempt for history, and it was achieved by the 'art of forgetting' (1911 p.95). The historian who could not forget fell prey to several dangers: his personality was weakened and lost independence, he assumed the old age of mankind and its highest form of justice, yet his instincts were thwarted by the tyranny of precedent and eventually he destroyed himself with irony and cynicism. The antidote to an excess of history lay in drawing a limited horizon around oneself, and in establishing the correct balance between past and present.

Who, after all, reaches for planning history? The older planners, for whom the life-span of statutory planning is embraced by their own biography. They look back upon early planning as old age judges youth; with sentiment and presentiment. But such reflections pass rapidly into contemplation of an achievement and a solid respect for one's colleagues. Who else looks back? The scholars, who through relays of all kinds (voices of the still living, texts of the dead) participate vicariously in the building of 'their' home. For the scholars, planning history is a treasure to inherit, and eventually they will have inherited it all. From being absent and ignorant they rise to fame and wisdom - while never having been historically necessary!

In terms of mounting a case study there are many inheritances we can do without. These include the equation of planning with reason, happiness and virtue; the assumption that planning is always liberatory, and represents a higher state of existence; the fable of a gradual accumulation of morality in society; that planning is a human motive, and in a sense, without history. The type of historian who studies the particular without sacrificing it to history, great men or his own values, makes a virtue of his 'unreasonableness'. Perhaps planning has petty or ignoble origins, perhaps it signifies a

reversal of fortunes and a tactical act of aggresion against established values. Perhaps planning was invented several times, and each time differently. Most of all, such a historian will be unreasonable about the facts of planning, remembering Nietzsche's (1974 p.104) aphorism that 'there is no way of telling what may yet become part of history. Perhaps the past is still essentially undiscovered!'.

This case study has certain (somewhat limited) objectives. It will attempt to recover a mass of documentation that has slipped into obscurity; trace several courses of action; identify the strategic moments in which method overcame manual and judgemental modes of planning; and evaluate the results. Because the case study is mounted in a historical discourse it may produce conclusions of a different order to a purely technical evaluation of the emergent methodologies of the 1960s - and that is indeed the intention.

4.2.2   Methodology of the case study

The chosen planning authority is Coventry's Department of Architecture and Planning. No attempt has been made, for reasons already given, to sample all planning authorities

for a typical or representative planning team. Coventry was attractive because of its unrepresentative qualities. These include:

(a) a tradition of municipal innovation in service delivery and public administration,

(b) extensive wartime destruction,

(c) the pioneering of pedestrian precincts, a civic centre, inner ring roads and community planning in Coventry's post-war Development Plan,

(d) the scope and sophistication of the Development Plan Review 1957-66,

(e) the presence of a local planning school and branch of the Town Planning Institute, and

(f) considerable prestige within the planning and development professions for its reconstruction and review.

This choice was retrospectively confirmed by findings made in the case study itself.

Three types of material were gathered for the case study: primary, secondary and interview material. By a 'primary source' is meant the immediate documentation of Coventry Architecture and Planning Department, the City Council's committees and Departments, and the Council itself: to which can be added primary documents drawn from the West Midland Branch of the Royal Town Planning Institute. In

April 1983 the author was granted permission by the Chief
Architect and Planning Officer for Coventry, H.Noble, to
consult the Departmental records. Thereafter, Shirley
Trafford (Assistant City Planner) assisted in the
identification and retrieval of relevant files. The
basement of the Department held a number of files,
including officers' reports to the Planning and
Redevelopment Committee 1956-67, records of officer
attendence at conferences during the 1950s and 1960s, sets
of Development Plan Review reports (published and
unpublished), a cabinet of photocopied articles and
offprints in use during the early-middle 1960s, and much
development control and other material. It was discovered
that in October 1973, some 280 files and 114 maps had been
transferred to the Coventry City Records Office. Inquiries
there revealed an extensive range of subject files,
including the central area redevelopment, subject studies
and office correspondence, large development applications,
and information on staffing and administration.

It was immediately clear that much more material was
available (without restrictions) than was expected or for
which there was use. In two visits (June and November 1983)
extensive searches were made of the files in the
Department and in the City Records Office. These files can

be described under six headings:

(a) Planning and Redevelopment Committee Minutes. Apart from a brief gap in the series 1960-61, the minutes were consulted for the period April 1956 to November 1967. Two versions exist: in the Records Office there is a formal pasted-up copy of agendas, motions and resolutions, and in the Department there are the corresponding files of officers' reports and correspondence between officers.

(b) Establishment and General Administration Committee Minutes. The Records Office holds just the formal pasted-up version. They were consulted from August 1955 to November 1963, and contain essential information on staffing, the use of computers, and the work of the Organisation and Methods Unit.

(c) H.M.Treasury Department Organisation and Methods Study. This famous study was made in 1952-53, and represented the first O and M application in local government.The Records Office holds the original 31 duplicated reports, including Report No.8 on the Architecture and Planning Department, individual Committee responses, and the final Policy Advisory Committee report to Council.

(d) Development Plans. Both the Department and the Records Office hold copies of the Development Plan, submitted 1952 and approved 1957, and of the Development Plan

Review, submitted 1966 and approved in 1972. Papers
from the 1968 DPR Public Inquiry are stored in the
basement of the Department. The Department published a
useful booklet (which is still on sale in Coventry),
originally for an exhibition of the Review Plan, called
Coventry 66: The Making of a Development Plan (Gregory
1966b). It contains a 'dramatis personae' of members of
the Planning Division involved in the Review.

(e) Development Plan Review Reports. 55 of these were
issued between 1955 and 1966, some in duplicated form
for internal use and in Committee, and some in
published form as Reports of Survey. Held in the
Department, they are an invaluable resume of the
pattern of interests and planning methods of the time.

(f) Subject files. These are working files from the
Department, subsequently retired to the City Records
Office. The subject files provide the bulk of the
information for the case study, and Table 4.1 sets out
the subjects and time periods of the files most
consulted. Several other files were consulted less
systematically. Within a broad subject heading and time
period, they lack any further indexing or internal
classification. Individual letters, memos and reports
are placed in approximate chronological order.

In addition to primary documents from the Architecture and

TABLE 4.1   Departmental files consulted, by subject
                   and time period

File subject	Time period		
Population	May 1950	–	May 1964
Traffic research	July 1961	–	July 1965
Articles and descriptive matter	Jan 1954	–	July 1964
Distribution of plans and reports	Feb 1963	–	June 1966
	Jan 1969	–	Feb 1970
Statistics – 1961 Census	July 1961	–	July 1965
Industrial survey	Dec 1956	–	Dec 1961
Coventry city region	May 1963	–	July 1969
Administration and staff	Jan 1956	–	March 1961

Planning Department, the Minutes and Attendence books of the West Midlands Branch of the (then) Town Planning Institute were also drawn upon. Covering the period from 1943 to 1961, the Minutes refer to the founding of the branch, activities of the Junior Section, relations with the planning schools, and professional activity including lectures, visits and publications. The Minutes are currently held by Mark Middleton (West Midlands Branch Secretary) in Birmingham City Planning Department.

'Secondary sources' consist of items written about Coventry planners instead of by them. Three books of especial local interest are Kenneth Richardson's (1972) official history of Coventry; the memoirs of a famous local councillor, George Hodgkinson (1970); and John Friend's and Ken Jessop's (1969) study of Coventry, Local Government and Strategic Choice. Other secondary material is listed in the Bibliography.

The third source of information was interviews. Interviewees were selected from the Coventry 66 book and the recommendations of the interviewees themselves. Lack of information and the early deaths of some ex-Coventry personnel precluded systematic sampling of staff, but the final selection included a mix of senior and junior, recent and established, and development and forward planning.

Between May 1983 and January 1984, 10 interviews were
conducted, in Coventry and elsewhere. They included 7
ex-planners from the Department, two current members of the
Coventry City Engineers Department, and a member of
Coventry Polytechnic. A list of interviewees and their past
and present jobs is given in Table 4.2. Interviews lasted a
minimum of 45 minutes and some took several hours; all were
tape recorded and transcribed. A typical interview
contained questions and prompts on (a) educational
background, employment up to and after Coventry, (b)
responsibilities and job-content in Coventry, (c) a subject
area in which the interviewee had specialised, and (d)
professional and extra-Departmental activities.

4.3   INTRODUCTION TO COVENTRY

The next four sub-sections provide background information
on Coventry, and contain many themes and issues referred to
in the case study itself. Without imposing any strict
causality on events, the introduction proceeds from a
discussion of Coventry's distinctive economic history and
its rapid growth in population, to consideration of local
political forces and the nature of the administration. In
this context, an outline is drawn of town planning in the
city between 1909 and 1947.

TABLE 4.2   Interviewees, by current and historic posts

Interviewees	Date of interview	Post at Coventry	Current post
Arthur Ling	19.1.84	1955-64 Chief Officer	Private practice
Malcolm Reece	28.7.83	1957-68 Development Plan Officer	Acting CPO East Sussex
Peter Wood	4.5.83	1960-63 Research Officer	CPO Merseyside
Roy Cresswell	8.7.83	1960-65 Traffic Planner	Lecturer UWIST
Mike Flynn	5.7.83	1960-63 APO Policy and Research	Deputy CPO Mid-Glam
Peter Aubrey	23.8.83	1961-64 APO Central Area	Manager LAW
Keith Platt	20.9.83	1961-65 APO Policy and Research	CPO Stafford
Brian Redknap	26.8.83	1948-50 1956- Senior Asst Engineer etc	City Engineer Coventry
Jack Simpson	26.8.83	1963- Joint Roads Team etc	Asst CE Coventry
Ken Carter	1.1.84	1965- Lecturer Lanchester Coll.	Lecturer Lanchester Coll.

4.3.1 Coventry's economy: late start, fast growth

The major fact in Coventry's history is that the factory system of the industrial revolution did not take root in the city until the end of the 19c. Until then, the dominant mode of production was 'artisanal', small commodity production in which the worker owned both tool and product. A multiplicity of ribbon-weavers and watch-makers formed the largest category of employment. They worked at home, and produced for a regional (or at best, national) market. Consequently, Coventry did not experience, as did many other northern and midland towns of the 19c, large-scale manufacture associated with a floating propertyless proletariat and a chronic housing crisis.

Only in the 1890s did the factory system make itself felt. Firstly, Swiss and American factory producers drove out of business Coventry's watch-makers, who were still in the era of the skilled craftsman. The silk-weaving industry had already collapsed because of competition from mechanised Lancashire. Secondly, these declining industries were replaced by new sectors based on a string of innovations in technology and product. In particular, capital released from the collapsing ribbon industry was directed into the

manufacture of bicycles and bicycle components.

Coventry Machine Company had produced the first bicycles in the city in 1867, but the re-capitalisation of the industry caused a cycle boom. The scale of demand reinforced changes in the method of production. The bicycle industry was characterised by relatively large-scale production runs, the early adoption of a standard 'safety' model, the simplification of parts, and the reduction of work to the assembly of pre-fabricated components. By specialisation, a number of wheel and tyre manufacturers appeared, to complement the assembly-type enterprises.

In the early 1900s, a second round of technological innovation occurred. Collectively, but amidst fierce competition, Coventry's cycle firms passed from bicycle, to motorcycle, to motor car production. In this transitional phase, 1900-14, vehicles were made in small numbers with experimental models ('batch production'), and the young industry attracted many new firms and private enthusiasts. The car firms employed skilled labour drawn from bicycle and motorcycle manufacture, and made extra demands on the components sector. By 1907, the motor firms employed twice as many workers as the second largest category, tool-making.

After the First World War, the car industry moved out of its experimental phase. The early 1920s were decisive for the transformation of Coventry into a car-producing, high-wage city. Among the British producers, only Morris Motors and Austin successfully entered the mass production, assembly line phase, and both had plants or headquarters at Coventry. For example, William Morris took over a WW1 machine-gun factory in Gosford Street, introduced linked transfer machines into the assembly line, and mass produced engines for assembly at his Cowley plant. By 1929, just 4 companies accounted for 80% of national vehicle output. These firms and workers occupied a strategic position in the British economy. The vehicles industry, along with the petrochemicals and electrical goods industries, together formed an 'economic bloc' directing the growth of other sectors and leading the western economies out of the slump (see eg. Richardson 1969, Aldcroft and Fearon 1969, and for more detail on car company performance - Church and Miller 1977).

According to Friedmann (1977), the Coventry car industry passed through its peak performance between the early 1930s and the mid-1960s. The car monopolies enjoyed rising home demand, protection from foreign competition, and economies of scale in production. The 1939-45 War maintained output levels in as much as civilian production was given over to

military uses, and the car companies benefitted from the state construction of new 'shadow factories'. After the War, the car firms entered the international arena at new levels of production. Vehicles were marketed globally, beyond the limits of Empire, and output was maintained by a combination of automation and rising overseas demand. Only in the mid-1960s did certain weaknesses become apparent; chiefly, under-investment because of reliance upon successful product runs, and poor internal company organisation due to hasty and incomplete mergers to meet North American competition in volume car production.

Coventry's peculiar economic history might be summed as 'benefits of a late start'. These benefits included the immediate introduction of modern machinery at the onset of production, the exploitation and extension of a mass market brought into being by other producers, the rapid elimination of other producers, the subordination of supply sectors, and the decline of other industries in the face of a high wages policy. Friedmann (1977 p.186) estimates that in 1971 the car industry employed directly and indirectly half the male, and one-fifth the female, workforce in Coventry. In fact, the town's identification with a fast growing, technically proficient and prosperous car industry explains many of its social and political characteristics.

4.3.2   Coventry's population: many people, few services

Gregory (1973 p.83) estimates that between 1919 and 1939 the population of Coventry grew at a rate seven times that of Great Britain. In 1891 53,000 people lived in the city; by 1939 that number had increased to 234,000. Growth continued after the War, reaching 305,000 inhabitants in 1961 and 330,000 in 1965. For over five decades, Coventry was easily the fastest growing town in the UK. Clearly, the increase in total population was closely related to the rapid increase in the size of the workforce. The prosperity of the vehicle, engineering and aircraft industries created a high demand for labour that could not all be supplied locally.

From the 1930s to the 1960s in-migration was pronounced. During the late 1930s and early and late 1940s, net increase due to population movement peaked at 8-10,000 people per annum (Gregory 1966a p.17). In terms of social facilities, this period of growth was marked by private affluence and public squalor. Despite the car companies' prosperity, there were severe deficiences in the production of housing, in the provision of schools, in the shops and other facilities available to suburban estates, and in the powers of local government to coordinate itself and

intervene effectively. Tim Brown (1982,1983) sets out
details of this underprovision as it affected housing, in
his commentaries on Reports of Coventry's Medical Officer
for Health.

In-migration dominated natural increase (in volume terms)
in the years 1921 to 1939, producing a very young
population. Certainly, an analysis of the migrant
population 1951-61 showed that the modal age class for men
was 30 and for women 26-9 (Gregory 1966a p.18). In the
post-war period, however, growth was increasingly
transfered from inflow to natural increase, and this
altered the social requirements of the population and the
demands made against council services. The post-war Labour
Party's enthusiasm for reconstruction of the city centre,
extension of the public housing stock, the redesign of
traffic routes, and reform of the Council's administration,
has to be set against the background of years of
frustration at its inability to contain or service a young,
vibrant and productive population. Demographic change, and
the issues made out of it, provide one of the keys to
understanding planning strategies of both the 1940s and the
1960s.

4.3.3   Coventry's politics: caucus rule, efficient
         administration

Coventry's political history was conditioned by the same
circumstances as caused people and capital to accumulate in
the city. The oldest traditions of the labour movement were
absent, the professional classes were small, and up to 1900
the most powerful unions and the unions best represented on
Coventry Trades Council were the skilled craftsmens', such
as the A.S.E. and the Toolmakers' Union. But over the next
two decades, the inflow of an adventitious workforce for
car and motorcycle manufacture and then for wartime
munitions led to the growth of unions for semi- and
unskilled workers, and especially the Workers Union. The
W.U. came to play a significant part in the Trades Council,
which campaigned on labour and social issues, established
in 1902 a Labour Representation Committee (forerunner of
the Labour Party), and pressed for better representation of
labour on the City Council. In fact, the number of labour
movement councillors increased from 4 in 1913 to 11 by
1920, or one-third of Council seats.

This spread of organisation and power was interrupted by
the General Strike and the miners' return to work.
Nationally and locally the trade unions lost support. The

Workers Union collapsed. In response to this defeat, the Labour Party renewed its autonomy and set out to fulfill its 1918 Constitution as an individual membership party, accepting members from inside and outside industry and campaigning on labour and social issues. A division of labour was tacitly acknowledged between Labour and the T.U.C.: workplace struggles to the unions, electoral struggles to the party.

In Coventry, socialism became the property of the Labour Party, a party insulated from its former supporters and especially the general unions and the Trades Council. True to contemporary models of socialist organisation the local party was highly centralised, and effectively run by a caucus led by George Hodgkinson (the Party's first secretary) and Sydney Stringer (the Party chairman from 1932). Between 1926 and 1937, and against the backdrop of rearmament and the Spanish Civil War, Coventry Labour Party planned its long ascent to power. Then in November 1937, following a bitter strike in the car plants, Labour took overall control of the Council for the first time.

The new administration announced itself as radical, socialist, and for planning (Brown 1984). It made two unusual moves. The first was to set up a Policy Advisory Committee to receive and review the spending plans of the

various committees, and to advise on the overall direction of the local authority. Although it contained a minority of opposition members, the P.A.C. was in fact the chief instrument of Labour's strategy for the city. The second move was to approve in December 1938 Coventry's own 'Five Year Plan'. Hodgkinson (1970 p.38) laconically remarks the £1,570,000 five year Capital Works Programme aroused 'a great amount of public interest'. It was, of course, highly controversial. The Programme included new streets, road improvements, an airport, school buildings, the protection of open spaces, new bridges and sewers, and an extension of the Council House.

Because of the outbreak of war in September 1939 these plans never came to fruition. But it is clear that Coventry's socialist planners were one part of the general movement towards 'planning' that encompassed members of all parties and traditions from the early 1930s (Skidelsky 1969, Addison 1975). The enthusiasm for comprehensive replanning of the city, the choice of the 'five year plan' method, the attack on waste and social inefficiency in unplanned growth , the expansion of the officer class and the creation of a cadre of planners, were all distinctive and expressive of the planning movement (cf. Long 1982c,d). What set Coventry apart from mainstream planning thought, however, was its buoyant economy. The cross-party agreement

on the need for planning had taken as its target the declining staple industries, residue of the first industrial revolution. Coventry was planning to house and service a growing workforce and to manage the development of a growth area. Coventry's pre-war orientation towards resource planning under conditions of strict political control constituted a valuable advantage in the following six years of the war.

Then came 'Coventration'. On the night of 14-15 November 1940, the Luftwaffe made a mass air raid on the city, killing 554 and seriously injuring 865. Three-quarters of industry was badly damaged, while 46,000 houses were bomb-damaged and 2,000 of them made uninhabitable. The tram lines were unusable and 156 of the 181 city buses had to be taken out of service. The railway station was hit and destroyed. Central Hospital was half destroyed and cut off by fire, so that ambulances had to be diverted to to Rugby, Nuneaton and elsewhere. As Hodgkinson (1970 p.159) describes it, 'the civilised life of the city had gone, its services paralysed, and it was in a "state of nature"'. Narrowly averting the Minister of Home Security's proposal that the city be put under martial law, the City's War Emergency Committee and Whitehall's Regional Officers worked jointly to retrieve the situation. Emergency services were provided including evacuation of schoolchildren, temporary feeding

stations, burial of the dead, innoculation against disease, restoration of water, gas and electricity, and so on. Several thousand craftsmen in the armed services were released to demolish unsafe buildings, make houses weatherproof and clear the streets. Lord Beaverbrook, Minister of Aircraft Production, set up a special Coventry Industrial and Reconstruction and Co-ordinating Committee to maintain continuity of production in the essential engineering and aircraft factories. The city was raided again on 8th and 10th April 1942, but less intensively; and generally after the German invasion of the Soviet Union in June 1941, Britain attracted less attention from the German bombers.

The cessation of bombing and the turning of the war at El Alamein in October 1942 turned the period of emergency into a more peaceful period of reconstruction. But the provision of emergency services 1941-42 had been a veritable 'school of planning' for officers and members of the Council. As is well known (eg. Calder 1969), the pre-war emergency plans for health, fire and other services crumbled the moment danger threatened, and they had all to be hurriedly redrafted in the heat of the moment. In responding to the blitz, the Council learnt what it was like to abandon tradition and take responsibility for practically every aspect of the people's life. For the rest of the war and

immediately after it, no obstacles were placed in the way of plan-making for the city (though given the shortage of materials and labour, plan implementation was another matter). After 1945 there was no reversal on party political grounds of the desire to plan, for a variant of the planning principle was incorporated in the 'Butskellite' consensus around full employment, social security and a national health service. Moreover, the status of planning had never been higher. Techniques such as Operational Research had been successfully applied to problems in military organisation, and extensive experiments had taken place in social accounting, manpower budgeting and the rationalization of the utilities under public ownership.

At the local level, it was impossible for this revolution to carry through into policy while representatives of the old order remained in power. This led the Labour group in Coventry to replace several of their aging Chief Officers during and after the War. The City Treasurer's post passed from Sydney Larkin to A.H.Marshall in 1944. Frederick Smith, appointed Town Clerk in 1924, was replaced by Charles Barratt in 1946. And Ernest Ford, the City Engineer, retired in 1949, his planning duties absorbed into the new Architecture and Planning Department led by Donald Gibson from 1949. Thus the War left Coventry's

political and professional forces doubly equipped to make sweeping changes in the face of the city.

4.3.4   Foundations of town planning in Coventry

This section describes the organisation and performance of town planners in Coventry between the first planning Act of 1909 and the appointment of a Chief Architect and Planning Officer in August 1949.

The origins of official town planning can be traced back to 1912, when the City Engineer J.E.Swindlehurst reported to Council on the desirability of 'a broad-minded, far-reaching scheme' for undeveloped areas inside and outside the city (cited in Ford 1951 p.4). A start was made on a small scheme in 1913 to the north of the city and across its tightly drawn boundaries, but the outbreak of war prevented any further progress. After the War, the city was forced to act because the 1919 Housing and Town Planning Act made it obligatory for all towns over 20,000 inhabitants to prepare a planning scheme before 1st January 1926. So in 1924 a new City Engineer and Surveyor, Ernest Ford, was appointed, a man with twenty-five years experience in local government with Walsall and Southport. With his Town Planning Assistant Arthur Pugh, appointed

1925, he set to work at once. He recalled some years later:

'I made my preliminary physical survey personally,
visited most of the large industrialists and
landowners, interviewed the local social workers
and consulted all my official colleagues and staff'
(Ford 1951 p.4).

The fruit of their labours was Coventry Town Planning
Scheme, adopted by the City Council in July 1925. It
comprised 17,560 acres, taking in 53% of the city's surface
and a ring of land around it in neighbouring rural
districts. Shortly afterwards the scheme was amended to
include nearly 28,000 acres, the adjacent authorities
relinquishing their plan-making powers to Coventry but
administering the plan within their boundaries.

The adoption of an amended scheme in 1926 did not end
Coventry's interest in planning, however.

Sizable economic and demographic pressures were affecting
the city. Coventry had doubled its population since the
beginning of the century, reaching 132,000 in 1924.
Considerable building pressures were expected on land next
to the built-up area. Moreover, the migrant workforce was
ill-housed, forced to commute from dormitory towns, or
suffered overcrowding. The 1930 Report of the Medical
Officer for Health included the statement that 'the housing
problem here, as in most cities, stands largely unresolved'
(cited in Brown 1982 p.9). The housing problem was coupled

with a traffic problem. As befitted a car-producing town, rates of car-ownership were much higher than the national average. In 1939 the local rate stood at 68 cars per 1000 inhabitants compared with the national rate of 39 per 1000 (Pugh and Percy 1946 p.80). The city centre's medieval road plan could not contain this number of vehicles without congestion; car parks were lacking and through traffic mingled freely with local traffic.

Ford responded in three ways. Firstly, the planning scheme for Coventry was progressed from resolution to draft to Ministerial approval. The draft scheme was sent out for consultation in May 1932, and included planned industrial zones, three by-passes, two ring roads, and housing allocations at 4 to 16 dwellings per acre. Local authorities in the plan area were granted the right to acquire the land for public parks etc. in addition to land sterilised by the plan. The scheme was somewhat altered by the passage of the 1932 Town and Country Planning Act, and in 1935 the Ministry of Health approved the division of the Coventry scheme into five separate schemes for detailed planning. These areas had been brought under interim control between 1925 and 1931, and now their plans were drafted concurrently. Scheme No.1 went to public inquiry, and became a 'local Act of Parliament' in 1938: the first and only plan prepared for Coventry before the 1952 Development

Plan. Despite the efforts of the City Engineer, therefore, the Coventry planning area was regulated during the 1920s and 1930s almost entirely by interim development control (ie. control in the absence of an approved plan). Under this regime the large suburban extensions to the city were constructed. Nearly 5,000 permissions were granted between 1929 and 1940.

Ford's second response was to draw up plans for new and improved roads. Road schemes for the built-up area had existed as early as 1914 (Richardson 1972 p.279fn), but it was only in 1920 that a local Act was passed enabling the city to make road improvements. Ford did the detailed planning for six streets, including Corporation Street (1931) and Trinity Street (1937). At the same time, he explored the idea of a series of concentric ring roads to by-pass traffic around the city centre. Following the 1930 boundary extensions, work began on a dual carriageway west of the city at Allesley and running south and east to London, but it took until 1939 to complete the six mile stretch of road. Ford (1946 pp.27-5) subsequently reported an estimate that the London-Birmingham by-pass took away only 25% of heavy through traffic. This led to a revival of his earlier suggestion for an inner ring road, passing closer to and through the built-up area.

Finally, Ford's response to growth took the form of a commitment to central area redevelopment. Before 1939, interest in the central area was threefold: slum clearance and rehousing under the 1930 Housing Act, road widening and re-alignment, and plans for a civic centre. Conjointly with the Trinity Street/Corporation Street improvements, the Council set up a sub-committee to investigate the possibility of a civic centre, complete with civic hall, art gallery, museum, library and college - facilities which the city lacked compared with towns of a similar size. Remodelling of the town centre attracted considerable local interest, and local architects Redgrave, Hellberg and Gardner presented a city centre plan on behalf of the City Guild. Ford had been using an unofficial plan since the late 1920s to guide central development decisions (Ford 1940 p.645), but it was not until 1938-9 that he was asked to draft plans for a new civic centre. Shopkeeper resistance and the burden of compensation played their part in the modesty of his scheme. It took the terrible destruction of April 1940 to lift the debate from dignified remodelling of individual sites, to the functional reconstruction of the whole central area.

At this point it should be pointed out how planning gained in status during the 1920 and 1930s from its initial position on the periphery of the authority. The city's

first planner-engineer J.E.Swindlehurst had reported to the Plans Sub-committee of the General Works Committee, the sub-committee having been established in 1913. But after Ford's appointment, and as plans came to approval stage, the planning function assumed increasing importance. On the officer side, Pugh's elevation in 1931 to Chief Town Planning Assistant put planning on a par with engineering and architecture within the Engineers Department. On the members side, a new Town Planning and Buildings Commitee was formed in 1933 with exclusive responsibilty for planning schemes. While town planning in Coventry was not liberally funded or staffed, other planners were surprised at how much had actually been achieved. Herbert Manzoni (cited in Ford 1940 p.642), City Engineer for Birmingham, thought that

> 'to have brought the work to its present stage in
> fifteen years seemed to the speaker very good
> indeed.... He himself, had had experience of
> planning schemes which had hung about for something
> like twenty years before the final stage was
> reached'.

The most dramatic change in the role and character of the planning function was eventually provoked from outside it. After Labour's victory in the local elections in 1937, and with an extensive public works spending programme in mind, the decision was taken to establish a City Architects Department. All architectural work of the Council would now be handled by this Department, with a view to ending the

coordination problems associated with the use of many private architects, and to relieving the Engineers Department of excess work. The new Department opened in January 1939 with a staff of 24, led by 29 year old Donald Gibson. It was a much more youthful and modernist working environment than Ford's. Though plan-making remained the City Engineer's responsibility, the architects, both officially (in a joint Engineers-Architects draft plan) and unofficially (in the guise of the local branch of the Association of Architects, Surveyors and Technical Assistants), made proposals for the replanning of the city centre (see Garratt 1959, Richardson 1972 pp.280-4). The contrast of personalities, traditions and methods produced a deadlock, and with it no consensus on redevelopment.

Then came the outbreak of war and the events of April 1940.

A City Redevelopment Committee was set up in December 1940 and once more requested a joint plan from Ford and Gibson. They openly split, and Gibson's private dissent was turned into a rival plan. In the event, the Committee chose Gibson's plan as against Ford's, because it best dramatised their desire to build again and to efface not only the bomb damage but also the irrationality of pre-war layout (Richardson 1972 pp.286-8). In March 1941 a reconstruction plan was hurriedly delivered to the Ministry of Health, and

shortly afterwards Gibson was made Joint Planning Officer, effectively replacing Ford. (Ford remained in the administration a further eight years, loyally executing his rival's plan.)

Post-war planning was clearly of a different variety to pre-war planning. Ford and Pugh had laboured wearily over schemes for the indirect regulation of greenfield sites. The reconstruction plans bypassed these engineering traditions, and exchanged the focus of planning for Gibson's urban concept, which was in turn closely related to the exigencies of design, finance and construction. Post-war planning decisively contravened the powers of individual property owners in terms of compulsory purchase and nationalisation of development rights, and left far behind the gentlemanly negotiations of Ford's day. Furthermore, the post-war planning system tended towards greater specialisation in the selection of staff, and relied less directly upon the engineering and surveying professions. In fact, Coventry fashioned a stratum of architect-planners to define and administer its plan in a direct response to pre-war professional mistrust.

The spell cast by reconstruction over the post-war administration of the city was not without its consequences for the later evolution of plan-making in Coventry. It

explains the sources of resistance to that approach as well as the types of criticism levelled at it. Finally, it accounts for the special interests and programes of work embedded in the planning office. Therefore it is to this office, with its special history, interests and conflicts, that we now turn.

CHAPTER   FIVE

COVENTRY PLANNING OFFICE IN THE 1950s

5.1   INTRODUCTION

This Chapter describes organisation and methods in the
Architecture and Planning Department between the setting up
of   the   Department in 1949 and   the   commencement of   the
Development Plan Review   in 1960.   It   draws upon   the
Departmental records and   interviews   itemised   in   Chapter
Four,   and   develops them   in   the   context   of   concepts
introduced   in   Chapter Three. The implications of post-war
reconstruction for town planners were twofold: firstly, the
need for a plan and its rapid implementation, and secondly,
the need for modern techniques of survey and analysis in
the   plan.   Therefore, this Chapter explores   in   turn   the
organisation, and methods, of the post-war planning office.
It concludes with some observations on the transition to a
different mix of tools and skills in the early 1960s.

5.2 ORGANISATION OF THE ARCHITECTURE AND PLANNING DEPARTMENT

It was suggested in Chapter Two that the origins of planning methodology were hybrid, and that substantial borrowings and external interventions were required before method in planning could become truly indigeneous. In this section it is shown how a series of administrative reforms in the size, structure and workload of the Architecture and Planning Department, and in the Corporation as a whole, led to important changes in planning practice. The post-war strategy for 'efficient administration' provided tools for fashioning a plannable office out of a collection of talented individuals. It also rationed the resources available to implement the planners' output, and for a while braked the Department when it wished to expand. In this sense, 'efficiency' was a condition of appearance of planning methodology as it applied to the office.

5.2.1 Transfer: the new Department 1949-52

We have seen that in 1947 Coventry City Council established a new Planning and Redevelopment Committee. However, for a further two years both the City Engineer's and City

Architect's Departments performed planning duties, with Ford and Gibson sharing ultimate responsibility. Only upon Ford's resignation as Joint Planning Officer in August 1949 did Gibson assume complete control. He was appointed Chief Officer of a new combined Architecture and Planning Department. The Planning Division was transferred from the Engineer's Department to Gibson's, and its staff eventually took up accomodation in the top floor of the ex-Rover showrooms in Warwick Street.

The circumstances of the transfer led to a particular organisation of the Department.

For several years, planners and architects were relatively distinct within it. Whereas the architectural sections were devoted to reconstruction of the central area, and later, to the Comprehensive Development Areas, the planners grouped themselves around the preparation of the Coventry Development Plan. The Plan let planners participate in the redevelopment process, but at arms length and without a detailed interest in design. This division of labour found support in the chain of command, in as much as the architectural sections were directly accountable to the Deputy CAPO, while the planning sections were grouped under a Principal Planning Officer who himself reported to the Deputy. (The PPOs were, jointly, Harley-Smith and

Barrington from 1949 to 1952, and then Wilfred Burns to 1958.) The device of a PFO reflected on the way planning had been transferred en bloc and attached to the existing organisation of architects as an afterthought. Throughout the 1950s, the Architecture and Planning Divisions referred to themselves as 'Departments', and this too recorded their separate histories.

This split in the Department could last only as long as the Planning Division was preoccupied with the preparation of the Development Plan. Finalised in late 1951, the Plan was submitted to Ministerial scrutiny in early 1952. For five years it moved through channels far removed from Coventry. Donald Gibson took this opportunity to redirect planning staff towards the consideration of more detailed projects in readiness for their implementation. Responsibility for the design of neighbourhood units had already been passed to the Architectural Division; after reorganisation in March 1952, further staff were moved from survey and policy-making to the redevelopment sections. The new structure is shown in Figure 5.1. Of a Divisional staff of 20, all but 3 were placed in Design and Development. Parallel with Gibson's shift to plan implementation, the Planning and Redevelopment Committee began from the early 1950s to approve a five-year rolling programme of capital expenditure (Gregory 1973 p.96). The scheduling of sites

FIGURE 5.1   Organisation of the Architecture and
                    Planning Department 1952

Chief Architect and Planning Officer
                |
Deputy Architect and Planning Officer
                |

Principal Planning Assistant   Architectural
                                                      Sections (14)

Chief   Senior   Senior
Planning   Planning   Technical
Assistant   Assistants   Assistant
                 (2)

Design   Outer   Development
Section   Area   Control (2)
(4)   Development
                 Section (5)

                 Central
                 Area
                 Development
                 Section (4)
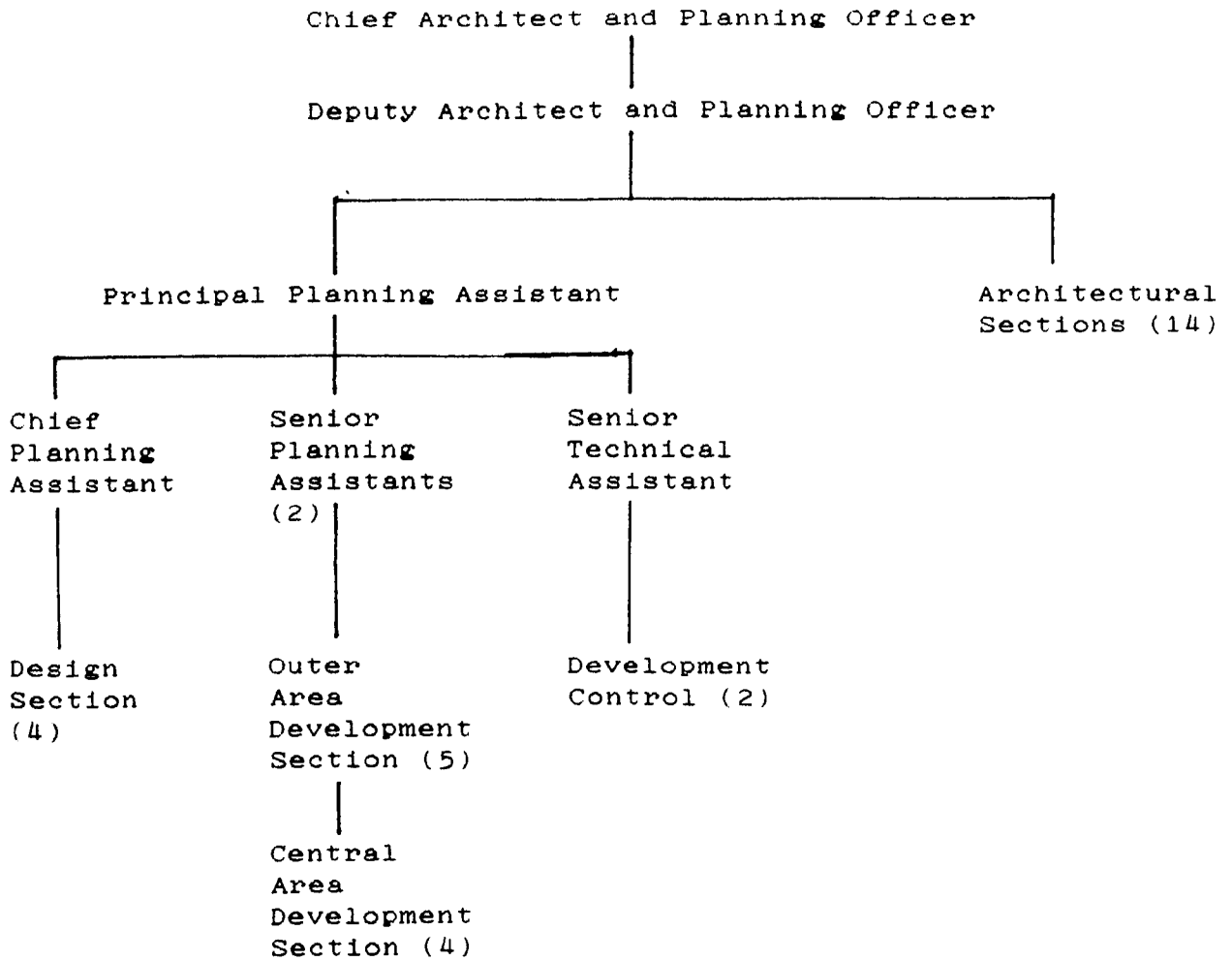
Source: O/M 8, Appendix A

for purchase, clearance and redevelopment drew the planning team more closely into the process of rebuilding, and strengthened relationships with other construction professions.

By 1952, then, the historic division of architects and planners was being bridged. The Development Plan was being progressed to implementation stage, and the dominant theme in the Department as a whole was site redevelopment. This drew to a close the period of transition from an engineering model of plan-making to an architectural model, and the latest model was presided over by a new category of professional: the architect-planner.

5.2.2   Under study: Organisation and Methods in Coventry
         1952-3

During and after the War, the city was affected by a number of special economic and demographic trends. Table 5.1 shows how Coventry's population grew by at least 6% between 1939 and 1952, and this is without making allowance for the thousands of temporary war-workers in the aircraft, engineering and munitions factories. Also, after 1945 there was a large increase in the Corporation's workforce due to the national Labour government's social and economic

TABLE 5.1   Increase in Coventry's population and
costs of administering services 1939-52

	1939	1952	Increase
Population of Coventry CB	242,000	258,000	6.7%
Number of officers on range of activities broadly compatible between 1939 and 1952	715	1,329	85%
Number of officers per 1000 people	2.95	5.15	75%
Central administration costs	£60,495	£223,588	380%
Architecture and Planning officers in post	22	150	582%

Source: O/M 31

policies. More services had to be provided, and there were more people eligible to receive them. For instance, the City Council took over the electricity, gas, transport and water supplies, expanded the hospital service, transformed the municipal drainage and sewerage utilities, put social work under its control, and built 6,200 houses in 1945 and 1946 (ed. Biggs 1946 p.58). The total number of Corporation officers, and the ratio of officers to inhabitants, both increased by a minimum of 75%, 1939 to 1952 (Table 5.1).

The absence of method in the accretion of functions soon created administrative problems. Costs of administration quadrupled between the outbreak of war and 1952. The H.M. Treasury O and M study later summarised the problem as organisational fragmentation (OM/31 p.5). Staff tended to work departmentally and without reference to parallel work (or savings in work) in other parts of the authority. Staff specialised in their careers too early and could not easily be deployed between departments. The Corporation also lacked a review machinery for enumerating and resolving difficulties in organisation.

In 1951 the Town Clerk, Charles Barratt, reported to Council an Association of Metropolitan Councils' memorandum on the implications for local government organisation and

procedure of a special review by the Local Government Manpower Committee. The Council's Policy Advisory Committee considered the Corporation already adequately managed, but accepted a suggestion from the monthly meeting of Chief Officers that there was scope for an advisory service on organisation and administrative methods (Barratt 1954). Subsequently the Town Clerk was instructed to invite the H.M. Treasury Organisation and Methods Division to make an exemplary study of the Corporation's functioning.

From January 1952 to July 1953, a total of 11 officers spent 6 man-years producing 32 reports on the Corporation's 19 departments and their common services. The O and M team was divided into two groups. The first made a thorough examination of the City Treasurer's Department and the special subject of financial control and accounting. The second group examined the operational work of the service departments, including clerical routines and establishment work. Without going into greater detail (see OM/31, Mason 1954, Dunkley 1954), the pertinent conclusions were these:

(a) A new Committee and Chief Officer, to secure 'continuous general oversight of the administrative efficiency of the Corporation as a whole' (OM/31 p.6). The Committee would concern itself with the efficient and effective deployment of staff, and provide an

in-house O and M service to all departments. The new Chief Administrative Officer would possess extensive powers of review and coordination.

(b) A centralised primary accounting function in the City Treasurer's Department, to serve the Finance Committee, advise the Council's other Committees and audit their activities. Complete re-equipment of the punched card machinery was recommended, along with standardisation of accounting procedures and the re-training of staff.

(c) An extension of managerial control over departmental activities. This required the continuous production of control information on costs, and also comparisons of running expenditure totals with budget estimates. The O and M team proposed extending cost controls from new construction and major reconstruction and repair work to routine engineering tasks, such as refuse collection, street cleansing, etc.

With some modifications these recommendations were approved by Council. Galvanised by the prospect of saving £50,000 per annum (the O and M estimate), the Town Clerk's powers were strengthened, the Treasurer's Department purchased a small computer, and a Methods Officer was appointed to a new Establishment and O and M Section under the Town Clerk.

The Department of Architecture and Planning was only

tangentially affected by the Treasury study. The focus of attention had been the financial processes of the City Treasurer's Department, and the more significant clerical routines in the authority. Departments without spending programmes, service delivery or routine workload were under less scrutiny. Architecture and Planning was assigned one officer (J.Bayliss), who compiled a short report on its functioning (OM/8). Nevertheless, Bayliss's report is significant because it initiated a process of contraction in the Department which eventually removed the Development Plan altogether as an organisational focus of the planning team.

The report dealt separately with the Architecture and Planning 'Departments'. It criticised the Architectural Division for the free creation of sections to solve problems in the face of personal differences, sections which were too small, under-qualified and poorly directed. The number of sections should be halved from 9 to 4, while the Deputy City Architect was advised to make more use of his Department's Chief Administrative Officer to secure coordination of work and to maintain central control records. It was calcuated that reorganisation on these lines would save some 6 jobs.

A rather harsher line was taken with the Planning Division.

For a much smaller planning team a cut in staff of 6 or 7 was proposed. Gibson's March 1952 reorganisation, it transpired, had been 'largely experimental', based on 'various preconceptions', and affected more by personalities 'than might normally be desired' (OM/8 p.9). Staff duties and responsibilities had become confused. For example, officers in the Design Section worked for officers in charge of other sections, while officers in the Development Sections spent time on duties for which they were directly accountable to the PPO. As a result the work was not sufficiently controlled; there were inequalities in personal workload; and senior officers performed too much detailed work.

> 'Moreover, although there is a programme of work for the Department, it is not related to a given period and comparative priorities are not indicated.'
> (OM/8 p.9).

The report criticised the distribution of work between the two Divisions. 'None of the staff in the Planning Division is a qualified architect and more time seems to be spent there on projects which involve design than their numbers or relative importance demand' (OM/8 p.10). Therefore it was recommended the Architecture Division handle the design element in all future projects. Finally, the formal separation of central and suburban redevelopment was questioned. These two sections should be merged. The structure of the Division would then be twofold:

development control, and a section to deal with 'all other planning business except design' (OM/8 p.10). In this negative definition of 'planning business', the Development Plan was notably lacking as a focus of work. Bayliss left open the possibility of further scrutiny by suggesting any Methods Officer subsequently appointed examine clerical procedures in the Department, and in the administration of development control.

It will be recalled from Chapter Two that local government O and M possessed at least four attributes. It (a) named and reclaimed a hitherto formless zone of office work, (b) imposed standards of performance upon routine office duties, (c) installed centres of supervision, control and improvement within the authority, and (d) deposited conceptions of efficient and effective management with senior officers and members. The intervention of O and M in Coventry Corporation followed these general directions. The impact upon planning was twofold.

Firstly, the O and M study significantly altered the management context for planning and development. In terms of inputs, the resources available to staff and equip the planning office and to implement its projects began passing through a series of checks and filters. The programming of capital expenditure, the planning of officers' time and

workload, and the scrutinizing of control procedures, all indicated an interest in resource utilisation. In terms of outputs, the senior administration began making demands on the Planning Division to supply information on job progress, targets and performance. The Town Clerk was now also obliged to consider the CAPO's representations and consider them in a Corporation-wide perspective. Taken together, the deliberate forward planning of the Corporation's resources, and the banking of control information, introduced a certain transparency into the authority's structure, in as much as administrative plans and commands encroached upon discretion and personal responsibility. The conscious grouping of tasks, teams and finance ensured a new type of visibility in council administration.

Secondly, the O and M study caused an extraneous element to appear in the planning office, which had not sprung from the traditions of town and country planning. Because of a discourse on efficient administration, planners could now talk of work methods, the use of office machines and especially punched card equipment, the recruitment and training needs of an office, control by means of information, and the inter-disciplinary or inter-professional approach to problem-solving, where their own sources of authority were silent. In Coventry after 1952

the planning office was not designed to simulate a planning concept - for instance, a certain model of plan-making. On the contrary, it was directed by an administrative plan for staff efficiency and consistency in layout and site planning. An administrative plan intervened when the only other long-term plan of work, the Development Plan, had been completed.

5.2.3   Retrenchment: plan implementation and the staffing crisis 1953-60

The general effect of the H.M. Treasury O and M study had been to reduce and simplify the planning function in Coventry, with central and special area redevelopment work a priority. After a few years a reaction set in against this trend, in particular to meet the problem of staff shortage in development control and in anticipation of the survey and research input to the Development Plan Review. By 1960 the Division was in the throes of a staffing crisis, which precipitated important changes in the planning team. The Review can properly be dated from reform of the planning team in the early 1960s.

In 1955, Wilfred Burns examined in detail the work of the Planning Division. He recalled that the Division had been

considerably reduced after submission of the Plan so as to concentrate on the implementation of its proposals.

> 'In my view the time has now come for a major reorganisation of work and the building up again of the planning division'
> (W. Burns. 18.5.55. AP CF 1/212).

More staff were needed: to ammend the Programme once the Plan was approved, to find alternative sites for developers, to bring areas not needed for immediate development under more detailed planning, and to integrate landscape work with mainstream planning. Burns also noted that

> 'no work is at present being done in planning research or on the collection of information required for the review of the Plan. Coventry is changing rapidly in many ways and it is essential that all changes should be systematically studied'.

Accordingly, in September 1955 the Division was reformed with a Development Plan focus and a research function. The 29 staff were allocated to: Development Control (6), Central Area Reconstruction (5), Redevelopment and Rehabilitation (5), Development Plan and Research (4), Landscape (2) and Tracers/Draughtsmen (7) (Minutes, 9.9.55. Est. and Gen. Admin. Comm.).

Reorganisation could not solve a staff shortage, however. A number of recorded incidents throw into relief the financial parsimony of the Corporation. The first clash came over the use of temporary assistants in the Division during 1955 and 1956. Arthur Ling (CAPO 1955-64) and the

Town Clerk exchanged several letters on the costs and benefits of their employment. Initially the Town Clerk's Establishment Officer had granted permission for up to 8 part-time clerks to process land charge questionnaires, but work fell persistently in arrears. Ling noted this was really due to shortages in full-time staff, who could not match the rate of clerical processing (CAPO to Town Clerk, 6.1.56, AP/CF/1/212). Ling succeeded in retaining the temporary workers until the autumn when the Town Clerk again complained of the expense (Town Clerk to CAPO, 10.9.56, AP/CF/1/212). Faced with the prospect of losing permanent staff to filing jobs (A.Hopkins, 14.9.56, AP/CF/1/212), Ling secured an extension, not before complaining that the assistants' workload had been sizeably enlarged by the efforts of the Town Clerk's own Methods Officer (CAPO to Town Clerk, 15.12.56, AP/CF/1/212).

Another example of staff shortage occured in development control. As the town grew under the provisions of the 1952 Development Plan, the development controllers' caseload became increasingly heavy. A design sheet for housing estate design standards was distributed in early 1957, but insufficiency of staff held back its further use. Commended in Committee for his design standards but queried on the hold up, Ling took the opportunity to press his case for an expanded DC team, organised on an area basis and under the

single responsibility of a Group Planning Officer (Minutes.
6.2.57, Plan. and Redev. Comm.).

A third example concerns the search for technically
proficient staff. M.Curtois (Chief Administrative Officer.
Architecture and Planning Department) commented critically
on the 1955 Divisional reorganisation to his (anonymous)
correspondent.

> 'We must adjust our thinking and seek to persuade
> the Establishment Officer to our point of view, if
> the detailed statistical work you require is to be
> produced.'
> (M.Curtois, 1.7.57, AP/CF/1/212).

He recommended the upgrading of a Statistics, Programming
and Staff Records Clerk.

With these problems and recommendations in mind, Ling went
to the Establishment and General Administration Committee
with a proposal for 9 extra members of staff. However, the
Finance Committee intervened and the increase was limited
to 6. Ling protested that 'this drastic cut must have a
serious effect on the work which can be carried out in this
division' (Minutes, 4.3.59, Est. and Gen. Admin. Comm.). He
cited the Review Plan land use survey as the first victim
of the cut.

> 'The early survey work is becoming a matter of
> urgency as it is impossible to review the
> Development Plan until we have an up-to-date base
> for it. The draft plan must be ready at the end of
> this year. Due to lack of staff only about one
> quarter of the city has been covered and even this

has had to be skimped.'

The transfer of 3 redundant Clerks of Works to the survey team partly alleviated the problem, but after a few months Ron Bryant (Senior Group Planning Officer, Development Plan and Research) was complaining of staff turnover and the loss of important local knowledge. Envisaging submission of the Review Plan by early 1961, he urged Ling to recruit staff, especially experienced and qualified people (R.Bryant, 5.2.60, AP/CF/1/212). The loss of two of the Clerks of Works later that year placed the group in what Bryant called 'a completely impossible position'. The land use survey had been plagued by stops and starts since it began.

> 'This has been a long, long story, repeating itself
> so often that I personally wonder what is the use
> of trying to get on with a job of work, when so
> many spanners are thrown into the machine'.
> (R.Bryant to A.Lees and T.Gregory, 6.10.60,
> AP/CF/1/212).

The shortages of experienced and junior staff, the understaffed development control teams, lack of technical and temporary support and delays in the Review Plan survey constituted a staffing crisis of the first order by 1960. Full time staff of the Planning and Redevelopment Committee actually fell from 29 in March 1958 to 27 in March 1959, and by March 1960 Ling had to report to Committee that his Divisional establishment stood at only 26, with 8 (or 30%)

of posts vacant. The work at risk included routine planning applications as well as the quinquennial review. CDAs in Hillfields and Spon End. site clearance for the Programme. and special project work. The present vacancies had accrued in spite of 13 advertisements in the press and universities over the last 6 months. Ling asserted that the chief barrier to recruitment was the low pay given to trainee staff. The present staff. 'now fully aware of the inadequacy of their comparative gradings'. might move to other authorities and take with them their stock of specialised and local knowledge. 'The experienced nucleus of the division might then quickly disintegrate' (CAPO. 7.3.60. AP/CF/1/212).

The Planning and Redevelopment Committee took notice and presented Ling's case to the Establishment Committee. They jointly proposed a two-level solution. following on Ling's recommendations. Firstly. they decided to re-grade posts. thereby retaining middle-tier staff. Secondly.

> 'a training scheme should be instituted as a long term measure. to improve the number of qualified planning officers available'
> (CAPO and City Treasurer to Chairmen. 7.60. AP/CF/1/212).

A maximum of 10 qualified architects or engineers. graded APT IV. was to be recruited. and trained on an approved part-time course at Lanchester College of Technology. The Committees authorised senior planning staff to undertake a certain amount of teaching on the course. Both in the short

term and in the longer term this replenishment of the Division solved Coventry's staffing problem. Section 6.4.1 will indicate the continuous growth in the planning establishment over the next decade. Solving the staffing crisis was an important step in the development of a secure planning organisation, for two reasons.

Firstly, it is is clear that the number and quality of trained planners was a pertinent issue throughout the decade. The Department was caught between financial stringency and pressure of work. The availability of staff determined the pace of work, the kind of work that could be tackled, and the mix of skills and local knowledge in the planning team. Whereas in the early 1950s the Treasurer's parsimony bore down heaviest on the Development Plan and survey and policy work, by the late 1950s priorities had been reversed and resources were being diverted to the Plan Review. Bidding for staff represented an important area of Ling's responsibilities, and provided one means of translating the Review into practice. The staffing crisis precipitated a review of staffing needs without which no stable platform for the Review could have been constructed.

Secondly, the problems of staffing re-opened the question of what constituted professional skills and how they were to be acquired. The Corporation's own interest in

establishment control and the exact matching of jobs to jobholders led to a greater involvement of the Department's senior officers in the appropriate qualifications and training of planners. In 1959, Audrey Lees (PPO after Burns) devised a standard for the level of qualification to be attained by each planner and grade of planner in the Division (A.Lees, 26.2.59, AP/CF/1/212). A year later the Department had enrolled ten recruits in a planning course taught largely by its own staff. The self-conscious production of planners was achieved by a kind of vertical integration of school and office, in a formula profoundly favourable to the office. The Department actively defined the skills it required: thus the education of its junior planners was work-led and an expression of the Department's own changing work programme.

5.3   METHODS IN THE ARCHITECTURE AND PLANNING DEPARTMENT

The formation of a discourse on 'methodology' as a distinct branch of knowledge, with its own technical representatives, was not an immediate achievement of planning practice in the 1950s. What will be found, though, is a number of mutations in practice diversifying and reforming such methods as were in use, and altering the balance of method and craft judgement in practice as a

whole. These mutations are introduced under two headings, the first concerning the changing content of 'survey', and the second the instruments of calculation.

5.3.1   Survey and analysis in the 1952 Development Plan

The Coventry Development Plan, as prepared under the 1947 Town and Country Planning Act, was finished in late 1951 and published early in 1952 (Barratt, Marshall and Gibson 1952). The complete Plan consisted of a Written Analysis, a Written Statement and a Town Map. No separate report of survey or other background material was released to match the Plan's claim (p.3) to rest on 'an intensive survey of the city and its activities'. Nevertheless, the types of survey that went into the Plan can be deduced from internal evidence and from articles in the professional press. The 'survey' referred to in the Plan was in fact a sequence of specialised surveys made since the War, and taken together they provide a perspective on survey practices in Coventry.

The first is found in the maps and models assembled in 1945 for the Coventry Planning Exhibition. Its chief objective was to dramatise Gibson's central area plan, and to concentrate in Coventry all that was progressive in current planning practice. For example, road junctions

displayed pedestrian sub-ways and flyovers, 'the Ministry of Transport and Sir Alker Tripp's ideas developed on actual sites in the city' (Ford 1946 p.272). There were also models of neighbourhood units, community and health centres, and the Coventry pre-fabricated house. The exhibition contained various survey and contour maps, 'a selection of those made during the preparation of schemes' (p.272). Ford explained that much survey material could be generated merely by the transcription of personal knowledge. In fact, nowadays this was the only form of intervention of personal knowledge in the making of plans. It was therefore desirable

> 'to collate such information and get it down on paper in a series of plans, and written particulars, for reference, and to persuade Ministries that new proposals are based on knowledge, and on a sure foundation' (p.272).

Basic survey maps thus formed 'the preliminary to all planning' (p.269).

Ford's assistants, Arthur Pugh and A.L.Percy, presented a paper a year later which clarified the nature of the Coventry survey. In 1946 the operative legislation was the 1944 Town and Country Planning Act which, amongst other things, allowed local authorities to comprehensively redevelop areas of extensive war damage by means of compulsory purchase orders. Under s.32(1) of the Act, the local authority was obliged to furnish the Minister with

sufficient information to allow a decision to be made, but as yet there existed no requirement to make a survey before a plan. Nonetheless, Pugh and Percy took the idea of survey to be central. They suggested that planning was passing from a stage of qualitative description to quantitative analysis, likening planning in the latter stage to scientific experimentation. The planners tested their hypotheses (instances cited: garden cities, Peckham Health Centre, new towns) in the laboratory of society.

> 'The basic survey now accepted as an essential preliminary to successful planning, corresponds to the quantitative analysis in chemistry. To be satisfactory the facts must be carefully compiled and depicted'
> (Pugh and Percy 1946 p.85).

No doubt in the first instance this meant the careful measurement and classification of data. But it also implied a methodological refinement: to every elementary particle of information there had to correspond a record. If the most basic unit of documentation available consisted of a file card, then they expressed a preference for particles of data gathered on cards and in files of cards. Thus, their survey of Coventry's areas of extensive war damage was mounted on a file of cards, each card devoted to a single property (Figure 5.2). Recorded in columns on each card was information relevant to the property's replanning, such as the previous size and use of each floor level, and the extent and nature of bomb damage. Because important information for each property was duplicated on top of the

FIGURE 5.2   A card index survey of areas of
              extensive war damage in Coventry 1946

| BI B- G P R W | Y BI B- G P R W | Y BI B- G P R W | Y B5 B- P R W | Y BI B- P R W |
| GROUND FLOOR | IN FLOOR | | | |

CITY OF COVENTRY — Area of Extensive War Damage No. 1 — Survey

STREET   No.   CARD No.

OWNER		AREA CURTILAGE		ACRES
FLOOR	OCCUPIER	FLOOR AREA	USE	KEY
BASEMENT				
GROUND				
FIRST				
SECOND				
THIRD				
ATTIC				

WAR DAMAGE
CONSTRUCTION
CONDITION | SHOP FRONTAGE (R)
REMARKS

R. V.   DATE   ASST.

S8443 10m 1 46 (14)

Source: Pugh and Percy (1946)

card by a system of coloured tabs. 'cards required for preparation of any type of map [could be] readily abstracted and used by draughtsmen' (p.85). In this small area at least. the priority of map over statistic was reversed. and a new competence caused to emerge beside draughting skills.

Other zones of work displayed similar tendencies. Pugh and Percy were faced with the problem of how to determine the future volume and pattern of traffic in the Coventry area. Their method entailed measuring the total vehicle stock (as a ratio of x vehicles per 1,000 population) and projecting it forward on the basis of Ministry of War Transport forecasts of vehicle ownership, the rate of growth of Coventry's population, and the higher rate of local ownership.

> 'This gives a total increase to 230 per cent of
> 1939 volumes. which figure is intended to be used
> in framing the city's road proposals.'
> (Pugh and Percy 1946 pp.80-1).

The increase was then translated into road widening and alignment proposals, and the line of the new inner ring road. This raised the question of how future levels of ownership could be allocated across the city.

> 'An examination of traffic censuses will show the
> extent to which traffic in a town originating
> within the built-up area compares with the amount
> of through traffic.'
> (Pugh and Percy 1946 p.82).

In this analysis, traffic projections based on a

statistical calculation had superceded either single-link road counts or impromptu re-modelling of heavily-trafficked road junctions. Once again, an important skill was attached to the planning team that did not find immediate expression in a map.

A further example of hybridity in skill concerns the Programme accompanying the Plan. Pugh and Percy noted how reconstruction programmes handled time in the same way as development plans handled land use. Programming involved dividing time between conforming and non-conforming uses, and granting permission for periods of time to be occuped by an activity, or for that activity to change. 'Time zoning is now as important as use zoning' (p.91). The significance of time zoning lay in the manipulation of resources to meet a specified rate and duration of rebuilding. Pugh and Percy wanted to continue phased labour programmes, with labour allocated

> 'to each of the building projects in the required numbers over the periods estimated to be necessary for its completion'.
> (Pugh and Percy 1946 p.92)

Available labour could be forecast by the Ministry of Labour, and after allowing for industry and maintenance the balance remained for housing and construction. Ideally, the Development Plan would be preceded by a lengthy chain of calculations specifying the material requirements of the proposed developments. Such a specification would call upon

the talents of economists and surveyors as well as traditional town planners.

In 1946, then. Pugh and Percy expected planning to be accorded the status of a science, and planning survey to include quantitative measurement and analysis. The contemporary model for survey was the 'inventory', in which figured stocks of vehicles. stocks of labour. and so on. Accompanying each item in the inventory was an individual record, and by aggregation these records were turned into files, and the files into surveys. The possibility of a records-based and survey-driven plan first appeared at this point. These linked antecedent calculations bore an uneasy relationship to the planning possibilities of the drawn line.

The Development Plan survey itself continued and extended this shift in the methods of planning. Whereas the 1932 Town and Country Planning Act referred only to procedures of scheme approval and correction, the 1947 Act carried an explicit requirement, in s.5(1), for local authorities to examine their areas within three years and submit to the Minister a report of survey alongside the Development Plan. S.6(1) also required local authorities to undertake a fresh survey within six years of plan approval. and to include with any alterations or additions to the plan a new report

of survey.

It was in this context that Gibson presented Council the Development Plan Written Analysis, a 100 page

> 'analysis of the planning problems in the city and
> a summary of the research into existing conditions
> and those considered ncessary for good living in
> the future, together with proposals which should be
> implemented in the next 20 years.'
> (Barratt, Marshall and Gibson 1952 p.51).

The analysis was conducted in 17 chapters, covering topics such as population, communications, housing and industry. A social survey was also later published (Kuper 1953, Burns 1954).

The novelty of the 1952 Written Analysis might be summed up in one word: projection. Projection allowed the period of plan implementation to be grasped as a statistic. It caused a separate professional interest to appear in the direction of change, but via a numerical routine and not personal reflection. In this way a branch of knowledge was detached from individual persons and entrusted to an impersonal procedure. These procedures were introduced in the form of a hierarchy of projections with population at its head, and then a second dependent tier of projections of housing, households, school land and industry.

Population projections were closely related to the Census or the estimates of the Registrar-General. Coventry's

projections did not conform to any formal demographic model. In the first stage, gross population totals for the end of the plan period were derived from official sources. These included estimates of natural increase from the Registrar-General (method unspecified), proposed migration figures from the West Midlands Regional Plan, and the overspill agreement with Birmingham. In the second stage, local birth and death rates were retrospectively applied to the total to determine how many people in each age-group there would have to have been to give a total of that size. (Because of the large effects of migration on the projections, sub-division of the population over school-age was not attempted.)

The population projection fed into three subordinate projections. Firstly, the projection of households and housing land take. The extra land required to house the additional population was calculated by applying standards of persons per room and residential density to the projected total population, and subtracting the current housed population. Even though 336,000 inhabitants were forecast for 1971, the Written Analysis concluded 'this population can be housed within the present city boundary' (p.75).

Secondly, population projections were incorporated in the calculations determining land provision for schools. Having been provided with the projected under-16 population for 1971, the number of births and the numbers alive in each school age group were retrospectively calculated for each year to 1971. In this case, the target year under-16 population was 38,900, or 13.65% of the total adult population. When combined with plans for nursery, primary and secondary education in the city it was possible to supply estimates of pupil numbers by class of school per year. These estimates formed the basis for an extensive school-building programme and the reservation of playing fields.

Thirdly, population projections were employed in the zoning of land for industry. It had already been calculated that the city's population could rise to about 303,000 without any additional lands being required for industry, if existing firms expanded in situ, commuting workers were housed in the city, or the service sector grew. However, the planned population for Greater Coventry was 340,000 and therefore approximately 37,000 people would require new industry in the city. At the standard of 5.3 acres per 1,000 population, this implied zoning some 200 acres for industrial uses.

To conclude, the late 1940s and early 1950s were years of innovation in Coventry's planning practice. First, the role of survey was re-defined. It became a compulsory phase of plan-making and the moment at which the total material requirements of the plan were determined. The Development Plan was survey-driven and therefore survey sensitive. Second, the practice of survey was hybridised. Cartography was supplemented by specialist discourses and documentations with a close, if not 'scientific', relation to reality. For the first time, a Plan was suffused with extra-legal commentaries, therefore the amount of the plan that could alter on purely technical grounds was greatly increased. Planning discourse achieved a specific density within the local authority.

The new kind of survey-driven plan-making was not just a choice of method. It also corresponded to wartime and post-war economic controls. As is well known, a 'bonfire of controls' in 1947 preceded publication of Coventry's Plan, and the incoming Conservative administration completed deregulation upon assuming office in 1952. For the country at large this produced a divorce of plan and finance. For Coventry during the 1950s, however, the dynamics of redevelopment planning kept alive critical wartime practices of projection, materials accountancy and time zoning. Because of the city centre plan and the ring road

strategy there was never a complete break from command styles of planning. They survived in the form of a public sector led construction programme, and in the techniques of planning and programming required therein. Chapter Six will show how sympathetic an environment this was for modelling of the traffic network in the early 1960s, and for a broader transition to quantitative modes of analysis and planning.

5.3.2 Craftsmanship and computers in the 1950s

This section looks in more detail at practices of calculation within the Corporation, and considers the role of two agencies: the Treasurer's computer section, and the Town Clerk's O and M Unit. It also reflects upon the changing balance of personal skill and (machine-assisted) routine in the Architecture and Planning Department and in the Corporation as a whole.

Attempts to intervene in and alter practices of calculation within the Corporation had two origins. One lay in the Treasurer's Department and the use of machines to perform numerical computations. The other lay in the Town Clerk's Department and the use of rational organisation and methods. Their convergence in the middle and late 1950s was

of considerable importance for the technical content of the planning office and the options open to it as it entered the 1960s.

In the early 1920s the Treasurer's Department under Sydney Larkin had been the first in local government to install punched card machines. A suite of Powers' sorters, tabulators and printers was used to handle the many routine financial transactions that characterised local government - wages, costs, stores, etc. Although the Department was re-equipped with machines in 1938, by the late 1940s they had begun to reach the end of their useful life. Coventry's Treasurer, A.H.Marshall, started searching for a replacement system, and this time the punched card machine had a rival: the stored program computer.

In 1950 Marshall visited the Mathematical Laboratory at Cambridge University where, in May 1949, a team headed by Professor M.V.Wilkes had constructed EDSAC, the Electronic Delay Storage Automatic Computer, and then published the world's first manual on computer programming (Wilkes 1975). Marshall (1954 p.91) 'gazed in awe on the "universal" electronic computer' and wondered 'how long it would be before this monster could be scaled down for ordinary commercial work'. In fact, the unlikely intervention of J.Lyons tea shops led to finance and scientific asistance,

until in 1951 the EDSAC was re-engineered as Lyons Electronic Office, or LEO I. This was one of several commercial computer applications that appeared in the early 1950s, and which led Marshall to a historic decision to purchase a computer for Coventry Corporation.

In November 1952 Marshall sent out tenders for a computer-based accounting system to three leading manufacturers: British Tabulating Machines, IBM UK, and Power-Samas Accounting Machines. At this point the H.M.Treasury O and M study intervened, and a careful study of financial control and accounting was undertaken. The O and M team calculated the economics of computer use and their results supported the Treasurer's desire to purchase an installation (OM/24). The Finance Committee agreed to the cost of an 'electronic programming-computer' (OM/Report to Policy Advisory Committee p.2), not least because it saved up to 20 staff, mainly punched card machine operators. In 1953 Marshall settled for an IBM 626 computer, centrepiece of a new installation including 2 accounting machines and a suite of punched card sorters, tabulators and printers (Marshall 1954 p.92). Delivered the next year, it became operational from April 1954 and handled wages, stores, costing and accounts; and a year later the rates account was transferred to it.

Exactly in parallel with the transfer of work from manual to mechanical methods was the creation of an in-house Organisation and Methods team. It flanked office mechanisation in as much as it converted idiosyncratic office practices into structured routines with standardised inputs and outputs. A domestic O and M team had been recommended in the H.M.Treasury study (OM/31), and a general scheme for the development of an O and M service for the Corporation was approved early in 1955 (Minutes, 20.1.55, Est. and Gen. Admin. Comm.). It was decided that, so soon after the H.M.Treasury study, no further departmental reviews were necessary; instead, the Unit would concentrate on specific problems brought to its attention either by the Treasury study or by the head of a department. A Methods Officer, P.D.Scott, was appointed and two assistants trained to work with him.

The significance of a computer and O and M service was not immediately obvious to Council officers outside the Treasurer's or Town Clerk's Departments. There was instead a drawn out process of learning and familiarisation. Marshall had to prompt his colleagues in the potential use of the IBM 626.

> 'Every staff will need a specialist, versed in the mighty potentialities of the machine, thoroughly familiar with local needs, and charged with the duty of ensuring that the computer is made to serve

the authority and its departments to the limit of
its capacity.'
(Marshall 1954 pp.92-3).

The relationship between machine and methods and good
office practice was most intense in the finance- based
departments (cf. Dunkley 1954), and least intense in the
design-based and craftsmen-led departments. Nevertheless,
within Architecture and Planning, heads of sections and the
head of the Department responded opportunistically to these
new external resources to solve immediate and pressing
problems. And as a result, particular planning jobs took on
a significantly higher technical content, or a collection
of tasks became a recognisable sequence under a formal mode
of control. Two major examples of crisis-precipitated
conversion can be mentioned.

The first concerns development control. One of the Method
Officer's first assignments was a review of the
Department's Development Control section. With caseworkers
overburdened by 20,000 application for planning permission
under the 1947 Act, Ling agreed in July 1955 to a transfer
of control information from the registers and original
files to a new card index filing system. The system
entailed a separate card for each application with a unique
OS reference code. This card was cross-referenced by the OS
code to the relevant OS map with the site boundary plotted
on it. By September 1956 a small temporary staff had

indexed 8,000 applications (A.Hopkins, 10.9.56, AP/CF/1/212). As Ling admitted, indexing and plotting on this scale was 'quite a formidable task' (CAPO to Town Clerk, 6.1.56, AP/CF/1/212). Once again, the services of the Methods Officer were called upon. However, his refinements only added more work. They included re-plotting all applications back to 1926, creating a register for 5,000 applications previously unrecorded, and a re-writing of the pre-1947 register (which in itself contained 10,000 entries). Ling argued that 'each of these aspects of the work are... necessary to the efficiency of the new system' (CAPO to Town Clerk, 15.12.56, AP/CF/1/212). Whatever the difficulties of conversion, it is clear that the new system represented a clean break with the past. A digital system of reference had these two virtues: it supplemented the cartographic record with a concise textual summary, that could be filed and sorted more successfully than the map; and secondly, it constituted an ineradicable memory, with greater permanence and recall than the organising powers of any individual caseworker. The sum effect of the new system was, inevitably, to replace traditional map-reading and map-making skills with less skilled clerical routines of recording, filing and sorting.

The second major example is the Department's relationship to the Treasurer's computer. In the late 1950s, Ron Bryant

began to think of alternative ways of structuring the
report of survey for the forthcoming Development Plan
Review. (After Plan approval in 1957 the preliminary target
date for its review was set at 1961.) In particular he
sought a more rigorous formulation of the land use element
of the survey. So in February 1957 he visited the machine
section of the Treasurer's Department 'to discuss the
possibility of adapting the LCC Land Use System to our own
requirements' (R.Bryant to W.Burns, 21.2.57, AP/CF/1/212).
Bryant was told that the most important consideration was
'to plan the recording of data in a form capable of fitting
in with the possibilities and limitations of the machines'.
In terms of batch processing, the Department had surplus
capacity on its sorting machines (which could handle up to
500 cards a minute), but less free time on its tabulating
machines.

> 'It might be necessary to farm out some of the work
> to the IBM Service Bureau in Birmingham. This would
> cost something like $10 a day even with the use of
> City Treasurer's staff to set up the machines.'

Although Bryant left for Canada in 1960 without having
employed the equipment, he evidently appreciated the
importance of correctly formatting input data, because the
land use survey he organised in the late 1950s was recorded
in a 'card system' (R.Bryant, 5.2.60, AP/CF/1/212),
suitable for transfer to punched cards.

Another pointer to the influence of the computer on

planning is that in 1957 Arthur Ling asked Malcolm Reece (Development Plan Officer) to draw up a fact-finding report on the first American origin and destination traffic studies. Such forms of analysis were inconceivable without the machine-processing of data (M.Reece, interview, 28.7.83). Also, before Peter Wood took up the post of Planning Research Officer in 1960, he had used Hollerith punched card machines at Birmingham to process information on land availability and on company relocation after clearance (P.Wood, interview, 4.5.83).

By 1960 the highest levels of the Department were aware of the possibilities of computing and actively sought evidence of computer applications in traffic and land use planning. They also considered the implications of computer usage for the kinds of information that should be collected and the format of records. In this way the Department prefigured computer applications without actually making use of one before 1961.

To conclude, it is clear that the Department did not enjoy a very close technical or managerial relationship with the Treasury/O and M reformers. Computer applications and working methods were still at the discretion of the craft planner. (Ling, Reece and Wood have all admitted their limited knowledge of statistics, mathematics and computer

programming - interviews with A.Ling 19.1.84, M.Reece 28.7.83, P.Wood 4.5.83). However, the speculative intervention of O and M and computing in the period preceding the real work of the Review team did leave behind a definite model of the approach to data-handling. The paradox is how the transition to machine-assisted, routinized plan-making was achieved under the leadership of the craft planners themselves. However, the craftsmen's sponsorship of the machine and impersonal procedure, and then the subsequent eclipse of the crafts in planning, is the proper subject of Chapter Six.

C H A P T E R   S I X

THE DEVELOPMENT PLAN REVIEW 1957-66

6.1   INTRODUCTION

The review of the Development Plan began in 1957. and to
all intents and purposes ended in 1966 with submission of
the Review Plan to the Ministry of Housing and Local
Government. While the subsequent Public Inquiry is of
interest, this chapter is specifically concerned with the
period of review up to 1966. In particular. it presents the
most substantial evidence yet for a discourse on planning
methodology with its own technical representatives. The
questions it addresses are: how did such a discourse get
installed in the Department of Architecture and Planning?
And to what effect? The possible answers are explored in
three sections. 6.2 covers the immediate background and
context of the review, 6.3 examines in detail some areas
appropriated by methodological discourse, while 6.4
describes the preparation of the Review Plan and its
relation to method.

6.2   CONTEXT OF THE REVIEW

It is clear that the Review was precipitated by a forecast of growth: growth in population, growth in traffic, growth in employment and a corresponding growth in competition for land. The first stages of the review were essentially concerned with the measurement of growth, coupled with the longer-term objective of preserving the post-war achievement of a rationally and comprehensively planned city centre. This short introductory section describes the pressures upon Coventry as it entered the 1960s, and the progress of the review before 1960.

6.2.1   Coventry city region in 1960

In 1951 the Development Plan had recorded an economy heavily committed to engineering and metal manufacture, suffering extreme labour shortages, but prospering from the immediate post-war boom. The situation improved significantly during the decade. Coventry and the West Midlands region generally played a major part in diverting employment growth to the new development areas in the British periphery, such was their own prosperity. Post-war industry developed competitive positions in foreign as well as domestic markets. Service sector employment grew faster than manufacturing employment, and though the city remained

dominated by very large units of production, within these units greater numbers were employed in scientific, technical and clerical operations. In 1960, Coventry's industrial profile revealed a more diverse complex of industries, a secure basis in growth markets and export markets, and a relaxation of pressure on industrial land.

The city's population continued to grow throughout the 1950s, from 257,800 in 1950 to 300,900 in 1960. The 1951 Plan had estimated total population would reach 336,000 by 1971, including 40,000 in planned overspill from Birmingham. In fact, this overspill did not arrive, but was compensated for by higher than forecast natural growth. Growth came increasingly from the balance of births and deaths, as labour demand weakened, in-migration fell away or was rediverted, and the settled population formed new households. Whereas in 1951, 91% of new dwellings had been built by the Corporation, by 1960 this figure had been reduced to only 16%. While both private and public housebuilding boomed in the mid-1950s, only the private builders sustained output in the late 1950s. The total effect was a narrowing of the gap between households and dwellings, but in the context of an increased demand for residential land due to the suburban and lower density characteristics of the new private housing.

The volume and pattern of movement in and across the city altered substantially between 1952 and 1960. At the time of the Development Plan the majority of journeys within the city's boundaries were by bus, and a high proportion of passengers and goods still arrived in Coventry by train. The position had been reversed at the end of the decade: private cars and lorries accounted for the majority of local trips, and had greatly inflated their number. After the war Coventry's rate of vehicle ownership remained higher than average, so the doubling of the national vehicle stock 1950-60 had a disproportionate effect on the city. The prosperity of the vehicles, engineering and electrical goods industries continued to generate heavy loads into and out of the city, until in the late 1950s Coventry was included within the motorway network.

Overall, Coventry's problems were problems of growth. They did not resemble the problems of areas hit by structural decline, nor of relatively well-developed static urban areas. These trends were medium and long-term, and in 1960 showed no signs of going into reverse.

6.2.2   Initiation of the Review

Agreement was reached in February 1957 between the Ministry

of Housing and Local Government and the Architecture and
Planning Department on the content of the approved
Development Plan, and official approval granted in May
(Minutes, 6.2.57 and 30.4.57, Plan. and Redev. Comm.).
Under the 1947 Act the local authority was obliged to
prepare a fresh survey and plan within five years, but the
Review process was in fact started in June.

Between 1957 and 1960 the Review was presided over by Ron
Bryant. He joined Coventry in 1956, having been Deputy to
the Research Assistant Planning Officer at Lancashire since
the war (anon., 12.60?, AP/CF/1/212). The Review was
comprised of (a) the compilation of a card system and a map
covering current amendments, (b) a new land use survey,
and (c) the preparation of reports on the range of subjects
covered in the 1952 Plan's Written Analysis (R.Bryant,
5.2.60, AP/CF/1/212). By 1960, Bryant was the only senior
officer in the Development Plan and Research Group to have
taken part in the prolonged negotiations with the Ministry
leading to Plan approval, and through him the original
Plan retained its momentum. Arthur Ling arranged for a
series of Development Plan Review Reports to be issued, the
first of which appeared in June 1957 as a presentation to
the Parks and Allotments Committee (DPR/1, 17.6.57). Around
15 had appeared by 1960, including short study notes on
industrial land availability, the travel to work, green

belts and office accomodation.

However, it would be misleading to present a picture of continuous re-assessment of policy, or even of continuous activity upon the Review. Bryant himself complained of staff turnover and shortages (R.Bryant, 5.2.60, AP/CF/1/212). There was also some dissatisfaction amongst other officers with Bryant's approach to the process of reviewing the Plan. Mike Flynn arrived in the Department in early 1960 and found the research staff at a loose end.

> 'It wasn't well organised, it was free-wheeling a little bit, and I think they were looking forward to commencing a review.'
> (M.Flynn, interview, 5.7.83)

Flynn characterises Bryant as

> 'a bit of a dreamer.... he wasn't well organised, more of an academic-reflective, more of a writer, a thinker, rather than an organiser'.
> (M.Flynn, interview, 5.7.83)

Bryant failed to get promotion in 1958 (Minutes, 12.6.58, Plan. and Redev. Comm.), and he left for Halifax, Canada in 1960. His duties were subsequently divided between two new appointments, Peter Wood (Research) and Malcolm Reece (Development Plan). Bryant's departure more or less marks the end of preliminary enquiries for the Review, and the beginning of serious studies.

It was also becoming less possible to simply 'update' the 1952 Plan chapter by chapter because of the appearance of

new problem areas that cut across chapter headings. Chief

among these was the problem of traffic. and therefore the

traffic content of town planning. What were the root causes

of traffic congestion. and what priority should be given to

its amelioration? At the beginning of the Review the

traffic problem appeared open-ended, an enigma.

> 'The central traffic problem is one which faces
> almost every town of any size both in this country
> and abroad, and in considering the matter we have
> experienced what others have descibed as "impotent
> perplexity" which arises from the many facets
> presented, the dearth of scientific data and the
> dilemma of deciding for what eventualities it is
> realistic to plan.'
> (DPR/6, 10.57, p.5)

At the same time it was recognised that traffic, as a means

rather than an end, bore upon many other urban activities,

and therefore represented a general problem of structure.

> 'The urban traffic problem consists of a number of
> inter-related problems, and it is this inter-
> relationship which produces difficulties in putting
> forward specific recommendations.'
> (DPR/6, 10.57, p.5)

However,

> 'the relationship between the use of land within
> the Central Area and the central traffic problem is
> immediately apparant'.
> (DPR/6, 10.57, p.5)

The management of traffic in the central area was very much

the hidden agenda of the Development Plan Review. Moving

into the 1960s, public finance was beginning to flow and

Coventry Council sought a bigger role for municipal

redevelopment or private/public partnerships. 'Planning by

freehold' imparted a higher planned content to central area

design and function than would otherwise have been possible. However, it was the state of planning and engineering practice that determined what model of planning would be imparted, and to what effect.

Between 1957 and 1960, then, the Review of the Development Plan was relaxed, understaffed and non-technical. Only the challenge of the car caused members and officers to spring to the defence of the reconstructed city centre. The planning office was supplied with new leaders in the middle grades and a pool of trainees to service them. The effect of team renewal was that while the political resistance to full motorisation clearly looked backwards to Gibson's original masterplan, the planners and engineers saw in the car an opportunity to realise the latest ideas in analysis and design. The inner ring road strategy thus effectively bridged two generations of planning, and it is no accident that the most fundamental themes of the Review were rehearsed in the commentary on traffic.

6.3   TECHNIQUE IN THE PLAN REVIEW

Chapter Three considered the uneven development of technique and its migration across zones of work. This section identifies the zones of work in the Coventry

planning office in which a discourse on method was first consolidated, before being transferred to other activities. Beginning with the major Origin and Destination study of 1961, the planning team developed a stream of methods for handling pertinent problems of analysis. The acquisition and computer processing of 1961 Census data on punched cards, and the construction of a demographic projection model, extended the life of method in the Department and sanctioned a discrete methodological discourse with its own claims and jurisdiction. However, until 1965, the dissemination of methods functioned purely as an intellectual support for the area development plans, and it could not enjoy the autonomy characteristic of methodology in the late 1960s and early 1970s.

6.3.1   Analysis and design of the road system

Dominating the traffic element of the Review throughout the first half of the 1960s was the proposed Inner Ring Road. Encircling the central area at a 1/4 mile radius, the line of the road had been prescribed in the approved version of the Development Plan, and it remained only to precisely design route widths and junctions. The planning response to the Inner Ring Road proposal needs to be seen in the light of the changing balance of power between the engineers and

planners in the Corporation. During the 1940s the Engineer's Department had passed into eclipse because Ford's plan for the city centre anticipated the direct incorporation of the car, whereas Gibson's plan envisaged traffic-free precincts and a ring road to take diverted flows. Once Gibson had left in 1955, it was up to the engineers to prove that they were capable of handling the traffic problem themselves.

In July 1960, the City Engineer's Department carried out an Origin and Destination survey to provide information from which to project 20 year traffic flows for the major Ring Road junctions. Brian Redknap (Senior Assistant Engineer) was appointed to the Engineers Department in 1956 with the express intention of constructing the Ring Road. Initially it was conceived as a dual carriageway with roundabout junctions. The road was phased in six stages and the first stage was begun in 1959 at a cost of £60,000. But as it was under construction,

> 'we were beginning to accept that the basis of highway design was changing dramatically... particularly having regard to the explosion in traffic at the time'.
> (B.Redknap, interview, 26.8.83)

After a visit to Wolverhampton for discussion of that town's O and D survey, and applying 'very straightforward engineering concepts', Redknap and John Hurrell organised their own traffic survey. Traffic flows were sampled along

a cordon just outside the line of the Inner Ring Road,
coded in elementary form, converted into Passenger Car
Units, and growthed to 1980 by applying factors of 150% for
light vehicles and 75% for heavy vehicles. Trips were then
assigned manually amongst the 21 zones, on the
assumption that the Ring Road would be used by all vehicles
with intermediate destinations within the central area.
Link flows and turning movements were generated by programs
on the City Treasurer's IBM 628 computer and IBM 421
accounting machine (DPR/31, 4.63, pp.7-8). Sufficient
detail was provided by these calculations to solve the
engineering design of the remaining turning points, and a
final plan for the Ring Road was presented to Council in
October 1961 (DPR/17, 10.61). According to Redknap,

> 'it was pure civil engineering rather than planning
> that brought us back in as a department of
> influence, because people were impressed...'.
> (B.Redknap, interview, 26.8.83)

However, the planners considered the 1960 O and D study was
inconclusive. It suggested greater emphasis should be put
on intermediate or outer relief roads so as to lessen
pressure on the Inner Ring Road, but no factual information
was available on outer area traffic loads. Therefore, the
Planning and Redevelopment Committee approved a city-wide
Origin and Destination survey, and instructions and terms
of reference were communicated to the Chief Architect and
Planning Officer in July 1961. As the collection of
information was to be completed by the autumn, there

followed a hectic three months as engineers and planners decided upon their respective contributions to the study. The former undertook volumetric and cordon counts, while the latter examined workplace and household trip generation.

> 'By the early 1960s it was considered necessary to bring together the development of the highway system with the wider planning objectives of the City Council'.
> (B.Redknap, interview, 26.8.83)

But this verdict should not conceal the novelty to planners of being involved in traffic studies, when all previous surveys and counts in the city had been managed by the Engineer's Department (J.Williams to M.Eliot Hurst, 10.5.63, AP/CF/1/149d). Problems of approach and method were very near the surface.

> It was at a time when the American transportation planners were producing mathematical models and we said, let's try and develop a mathematical model of the Coventry travel patterns.... I just got hold of whatever American literature I could get hold of... and then really almost going back to first principles, saying how can I apply that kind of thinking to the Coventry situation'.
> (P.Wood, interview, 4.5.83)

According to Mike Flynn, 'we were thinking things out from first principles' (M.Flynn, interview, 5.7.83). Peter Wood's 1957 paper on American traffic analysis had alerted planners in Coventry to the methods currently available; but

> 'they weren't O and D surveys which provided us with the information we wanted', (ie. trip

purpose). 'and that's why we had to sit down and
think: now. what is the best way'.
(K.Platt, interview, 20.9.83)

The scope for application of techniques was greatly limited

by the Council's reluctance to fund research. Arthur Ling

persuaded the Planning and Redevelopment Committee the

necessary data could be gathered cheaply, leaving Wood with

the problem of

'how to study Coventry's transport situation,
virtually out of petty cash'.
(P.Wood, interview, 4.5.83)

The fundamental document for method is the paper headed 'An

Assessment of Methods of Traffic Study' (P.Wood, 21.7.61,

AP/CF/1/149d). It set the study team two essential

objectives: firstly, to project future traffic volumes, and

secondly, to test the principles of the proposed Inner Ring

Road and their detailed application. Such an analysis would

have to rest on certain assumptions, and these are

specified: no change in modal split, the rush hours or the

city's level of prosperity, and a target of one car per

family and one family per house. Next, alternative methods

of study are examined, noting a 'logical movement in

technique' (p.2) from straightforward volumetric counts,

through origin and destination surveys of existing

networks, to trip generation studies reflecting the

changing patterns of land uses.

'The logical end in the development of methods of
traffic forecasting is one based on the traffic
generated by various land uses.'
(p.3)

The paper goes on to record progress in methods of traffic projection, from simple trend-projection to more complex analytical measures of growth in population, person/vehicle ratios and average vehicle use.

'The calculation and use of correct mathematical formulae is the key to predicting travel patterns.' (p.3)

Finally, the various means of collecting traffic data are described and evaluated, including roadside and home interviews, cordon counts, volumetric counts, car parking surveys and information from public service operators.

Immediately after this technical review, Peter Wood entered into discussions with the Engineer's Department concerning the boundary of the cordon, the nature of the information to be collected from motorists, the duration of the count, and other organisational matters (T.Hughes to A.Lees, n.d., AP/CF/1/149d). Two parallel teams were formed: Roy Cresswell (Traffic Planner), Keith Platt and Peter Wood from the Planning Division, and John Lomas (Traffic Unit) and Ted Osborne (Statistician) from the City Engineers. They jointly held responsibility for the study.

The surveys took place in September 1961. Firstly, a roadside interview was conducted with drivers at 25 stations along a cordon line approximating to the city boundary. A staff of 300 temporarily assigned Corporation

employees sampled between 1 in 2 and 1 in 5 vehicles passing through Coventry. Secondly, 20 large factories and 50 smaller factories, offices and shops (covering 90,000 workers in all or 60% of the city labour force) were sent questionnaires to be distributed to employees. Thirdly, a home interview survey was undertaken as a check on the roadside and trip generator counts. 50 students from Lanchester College of Technology and Birmingham School of Art visited 1,700 houses in ten areas with a simple questionnaire covering trips and socio-economic status. Finally, a number of classified and mechanical volumetric counts were taken throughout the city, to provide details of traffic loads within the cordon area, and also as a check on subsequent vehicle assignment (DPR/31 4.63; A.Ling to H.Alston, 3.4.64, AP/CF/1/149d).

By mid-December all the survey material had been coded onto punched cards. Coding was an elaborate process and took 6 people 10 weeks. The rationale, assumptions and exact coding are given in the 'Explanatory notes' written by Keith Platt (K.Platt, 22.5.62, AP/CF/1/149d). Because all traffic information was to be retained, and as projections were to be made along routes as yet unbuilt, the decision was taken to separate routing information (called the 'centre' or 'internal' pack) from details of traffic flow, mode, purpose, etc. (called the 'outer' or 'external'

pack). So

> 'the method of obtaining a tabulation of the
> information required of traffic flows, turning
> movements at junctions, etc. is accomplished by
> machine matching the external pack with a
> corresponding internal pack thus applying the
> traffic information to a given route'.
> (K.Platt, 22.5.62, AP/CF/1/149d, p.2)

The first tabulations and summaries were prepared by Peter

Wood and the Treasurer's Computer Manager on the

Corporations's IBM 628.

> 'This was a complete new departure. We tended to do
> all of the work in the evenings, when the computer
> was quiet from its payroll work'.
> (P.Wood, interview, 4.5.83)

At this stage, it was estimated the traffic projection

program could be written in 5 weeks and the results

analysed in 2 more (P.Wood, 6.12.61, AP/CF/1/149d)

However, this timetable proved over-optimistic. Although

Wood was moved, at his request, to a full-time position in

the traffic team (P.Wood, 13.12.61, AP/CF/1/149d), a number

of problems continued to appear. In June 1962, Ling and

Granville Berry (City Engineer) asked Council for the data

to be passed to the IBM Service Bureau at Birmingham, as

the projection and assignment of flows was too large a job

for the Corporation's machine (Minutes, 6.6.62, Plan. and

Redev. Comm.). The transfer introduced several new errors

into the data, trip and routing mistakes had to be removed,

and late estimates of non-surveyed traffic included. These

gave an 'increase' in afternoon peak-hour traffic of 14.5%.

Final desire line tabulations for September 1961 became available in October 1962.

The chosen method of projection consisted of a composite growth factor applied to each of 47 zones in the city. The individual growth factors included changes in employment 1961-81, the development of industrial and residential areas to 1981, and the different growth of car ownership in the various districts of the city (P.Wood, 6.12.61, AP/CF/1/149d). The composite factor was then substituted into Fratar's equation (DPR/30, 4.63 pp.30-1). In 1961 this was not an easy task to code for machine processing, and the Birmingham computer could not cope with record-keeping for 9 million traffic movements.

> 'There were all sorts of quirks, of course. You tend to be putting something new into a bureau and the machine started to do silly things'.
> (P.Wood, interview, 4.5.83)

Once more, Ling went back to Committee at his officers' behest, with a request for permission to use the IBM 7090 computer in London. This was the largest computer in Britain, and IBM was keen to sell transportation packages to the local authority market. Programmers and systems analysts in the IBM London Bureau wrote the new trip generation program that was required, but 'they wrote it with us sat at their sides' (K.Platt, interview, 20.9.83). The resulting program had to be extensively revised and corrected: 'as I recall we spent three months on testing'

(K.Platt, interview, 20.9.83). Using the London as against
the Birmingham Bureau caused heavy flows of punched cards
and printout between Coventry and London.

> 'You had to take boxes of punched cards or punched
> tape down to Wigmore Street...'
> '...And drive back with sheets and sheets of paper
> - testing various new traffic routes'.
> (Interviews with R.Cresswell, 8.7.83, and K.Platt,
> 20.9.83)

Some 40 pages of printout were produced for every half-hour
survey period.

The generation, assignment and testing of road systems was
now so elaborate that a Joint Roads Team was formed in
October 1962. The Architecture and Planning Department
contributed Cresswell (full-time), Platt (full-time) and
Wood (part-time), and the Engineer's Department provided
two full-time and two part-time officers (A.Lees to A.Ling,
2.11.62, AP/CF/1/149d). During the autumn of 1962 and the
spring of 1963, three complete road systems were tested
(ie. projected flow set against road capacity and network).
The first run tested the performance of the existing road
network with 1981 traffic loads. The main results here were
an extreme overloading of the Foleshill Road to the north
of the city centre, and intense congestion on the Inner
Ring Road with 9,000 vehicles per hour in both directions,
well in excess of its designated capacity of 5,000 vehicles
per hour. The second run tested the draft city road pattern

report (DPR/17 6.61), with certain amendments to relieve pressure on the radial routes. The third run considered an 'inverted Y' proposal of a branched urban motorway descending southwards from the M5 motorway and passing both sides of the city centre and ring road. In fact, two variants of the 'inverted Y' proposal were explored. Stage 1 included higher standard urban routes and large car parking complexes in the principal employment and shopping areas, while Stage 2 expanded the motorway network on the assumption that public transport would be insufficiently attractive to car owners (DPR/31 4.63, Part 2; G.Berry and A.Ling, Joint Report P.1/63, Plan. and Redev. Comm.).

> 'The important distinction betwen Stages 1 and 2 and the other two patterns is the adoption of urban motorways with multi-level junctions and no minor accesses'.
> (DPR/31, 4.63, p.17)

By April 1963 the analytical work of the Joint Roads Team was over. The results were written up in two volumes and published (DPR/31, DPR/32, 4.63). Ted Osborne supplied the statistical matter, Keith Platt wrote the text, and Peter Wood edited it on behalf of the Planning Department (K.Platt, interview, 20.8.83). The report commented that the tabulations produced so far had been concerned specifically with the principles of a new road system.

> 'The greater part of the material available is so far unexamined. The value for future study and analysis will however be apparant'.
> (DPR/31, 4.63, p.53)

Suggested uses included road alignment, priorities for road

building, detailed junction design, studies of Coventry's
sphere of influence, simulating trip data for areas of
proposed development, public transport and car parking
studies, by-passable traffic, and so on. 'The computer
programme is a financial asset capable of quick amendment'
(DPR/31, 4.63, p.54), and could be run again at £360 to
£750 for each new road pattern over a 12 hour period of the
day. Alternatively, individual hours of the day could be
analysed at £65 to £140 (DPR/31, 4.63, p.52).

This was far from the end of traffic analysis in the
Planning Department, however. The major conclusion of the O
and D study had been that building new roads could not of
itself solve the city's congestion problem. While high
standard urban motorways were suggested in the report, it
was in the context of a shift towards a new public
transport policy.

> 'The next stage of the problem was now clear: how
> to ensure that private and public transport would
> jointly solve the movement needs.'
> (E.Osborne, 12.11.64, AP/CF/1/190b)

The development of a public transport policy required two
lines of research: one into the technology of mass transit,
and another into the personal choices surrounding modes of
transport.

> 'Very little is known of the real motivations of
> the public concerning their choice of transport...
> and of the specification and features that the new
> public system must have to make it viable.'
> (E.Osborne, 12.11.64, AP/CF/1/190b)

In June 1963, Ted Osborne and Roy Cresswell met Operational
Research lecturers from the Institute of Engineering
Production, University of Birmingham, to discuss problems
of transportation study.

> 'It was agreed that one of the principal
> difficulties is caused by the lack of precise
> information concerning the current and future
> motivation of travellers with regard to their
> choice of mode of transport.'
> (R.Cresswell, 13.6.63, AP/CF/1/172)

Shortly afterwards, the decision was taken to mount a
'transportation motivation study' to document current,
expected and desirable modal splits. A roads-only approach
to the traffic problem neglected the behaviour of vehicle
users, and to this extent the planners asserted a certain
social solidarity with the resident and public transport
user against the indiscrimate use of cars and the
car-user's representative in local government, the road
engineer.

As in 1961, the traffic study began from scratch.

> 'Discussions with London Transport, the University
> of Birmingham and a study of the literature, shows
> that no motivation studies applying to the modal
> choice of commuters has been made in this country.
> Certain studies have however been carried out in
> the United States.'
> (E.Osborne, 20.6.63, AP/CF/1/172)

Between May and July 1963, the Department contacted 11
American transportation authorities (including Penn-Jersey,
Chicago, Toronto and Atlanta) and universities and public

agencies, requesting details of work in progress on modal choice and rapid transport. The Department was assisted in this exploratory phase by the arrival at Birmingham University of a young Canadian researcher. Frank Wilson. Studying for a PhD in the modal split of personal travel, he soon became involved in Coventry's plans for a journey-to-work survey.

A proposal for a new traffic survey was set before Committee by Ling and Berry early in 1964 (Minutes, 21.1.64, Plan. and Redev. Comm.). It differed from the O and D study in that it was directed at peak-hour journeys to work, and collected data from trip generating sites with a multiple choice questionnaire. It was planned to process it in-house rather than at a bureau. According to an outline of requirements, the project consisted of three surveys: a place of employment survey, a home interview survey and a travel time survey (F.Davis, 3.64, AP/CF/1/149d). The workplace survey involved the selection of 18 major employers (trip generators) in the city and the distribution to their employees of some 42,000 questionnaires. 1,250 people were interviewed at home by students from Lanchester College of Technology to provide information on the relationship between socio-economic status and travel behaviour. It was estimated the data processing would take 2-3 weeks for the home interview and

a maximum of 5 weeks for the workplace survey. The employee questionnaire was distributed on May 26 1964, despite meeting at first some resistance to 'personal' questions (income, number of children) (A.Ling, 28.5.64, AP/CF/1/149d).

As before, estimates of workload were greatly under-stated. Preparatory work was still proceeding by December 1964, and the last stages of the data processing were not reached until February 1965 (Minutes, 2.12.64 and 3.2.65, Plan. and Redev. Comm.). Later that month, Osborne rejected the idea of running the new data on the O and D computer program, because it would require senior staff to create three new packs of cards (new routes, new assignments, new loadings), a task too error-prone and time-consuming to consider. However, he did approve a further test of the existing network once the Development Plan Review was completed, 'to act as a yardstick for the transportation policy decisions' (E.Osborne, 25.2.65, AP/CF/1/149d). No formal write-up of the study is available, but Frank Wilson subsequently published the Coventry data and associated linear regression model in his book Journey to Work - Modal Split (Wilson 1967).

Partly because of the survey finding that public transport was decreasingly used and preferences were shifting towards

maximun personal mobility, the City Council set up a
Traffic Advisory Committee which first met in October 1965.
It was directed to make recommendations to the Council on
all major proposals affecting the control and flow of
vehicular traffic, public or private, within the city. The
formation of a joint Traffic Committee, to which reported
several other committees (General Works, Planning and
Redevelopment, Transport, Watch), had long been the
principal demand of the Planning Department. In March 1965,
Ian Neale (Senior Group Planning Officer, replacing
Cresswell), had argued for a definite transportation policy
with a comprehensive transport system as its goal (I.Neale,
18.3.65, AP/CF/1/172). The Planning Department then hosted
an inter-departmental meeting before the Advisory
Committee's first session, at which Neale, George Thomas
(Principal Planning Officer) and Terence Gregory (CAPO
since Ling departed in 1964) presented the main traffic
problem as they saw it and sketched out the elements of a
joint transportation policy (I.Neale, 16.7.65, AP/CF/1/
172). Neale's pre-meeting notes indicate a wish for a new
transportation working party to support the joint
committee. One objective of this working party would be
'the evaluation of modes of mass transit - need to
establish cost/benefit techniques' (I.Neale, 13.7.65, AP/
CF/1/172).

The importance of technical support was impressed upon the Advisory Committee by the Chief Officers responsible for Planning. Engineering and Public Transport. They urged the Committee

> to initiate further studies of traffic management techniques designed to utilise to the full the capacity of the road network and to aid the movement of traffic'.
> (T.Gregory, G.Berry, N.McDonald, E.Pendleton, Joint Report P.33/65, 18.10.65, AP/CF/1/172)

Malcolm Reece wanted to see planning officers taking a 'more direct and positive line' in advising the Committee (M.Reece, 30.11.65, AP/CF/1/172). This should include the immediate adoption of schemes prepared by the City Engineer's Traffic Management Unit, and the commencement of a programme of research into Coventry-based and city-regional movement issues. Reece revived Neale's demand for a working party of specialists, to

> 'come together and agree the right sort of research programme and generally put more sense of direction into the formulation of comprehensive traffic planning, traffic policy decisions'.
> (M.Reece, 30.11.65, AP/CF/1/172)

Reece strongly asserted the leadership of the Planning Department in this process.

> 'It cannot be too strongly stated that the preparation of the research programme for the Road Team is our own responsibility.'
> (M.Reece, 30.11.65, AP/CF/1/172)

If necessary, the Roads Team and the Department's Research Group should be augmented with a statistician, an economist or a research assistant.

By 1965, the Architecture and Planning Department had assumed a position of some authority within the departmental hierarchy, and over the construction of transport policy in particular. This picture can be sharply contrasted with the situation five years earlier, when no planner had ever assisted in a traffic survey or assumed competence in the field of policy. At the same time, the preparations for policy-making had become curiously rigid and computational, obliging the thoughtful planner to stand back while a burst of calculation was performed. A source of civic pride, yet also an ominous sign to the craftsmen, the traffic studies affirmed a new relationship of routine and judgement.

6.3.2   Collection and projection of population data

The second major zone of technical innovation concerned the collection and processing of 1961 Census data.

In August 1961 the Registrar General wrote to all planning authorities with the information that special tabulations from the 1961 Census would soon be available, including ward and enumeration district data upon request. The data could be supplied in punched card form for further in-house tabulation and analysis (Minutes, 30.8.61, Plan. and Redev.

Comm.). At the same time, the MHLG's Chief Planner urged CPO's in an official circular to purchase GRO data sets.

> 'Local planning authorities can obtain important
> information at small cost compared with that of a
> local survey.'
> (J.James, 4.8.61, AP/CF/1/209i)

Coventry's chief interest in Census data lay in the measurement of population growth. It had prepared medium and long-term forecasts for some years, on a simple trend extrapolation basis. When Ling sent the MHLG his latest estimate of Coventry's population for 1981, the Ministry's Senior Research Officer commented:

> 'The method used is not one we adopt, since we like
> to make a distinction between natural change and
> migration. This is not to say, however, that the
> suggested figure of 360,000 is necessarily of less
> validity than any other which might emerge from a
> more detailed analysis of past trends and future
> prospects. It is all very much guesswork and so
> many things can go awry'.
> (J.Jarmain, 2.3.61, AP/CF/1/143)

Hence the significance of Ling's decision to purchase Census data in card form and encourage more precise, detailed and sophisticated calculation of demographic change.

> 'The opportunity of obtaining the information on
> punched cards should not be missed, for quicker and
> more flexible analysis will be posible on the City
> Treasurer's equipment, thereby saving many hours of
> manual extraction of information.'
> (Minutes, 3.1.62, Plan. and Redev. Comm.)

At this point a second motivation surfaced for processing of Census data: the supply of demographic data to other Corporation departments. Population, household, housing and

other variables would be invaluable to providers of schools, dwellings, open spaces and playing fields, etc. Predetermined information bought from the GRO necessarily included unwanted or redundant figures: whereas

> 'the punched cards could be grouped more readily according to the needs of the various departments'. (Minutes, 3.1.62, Plan. and Redev. Comm.)

In fact, there were substantial delays in the delivery of the cards. Upon Peter Wood's original visit to the Census Branch of the GRO in November 1961, he had been told that information would be available from mid-1962. Accordingly, Ling delayed preparation of the Review Plan until basic demographic data was available (A.Ling to R.Thorby, 20.9.62, AP/CF/1/209i). However, in March 1962 he was told that the County Report for Warwickshire and detailed Scale A and D data for Coventry would not be ready until October (GRO Census Branch to A.Ling, 30.3.62, AP/CF/1/209i). Ling asked for the presentation of information on the punched cards to be described, 'in order for a computer programme to be prepared' (A.Ling to Census Branch, 29.8.62, AP/CF/1 /209i), but was told the layout of the cards had not yet been finalised. Also, the deadline was again pushed back to the spring of 1963 (Census Branch to A.Ling, 3.9.62, AP/CF/1/209i). Tom Hughes (APPO, Policy Division) suggested requesting material ahead of publication, and the GRO did in fact authorise an early release of data after an

anguished plea by Ling to let his plan proceed (Census Branch to A.Ling, 26.9.62, AP/CF/1/209i). This material was in summary form, and the Planning Division had to wait until May 1963 for the 100% and 10% data to be released (C.Tallentire to A.Ling, 2.5.63, AP/CF/1/209i).

Osborne now liaised with the City Treasurer's Machine Accountant on the tabulation of the material. There were 66,300 cards in 417 sets of 159 different kinds of card. Ling told the City Treasurer the information could not be superceded for another ten years, so

'it is not possible at present to foresee all the work you will be required to do on the data although the following tabulations are urgently required. Data by enumeration district, data by statistical item. These will serve as a permanent printed record of the entire material'. (CAPO to City Treasurer, 9.9.63, AP/CF/1/209i)

Osborn checked the punched cards on delivery, eliminated those not required, and made a preliminary tabulation. This took 35 hours of machine time (E.Osborne to T.Hughes, 17.10.63, AP/CF/1/209i). Osborn arranged for the printing of final tables and the calculation of associated totals, sub-totals and percentages to be handled by the Birmingham IBM Bureau, a job estimated in October 1963 to take 2 months (E.Osborn to T.Hughes, 17.10.63, AP/CF/1/209i).

Further tabulations followed. The Planning Division promised

'to approach each Department of the Corporation to coordinate their requirements for Census data'.
(Minutes, 1.5.63, Plan. and Redev. Comm.)

Each department was duly circularised in September 1963. A complete listing of names of variables was included, with the restriction that tabulations could only be under the one heading with no cross-tabulation or correlation of items. Economy in use was suggested, as

'such is the quantity of data available that complete tabulation, without leaving spaces between lines and without totals would occupy a book some ten inches thick'.
(CAPO, 11.9.63, AP/CF/1/143)

No record of Departmental use of this service remains, but it appears to have proceeded smoothly and successfully.

Ling reported in January 1964

'we consider the production of these tables to be a good job well done.... Copies are now in use in many Corporation Departments and the whole exercise is a good example of the benefits that can accrue to everyone from the use of a computer'.
(CAPO to City Treasurer, 24.1.64, AP/CF/1/2091)

The Planning Division made use of Census data in two phases. The first application was fairly modest, and consisted of the aggregation of ED data to ward level. Spatial statistics were generated on the Birmingham Bureau's IBM 1401. A handwritten sketch exists for a 'Community Data Record' combining land use, property and household data at 100% and 10% scales. The definition of community structure was an important, if unrealised, ambition of Ling's since he had come to

Coventry from the London County Council (A.Ling, interview, 19.1.84).

The second application was very ambitious: the preparation of a computer-based population forecast. Discussions started in May 1963 within the Department, and were carried over into an informal meeting in Birmingham the same month. In attendence were A.B.Neale (Statistics Officer, Birmingham CB), Valerie Jackson (University of Birmingham), V.Miller and K.Leadbeater (IBM UK), and Peter Wood. The meeting had been arranged because it was thought 'some planning authorities might welcome an approach from a data processing organisation' to help with the analysis of Census data. It transpired that IBM were offering to investigate the possibility, and the likely cost, of writing a computer program to project population at small scales. Peter Wood suggested such a program could be used to test the effect of varying assumptions as to birth/death rates, migration, etc. (P.Wood, 12.5.63, AP/CF/1/143).

In July, Ling informed the GRO of the outcome of these discussions. He mentioned IBM's 'extremely reasonable fee' and explained his wish to circularise other local authorities who were thinking of purchasing data in punched card form (A.Ling, 16.7.63, AP/CF/1/143). A circular was sent out in July to major and medium-sized counties and

county boroughs in England and Wales, and in addition to certain Universities. The were requested to cooperate in a plan for 'population progression' using IBM's facilities. Between August and October 1963, some 35 authorities replied. 20 were moderately or extremely supportive. No other authority had experience in projection which could be useful to Coventry.

Unfortunately, Coventry now began experiencing difficulties in data collection which threatened to end the whole project. While the GRO collected fertility and mortality data locally, it would not release disaggregate figures (A.Ling to H.Bennett, 25.11.63, AP/CF/1/143). When Ling asked for age-specific fertility and death rates for Coventry, he was told they were not tabulated (A.Ling, 25.11.63, AP/CF/1/143; J.Rowntree to A.Ling, 5.12.63, AP/CF/1/143). Ling replied that such figures were nevertheless collected by the local Registrar of Births and Deaths, so why could they not be released to another branch of government?

> 'The history of planning at a local level shows
> that plans stand or fall almost entirely on whether
> the basic estimation of population was right or
> wrong. The importance of this cannot be
> sufficiently stressed.'
> (A.Ling to J.Rowntree, 10.12.63, AP/CF/1/143)

Rowntree countered that

> 'to produce such figures now for recent years would
> involve extensive and expensive sorting and
> re-running of cards'.

(J.Rowntree to A.Ling. 19.12.63. AP/CF/1/143)

Furthermore. national rates were not calculated directly from local rates as some adjustments had to be made first. Ling conceded defeat. and promised to run the Coventry model making allowances for any differences in assumptions they could identify (A.Ling to J.Rowntree. 10.1.64. AP/CF/1 /143).

First runs of the 'Coventry method' were not encouraging. A population estimate for 1981 was prepared and contrasted with the MHLG estimate. Although it fell within the Ministry's 'low' estimate, its variation from the 'high' estimate was too great (A.Ling to J.Jarmain, 4.2.64. AP/CF/ 1/143). Osborn re-evaluated the situation, and later in February suggested 'we abandon the idea of computer projection of population' (E.Osborn to A.Lees and T.Hughes, 11.2.64, AP/CF/1/143).

He argued that accurate birth and death rates were not available to planning authorities, and those that were produced a large range of errors when projected over 20 years. Also, Coventry was strongly affected by migration, and the migrants' age and sex structure were considerably different from the established population. Migration made small area projections particularly difficult. His final observation was that

'a straight forward forecast based on national
trends or such regional figures as are available
can be done by a trainee on an electric calculator
in less than half a day for each area'.
(A.Ling to W.Bor, 3.3.64, AP/CF/1/143)

This was not the end of population projection in Coventry,

however. In the same letter recommending the termination of

the population progression project, Osborn argued the case

for a new and more complex 'demographic model of a city',

the essential feature of which was the inclusion of

household structure as an endogeneous variable (E.Osborne

to A.Lees and T.Hughes, 11.2.64, AP/CF/1/143). A

preliminary study had shown that the introduction of

further variables reduced the range of error to acceptable

limits, in addition to generating estimates of change in

household composition. Varying migration assumptions could

also be included.

'This project, whilst representing a relatively
long term aim, is being implemented as soon as
possible.'
(A.Ling to W.Bor, 3.3.64, AP/CF/1/143)

Not least because of its achievements in processing and

distributing the 1961 Census, the Planning Division became

almost synonymous with 'information' from the early 1960s.

In particular, the basis of the Review - population

forecasts for the twenty year life of the Plan - was

subjected to a rigorous examination and reformulation.

While they did not become any more accurate, nevertheless

they now varied within calculable limits. The conversion of

error from a mistaken judgement into a mathematical definition of a limit, marked one more encroachment upon craft skills in the preparation of plans.

6.4   PREPARATION OF THE REVIEW PLAN

We can now examine the implications of staffing policy, office practices and the process of plan preparation for the emergence of the discourse on methodology. The greater part of the Review's survey and analytical work was underpinned by a brief partnership of organisational factors, and once this came to an end after 1964 the original impetus to innovate left the Department. The creation of a planning team is considered in section 6.4.1, the operation of the planning office in section 6.4.2, and the progress of the Review after 1963 in section 6.4.3.

6.4.1   Formation of the Review team

Section 5.2.3 discussed the staffing crisis of the late 1950s and ended with the recruitment of ten trainees. However, the training programme was only part of a larger renewal of the Planning Division that can be dated from 1960-1. From the early 1960s, a stream of senior personnel

flowed into the Division, captured by the scale and scope of Coventry's replanning, who thereafter played an immediate and effective part in the formation of a planning 'team' out of a collection of individual planners.

In the space of a year the entire senior cadre of officers was replaced. Tom Hughes joined to assist Audrey Lees, Malcolm Reece led the Development Plan Review, Peter Wood took over research, Roy Cresswell assumed responsibility for traffic planning, and Tony Moscardini and Basil Rossiter took senior positions in development control and area development. In 1960 Terence Gregory was made Deputy CAPO. As Audrey Lees had only been appointed in 1957, the sole remaining link with the past was Arthur Ling himself.

The new senior entrants were characterised by redevelopment skills and experience, and by a shared acknowledgement of Coventry's progressive approach. Cresswell had spent several years at Essex County Council on urban renewal work before taking a planning degree at Manchester University. He went to Coventry because

> 'it was one of the leading three or four planning authorities from the point of view of getting positive planning experience, as opposed to purely plan-making'.
> (R.Cresswell, interview, 8.8.83)

Similarly, Peter Wood had been involved in the research and programming of Birmingham's inner city redevelopment. He

took the post of Principal Research Officer because
Coventry had

> 'a different atmosphere and charisma about it....
> It was very much at the forefront of planning
> thinking in this country'.
> (P.Wood, interview, 4.5.83)

Progressive thinking encompassed not only physical planning
or urban architecture:

> 'it went into planning research, and thinking of
> the way the Development Plan Review should be
> formed'.
> (P.Wood, interview, 4.5.83)

Finally, Malcolm Reece had experience of cartography,
engineering and then planning at Staffordshire County
Council before moving to Coventry,

> 'attracted by its central redevelopment problems,
> design and implementation'.
> (M.Reece, interview, 28.8.83)

In 1960 the renewal of the Planning Division was completed
by an intake of ten trainees, whose work in the office was
paralleled by a specially created planning course at
Lanchester College of Technology. According to Ling,

> 'we needed staff, they were very active, and to
> some extent perhaps we had a slight empire-building
> approach to it, in the sense that we knew we had a
> lot of work to do and we could see this as a way of
> getting some staff outside our normal
> establishment'.
> (A.Ling, interview, 19.1.84)

The 'trainees' were far from junior, however; at
enrollment, the youngest was 23 and the eldest was 40.
They all had prior professional qualifications: 4 as
surveyors, 5 as architects and 1 engineer (P.Aubrey,

interview, 23.8.83). The trainees were 'high-fliers from a variety of basic disciplines' (P.Wood, interview, 4.5.83), recruited to fortify the Division but also to diversify its skill base.

> 'Some of the planners were dealing with activities
> which were almost well beyond their experience'.
> (M.Reece, interview, 28.8.83)

'The ten', as they came to be known, were employed on AP/4 at £1,000 per annum, considerably more than previous recruits. Mike Flynn had joined the Planning Division fifteen months earlier on AP/1 while taking Ginsberg's planning course at Birmingham.

> 'Everyone was green with envy at their privileged
> position and privileged status, not on a personal
> basis, but it was just the illogicality, the
> unfairness of it, as it was seen by others like me,
> who were on these lower grades, who were equally
> trying to qualify.'
> (M.Flynn, interview, 5.7.83)

Between 1960 and 1962 the staff of the Planning and Redevelopment Committee increased by half to total 52 (see Table 6.1: City of Coventry 1962). Of this total, the trainees accounted for 20 to 25% (P.Wood, interview, 4.5.83). Enhancement of the Planning Division had two important effects. Firstly, the leadership of the Department received new impetus with the arrival of highly motivated and experienced senior staff. With Wilfred Burn's departure to Surrey in 1958 and Ron Bryant leaving for Canada in 1960, not only a layer of senior officers but

TABLE 6.1   Staff of the Planning and Redevelopment
                   Committee 1958-66

Year (March 31)	Full-time staff
1958	29
1959	27
1960	35
1961	47
1962	52
1963	48
1964	n.a.
1965	54
1966	55

Source: Abstract of Treasurer's Accounts

also a historic fixation on the Development Plan passed
away. In particular, Bryant's modest conception of 'review'
was overtaken by a more ambitious plan of data collection
and analysis across chapter headings. Secondly, the
trainees added width to the Division and promoted debate
within it. The Lanchester course held them together as a
social group, producing a much-noted comeraderie (eg.
M.Flynn, interview, 5.7.83) which connected many different
areas of activity. With the Development Plan section
boosted by the arrival of Wood, Reece and 'the ten', and
with the departure of Bryant, 'it was like a new team'
(K.Platt, interview, 20.9.83). The situation remained
substantially unchanged for three years.

6.4.2   The planning office and office work

This section describes the day-to-day functioning of the
Planning Division and explores working relationships
between the planners. The special character of Coventry's
planning office helps explain the formation of new working
practices and the progress of the Review as a whole.

The Planning Division occupied three floors of the
Architecture and Planning Department offices in Bull Yard,
opposite the Council House, and was sited along two sides

of the internal courtyard. The planning offices took the
form of an open plan, with solid partitioning between
doorless rooms. According to Platt, the openness of the
office was a contributary cause of the 'openness' of the
planning team. There was

> 'just a sea of desks and people and paper.
> Absolutely chaotic. There were two and three people
> working at one desk at one time in any given
> situation.... It made us work together; you were
> falling over yourselves if you didn't'.
> (K.Platt, interview, 20.9.83)

Platt also descibes the planning team as having been a
'very democratic organisation' in terms of discussion of
jobs on hand and also the wider politics of planning. This
made itself felt in various ways. Inside the office there
was no major division between planners and clerical/
cartographical staff.

> 'We used to do a lot of manuscript things because there
> was no dictation facility. We used to do a lot of our
> own work, hand-drawn stuff. I actually physically
> worked on a drawing board.'
> (K.Platt, interview, 20.9.83)

There were no demarcation disputes over the allocation of
work. In fact, the organisation of work was quite loose-
knit.

> 'There was no formalisation of memos having to be
> passed or anything.'
> (K.Platt, interview, 20.9.83)

> 'Within the office there were all sorts of things
> going on, which didn't operate like someone doing a
> piece of work, and that piece of work going into
> the system and appearing somewhere else.'
> (P.Wood, interview, 4.5.83)

Hours of work were long, and leisure was willingly forgone.

> 'Nobody of the planners ever looked at clocks,
> they'd go on until something was finished.'
> (K.Platt, interview, 20.9.83)

While overtime was occasionally compulsory if bottlenecks appeared in the central area project, many planners also worked it voluntarily. For example, Wood processed the results of the O and D survey on the Treasury machine at night. Work and non-work time further fused in the 'Crypt Club', a social organisation formed to take advantage of the 14c crypt preserved below the offices. On leaving Coventry, Arthur Ling donated a long seat to the Club for its bar: a sign of his appreciation for 'our social centre' (A.Ling, interview, 19.1.84). Outside the office, the staff were prepared to live in what they had helped plan, including Coventry's first high-rise flats.

> 'Many of the staff in the Department of
> Architecture and Planning lived in the Tower Hill
> flats when they first opened. It was considered the
> latest and greatest....'
> (R.Cresswell, interview, 8.8.83)

The major characteristics of the 'democratic' planning office were these: corporate leadership, and decentralisation of responsibility.

Both the City Council and the Architecture and Planning Department were run on 'corporate' lines, meaning collective decision-making across the major service providers. The city centre redevelopment had been the

greatest stimulus to departmental collaboration in the Council.

> 'One of the interesting things... that came out of this central area reconstruction was... that we were then the pioneers of what was corporate development'.
> (A.Ling, interview, 19.1.84)

The Town Clerk, Charles Barratt, was 'by agreement in the city... the chief among equals' (M.Reece, interview, 28.8.83). He held weekly progress and coordination meetings which all Chief Officers involved in the redevelopment attended. At one time, Keith Platt was progress-chaser for this group and worked closely with the Treasurer's Department. 'Charles Barratt was the first proper corporate manager... of a city' (K.Platt, interview 20.9.83).

Corporate leadership of the Council was a readily available and tested model for joint working arangements within the Planning Department. Thus the Development Plan Review was presided over by a policy group made up of the Development Plan section headed by Reece, the Transport section under Cresswell, and the Research section led by Wood.

> 'We shared commonly the guidance of staff below.... It worked in Coventry because there was a very, very good team spirit. That was largely derived from good and sound leadership on the top, in the spirit of Ling, Audrey Lees and earlier Wilf Burns.'
> (M.Reece, interview, 28.8.83)

High levels of cooperation and commitment also characterised relations between the different professions

in the Department.

> 'There was a much greater integration of effort. To
> begin with. there was actually team-working on
> projects of architects. engineers and planners in
> the same room.'
> (M.Reece. interview. 28.8.83)

The Joint Roads Team formed in October 1962 is a specific
example of the kinds of inter-professional cooperation that
were emerging.

The second characteristic of the 'democratic' planning
office was the decentralisation of responsibility. and
therefore the greater involvement of middle and
lower-ranking officers in important decisions. According to
Cresswell,

> 'one of the good things about Coventry was the
> amount of responsibility given to people at the
> third level: I mean going to public enquiries and
> so forth'.
> (R.Cresswell, interview, 8.8.83)

This partly came out of necessity, especially during the
early period of the Review when senior officers were
heavily engaged in the redevelopment. Much of the early
survey work for the Review was planned and prepared at a
low level of authority. 'If we had to do it any other way
we just wouldn't have had the time' (K.Platt, interview,
20.9.83). For example, Mike Flynn joined the Planning
Division in January 1960 having completed a geography
degree, and soon after found himself responsible for an
industrial survey of the city. He drew up a questionnaire,

and with Platt visited every large factory and its
management in Coventry. The report Work in Coventry
(DPR/33, 6.63) was written substantially by Flynn, with
direction from Peter Wood.

> 'I was fortunately given a free range to... think
> out how to approach this.... I had a very free rein
> of inventing and formulating the process and
> methodology of it, which was quite good.'
> (M.Flynn, interview, 5.8.83)

Malcolm Reece comments:

> 'it was a teach-yourself survey one month, and...
> taking a very formative view of the industrial,
> economic, structure of Coventry within the next'.
> (M.Reece, interview, 28.8.83).

The presence of a layer of trainees in the Department
compounded this decentralisation of responsibility. 'The
ten', by their close personal and educational
relationships, created strong horizontal links between
separate areas of work. Peter Wood had an architect helping
him with the interpretation of data.

> 'Anything he was picking up he would filter through
> the group of ten. And the group of ten were moving
> around anyhow. It was a kind of dissemination
> machine that we'd got within our staff structure.
> And so the kind of innovation and research thinking
> that was going on in my little group was being
> spread around.'
> (P.Wood, interview, 4.5.83)

In addition, the trainees were encouraged to go to Summer
Schools, visit other towns, use the well-stocked library
and take part in the meetings of the West Midlands Branch
(Junior Section) of the Town Planning Institute. 'We were

all interested, we were all dead keen' (P.Aubrey, interview, 23.8.83).

Retrospectively, it is clear that the Coventry planning office was a pre-bureaucratic phenomenon. It was not characterised by a set division of tasks and posts, standards of performance nor output-related awards. Instead, work was divided according to personal strengths and abilities. Individuals were identified less by an official post than by the skills they possessed within a common pool of skills available to the whole office. One consequence of this kind of organisation was that individual planners experienced the division of labour and specialisation as temporary stages in the development of an overall planning career, than as permanent investments of specialist skills in specialist careers.

The craftsmanlike emphasis on general career development, plus the drive towards implementation, definitely precluded premature specialisation in methodological problems. As Cresswell observed of the 1961 traffic study,

> 'it wasn't a question of developing methodology so much, but using the methodology in order to test the network... in order to cater for greater traffic flows'.
> (R.Cresswell, interview, 8.8.83)

Only as the redevelopment process slackened in the later 1960s could a permanent division of labour around method be

installed.

6.4.3   Assembling the Review Plan

The form, content and purpose of the Review Plan were first indicated in early 1963. From this moment on, work in the Department entered a new stage, in which policy development prevailed. This sub-section explores two aspects of the preparation of the Review Plan: firstly, the substitution of a city-regional for a city-centre perspective, and secondly, the administrative construction of the Plan. The pertinent question is why it was possible for a discourse on methodology to figure so highly in the discussions surrounding the Plan, when that methodology had not in general been employed in drawing up the Plan.

Of fundamental importance in understanding the growth of new concepts of plan-making in Coventry is the legacy of the wartime blitz. The destruction endured in 1940 dominated the attention of planners, councillor, business and residents alike. The reversal of the bomb damage via a huge, progressive and public sector-led programme enjoyed almost unquestioned assent (Ginsberg 1974). This irreversible commitment introduced a significant distortion into the planning activity of the Corportion, in as much as

it became dominated by the timetable of development of one major set of inter-related projects for the central area. There was, of course, considerable variety in the central area work: it included shops and offices in a pedestrian precinct, the multiple segregation of vehicles, the first phases of the inner ring road, the new Cathedral precinct, and the Lanchester College of Technology. Nevertheless, it caused a switch of staff and skills to the design and development functions of the Department.

> 'There was a stage in the planning of Coventry where you had to be an architect to get anywhere, and that was made known.'
> (M.Reece, interview, 28.8.83)

This emphasis on implementation of the central area plan was 'by no means a thing of the past' (M.Flynn, interview, 5.8.83) in the early 1960s. The crisis Coventry faced in the early 1960s was precisely that it had little attention to spare from the central projects for the new problems of the decade, problems which were of growth rather than replacement: traffic increase and congestion, the sub-regional growth of population and industry, novel types and patterns of consumerism, etc. So it is not surprising that it was the officers and sections working furthest away from the redevelopment programme, in research and the Review, that first detected and relayed these new problems to the rest of the Department.

In the first instance, the Development Plan focus of the

Department was recovered in order to remedy a statistical deficit; and this deficit had arisen because of new forces operating upon the city centre which exceeded the scope and brief of its planners.

> 'The first survey [of 1952] didn't really get down to the basic problems and have sufficient statistics to justify anything but a general plan... It was felt that it was necessary, as new ideas were developing... to collect much more data than previously, and carry out investigations with industrialists, to have an origin and destination survey - it was all the new aspects that were coming on, and everybody realised.'
> (A.Ling, interview, 19.1.84)

The growth of Coventry was interpreted through its impact on the city centre, and the challenges it implied for the central area plan. Hence, for example, the treatment of the regional traffic load as an inner ring road problem.

After 1961 this position ceased to be tenable. A critique was launched from within the Review team of physical determinism in planning, a critique aimed not only at the 1952 Development Plan but also at the political sponsors of redevelopment.

> 'Past achievement became dominant, overdominant.... One had to reach the disagreeable stage of telling the Chairman of the Planning Committee - it was a constant Chairman, Hodgkinson - that you've lived too long on your precinct, you've taken visitors around too long.... Not only is it getting tired, you're tired mentally. You should be thinking about the new problems of Coventry.'
> (M.Reece, interview, 28.8.83)

Ling, with his background in new towns, social units and other forms of total provision, was amenable to these kinds

of argument. He was keen to set about 'putting a London investigation standard to Coventry' (A.Ling, interview, 19.1.84). Under his leadership the central planning problem shifted from design of a bounded area, to

> 'the optimum size that will govern the planning of future employment opportunities and other facilities of the city'.
> (DPR/16, 6.61)

> 'We were indulging in these untold heady luxuries of studying the industrial growth of the town and saying, to what extent shall we control growth.'
> (M.Flynn, interview, 5.8.83)

An important step in the development of a city-regional perspective was the Department's relationship to the Ministry of Transport's study team that produced Traffic in Towns. The team included Geoffrey Crow, a former engineer from Coventry, and he may have been responsible for suggesting Coventry as a potential case study to Colin Buchanan. In the event, Leeds was chosen in preference to Coventry, and secured for itself a 31 page write-up in the final report.

> 'I am sorry that the original plan to make a full case-study of Coventry did not come off, but I think we were probably right in deciding in the end to have a look at a town where the situation was much less committed.'
> (C.Buchanan to A.Ling, 19.6.63, AP/CF/1/204cont)

As it was, the Department maintained a working relationship with the study team, to the extent of requesting a meeting with Buchanan to discuss the 1961 O and D survey,

> 'in case there is a particular extract from the material which we would not otherwise be producing and which would be helpful to your exercise'.

(A.Ling to C.Buchanan, 12.2.62, AP/CF/1/149d)

Buchanan asked Ling to approve of the draft section on Coventry in Traffic in Towns, because he did not want to 'say anything which was either inaccurate or offensive to you in any way' (C.Buchanan to A.Ling, 19.6.63, AP/CF/1/204 cont). The significance of the Buchanan Report for Coventry was that it validated redescription of the city centre as a node in a regional network. The Report received a uniform welcome across the Planning Department:

> 'we thought that was the best thing since sliced bread.... We all had copies of the Buchanan book'.
> (P.Aubrey, interview. 23.8.83)

The Plans Sub-Committee recommended all members of the Planning and Redevelopment Committee be supplied with a copy, and the Committee was treated to a lecture by Tom Hughes on the main principles of the Report (Minutes, 4.12.63, Plan. and Redev. Comm.). While no doubt reinforcing 'where Coventry already was' (M.Reece, interview, 27.8.83), the Report also formed a substantially more favourable context in which to envisage a review of the 1952 Plan on a regional scale.

On the basis of movement and residence data gathered 1960-61,the Planning Division made a case for the emergence of a Coventry City Commuter Region.

> 'Within this area there is a need for a closely coordinated planning policy to control and direct development and communications systems to achieve an economically and socially desirable plan for the

> whole city region.'
> (DPR/28, 4.63, p.2)

The City Region report criticised the absence of an appropriate administrative unit for this emerging functional region, and proposed a 'Master Plan' (DPR/29, 4.63, p.29) to accomodate 100,000 people in the region by 1981. By April 1963, officers from Coventry had approached the Warwickshire County Planning Department and made agreements on a common format for the collection of statistics on industrial structure, land use and social life. A joint MHLG/Warwickshire/Coventry sub-regional study was envisaged,

> 'after which it will be possible to proceed with
> the finalisation of the detailed planning proposals
> in regard to the city'.
> (DPR/28, 4.63, p.2)

However, officer liaison was abruptly ended when Warwickshire County Council discovered on what their staff had been engaged. The County construed Ling's preliminary sketches of a linear model of city growth as a direct attack upon the green belt and the autonomy of the county (E.Stephens to C.Barratt, 25.5.63, AP/CF/1/209p). Despite this injunction, Ling further invited J.J.Brookes (County Planning Officer, Warwickshire) to exchange information 'on the extent of the problem' (A.Ling to J.Brookes, 30.7.63, AP/CF/1/209p), while Ling's successor, Terence Gregory, arranged a covert meeting with the CPO in December 1964, arguing

'the implications of such policies should be
discussed freely and informally between the
officers of the City and County planning offices.
before such policies became set and subject to
political assesments by the various Councils
concerned'.
(Anon, 23.12.64, AP/CF/1/209p)

Although Brookes remained unimpressed by this argument, the

Department maintained its pressure into 1965. securing

Coventry City Council's support for a study

'to provide for the anticipated population growth
within the context of an overall Master Plan for
the Coventry City Region, and to include an
integrated Transportation Plan for the City
Region'.
(Draft Written Statement, 1965)

The Council's endorsement of the Coventry city region

concept reinforced two tendencies within the Planning

Division. The first was towards a larger scale of reference

in assessing trends in the city. In the name of 'scale',

city-wide policies were brought into contact with project

planning for the centre and for the more recent CDAs. Thus

the city region perspective made the redevelopment

accountable to the larger socio-economic trends, and

presented criteria for judging the post-war planning record

other than by repeating the original desire to 'build

again'.

The second tendency was the systematic accumulation of data

from several sources and on a comparable basis. The City

Region report noted how surveys for the quinquennial review

strayed across administrative boundaries in pursuit of new functional entities, and hoped that the City and County could successfully utilise the mass of material by proceeding from 'a common survey base using the best statistical material that is available' (DPR/29, 6.63, p.11). City regional planning focussed attention on information as a means of planning.

This is the context in which the Review Plan was assembled.

Malcolm Reece is clear that the Review team was under pressure from mid-1963

> 'to get from the survey-exploration phase to the
> application and... policy stage'.
> (M.Reece, interview, 28.7.83)

This was both a political pressure, due to the availability of central government money for the inner ring road and the comprehensive redevelopment programmes, and a technical pressure to avoid delay and the aging of information. As a result,

> 'there was a very swift synthesis stage, in fact it
> hardly existed. And that was the final deficiency
> of the plan.... A fine effort to collect some data,
> a fine effort in seeking out an application in
> policy in areal terms. But there was very little
> time left for the synthesis of policies to make
> sense of it across the city'.
> (M.Reece, interview, 28.7.83)

In terms of a plan it became

> 'a matter of just wrapping up the bits and pieces
> in a documentation and map form.... an exercise in
> compilation, not a synthesis'.

(M.Reece, interview, 28.7.83)

The oppressive need to get the Review completed was complicated by the large turnover of staff in late 1963 and early 1964. Platt recalls an almost 100% renewal of staff, including among senior posts Audrey Lees, Peter Wood, Tom Hughes, Arthur Ling, Roy Cresswell and Tony Moscardini. Their replacements were quite different people and 'the atmosphere just evaporated very quickly' (K.Platt, interview, 20.9.83). After Ling, Terence Gregory was a 'bread and butter man' (K.Platt, interview, 20.9.83) who had no further interest in innovation, who sought to limit overspending on the planning budget, and who resented the lack of organisation in the Department. According to Reece, the absence of continuity in staffing, and especially 'the absence of skilled planning staff as opposed to people doing the specialisms' (M.Reece, interview, 28.7.83), meant little effective integration of policy areas was possible in the two years to plan submission in 1966.

The weaknesses in policy formulation and integration contrasted sharply with the professionalism of the preceding surveys. The spirit of these earlier stages had been

> 'we're doing work in a way here we ought to fully
> document each step we go through, document in a way
> other people can inspect - check - our method-
> ology'.
> (P.Wood, interview, 4.5.83)

The policy preparation stage of the Plan deposited no such documentation. In fact, during 1965 and 1966 the Development Plan Review faded as a vehicle of decisive and original thinking. It was overtaken on two counts. The first was that the actual mechanisms controlling the growth of the city were not embraced by the Plan. The future of Coventry was being settled at the urban margins, and even while Reece and his colleagues were seeking the MHLG's approval of the Plan, they knew

'full well that the real future of the city would be guided by the border policy plans'.
(M.Reece, interview, 28.7.83)

In terms of guidance the Plan was not destined to be a source document. The second problem was that the Plan was ceasing to represent the most advanced type of intervention in development. Coventry had shown an immediate interest in the deliberations of the Planning Advisory Group, set up in 1964 to review the Development Plan system, because it was due to submit the Review Plan in the same time period. As it happened,

'the Coventry Policy Statement and Map were evolved concurrently with, but independent of the preparatory work on the PAG report'.
(Gregory 1966b p.1)

Coventry and PAG did not come to quite the same conclusions, however. Whereas PAG sought to distinguish 'matters of principle' from 'matters of detail', the Planning Division was more interested in a

'systematic approach to the collection and assembly

of data and... its analysis' and 'the rational-
isation of the decision-making processes within the
City Council'. (Gregory 1966b p.1)

Coventry's interest in corporate management of information
and decisions left the Review in a difficult position. The
Review was well-advanced by 1965, and for the Minister not
to have approved it 'would have been, to some extent, to
waste the time we put into it' (M.Reece, interview,
28.7.83). At the same time, it was not couched in a form
entirely suitable to the administrative processing of
Development Plans. The Department was invited by MHLG to
send an exhibition to London on 'The making of the
Development Plan' (Minutes, 2.6.65 and 8.9.65, Plan. and
Redev. Comm.), but according to Reece,

> 'the technicians there did not understand it.... I
> always regarded that as something of a disappoint-
> ment'.
> (M.Reece, interview, 28.7.83)

In face-to-face meetings with the Minister, Reece succeeded
in getting the Review Plan accepted before the final PAG
report was issued.

> 'We had to say, although we weren't particularly
> satisfied that we had the right Review, it was the
> only one we had.'
> (M.Reece, interview, 28.7.83)

Plan submission became the quickest way of getting rid of
the Review Plan and of freeing Departmental resources for

the next phase of corporate activity: strategic planning with a greater emphasis on resources. Hence Reece's conclusion:

> 'The whole Development Plan Review process started up as being the biggest thing in the development world. It finished up realising its own deficiencies as a stop-gap before a different form of planning took over.'
> (M.Reece, interview, 28.7.83)

Coventry took the precaution of submitting an old-style Town Map and Written Statement, while reserving in the Review Plan document a new-style Policy Map. In other respects the format of the Plan was conventional, moving seamlessly from a review of topic areas to a brief sketch of urban structure options, and then into a series of area studies illustrating the application of new standards. The Plan did not summarise the whole process of re-planning Coventry; this duty fell to the booklet accompanying the Exhibition sent to London and elsewhere. Here, the most optimistic gloss was put on Coventry's technical performance. The local authority was promoted as a general source of intelligence in relation to development; the transition from manual/graphical to graphical/computer modes of working was announced as fact; and the concept of a comprehensive data bank as a basis for mathematical model-making of urban development was strongly supported (Gregory 1966b p.13). The booklet also described how Coventry had tested the PAG concept of a Local Plan by

carrying out comprehensive district planning studies which assessed the problems and potentials of an area and showed how the Development Plan related to these areas (Gregory 1966b p.13). According to the booklet,

> 'there remains the challenge to create a system which will facilitate future reviews of aspects of the plan by utilising accumulated knowledge within a situation of continuous planning activity'.
> (Gregory 1966b p.1)

Indeed, Coventry was expressly consulted by the MHLG's planning officials on 'the more technical aspects of certain plans and the planning process generally' (Minutes, 6.7.66, Plan. and Redev. Comm.), in the preparation of the new post-PAG Development Plan regulations.

While it might be true that 'the idea of the old Town Map with its rigidity was something we discarded in Coventry' (M.Flynn, interview, 5.7.83), nevertheless, after 1964 the process of acquiring and discarding elements of planning control was happening across the boundaries of the Review itself. The Review created a momentum which the delays and rigidities of the Development Plan procedures could not contain, which caused a displacement of innovation into other areas. The Review Plan was submitted to the Minister in May 1967, sent to Public Inquiry October-December 1968, accepted subject to modification in August 1971, and approved in December 1972. Reece, who left Coventry in 1968, comments:

'the time which was taken to formal approval stage
was itself rather self-defeating. And that was
really indicative of what we could see was the
beginning of the end of the old Development Plan
system'.
(M.Reece, interview, 28.7.83)

Although the Review established a platform on which to

mount a critique of the Department's historic fixation on

the redevelopment of the city centre, the Review Plan

itself presented obstacles to the further development of

that critique. Consequently, while a novel discourse on

methodology found its supporters in the Planning Division,

Coventry's relationship with methodology was largely

retrospective as far as the Review Plan was concerned.

C H A P T E R   S E V E N

<u>COVENTRY AND THE PLANNING PROFESSION IN THE 1960s</u>

7.1   INTRODUCTION

This chapter examines the additional practices which defined the discourse on methodology from outside the planning office. It considers Coventry's relationships with local and central government, other planning departments and agencies, the RTPI locally and nationally, and the planning schools. What did Coventry's planners borrow, transform and lend in the way of method? And to what alliances and projects did this give rise? Section 7.2 looks at the role of central government, and the spread of technique across local government in Britain and the United States. The local RTPI is evaluated in section 7.3, and the intervention of the Lanchester planning course in section 7.4.

7.2   COVENTRY AND GOVERNMENT

Coventry's planners' most intense professional

relationships were formed within and between official planning agencies. Before 1965 there was no local academic counterweight to official formulations, and such research networks or information exchanges as came into being were composed almost entirely of official planners. Method was thus a problem tackled largely by and for officialdom. What is of interest is how an emerging programme of technical work, centred upon traffic and population studies, re-organised planning officials at several levels. Section 7.2.1 considers the changing degree of support offered Coventry by MHLG, while section 7.2.2 relates Coventry's experiences to planning authorities elsewhere.

7.2.1   The MHLG and central promotion

It would be difficult to say that the Ministry of Housing and Local Government played a major or decisive part in the preparations for the Development Plan Review, or in the many discussions that surrounded it. This was also the experience of the Development Plan Officer.

> 'Maybe we were too optimistic at the early stages
> as to the advice, guidance and skills we'd get from
> them.'
> (M. Reece, interview, 28.7.83)

Nevertheless, MHLG officials promoted and utilised work performed in Coventry, and were important for stimulating technical work in the city as well as displaying it when

completed.

Throughout the middle and later 1950s, Ling and his colleagues were in contact with Ministry research officers over the validity and interpretation of planning data. For example, the MHLG Senior Research Officer, J.R.Jarmain, supplied Coventry with advice on how to calculate journey-to-work estimates from the 1951 Census, and how they might be updated (J.Jarmain to A.Ling, 5.57, AP/CF/1/143). Another example is the correspondence on the best method of projecting Coventry's population to 1981. Jarmain criticised trend methods that did not distinguish natural change from migration, but agreed that the range of error in projections did not make choice of method that important (J.Jarmain to A.Ling, 2.3.61, AP/CF/1/143).

From the early 1960s the MHLG position changed somewhat. There was a greater interest in making change calculable. In Coventry this interest was felt in the two key areas of traffic and population. In August 1961 J.R. James reminded local authorities of the availability of 1961 Census data on punched cards.

> 'By using the services offered in this circular, local planning authorities can obtain important information at small cost compared with that of a local survey.'
> (J.James, 4.8.61, AP/CF/1/2091)

Coventry sunsequently purchased a set, and made an

application itself by planning a computer-based demographic model of the city. The Ministry was notified of early results,

> 'and immediately became interested.... Mr Jarmain... felt that a meeting should be called immediately to put this matter on some sort of national footing'.
> (T.Hughes to A.Lees, 4.11.63, AP/CF/1/209i)

Although Osborn later reported difficulties in operationalising his 'population progression' model, he could still claim that 'some authorities... and the MHLG are very interested' (E.Osborne to A.Lees and T.Hughes, 11.2.64, AP/CF/1/143).

Similarly, the Planning Division was approached at an early stage in its Origin and Destination study. Frank Littler of the MHLG was

> 'most interested in the traffic and car parking problems of towns, particularly of their central areas, and I therefore wonder if you would let me know the results of your surveys as soon as they come out?'
> (F.Littler to A.Ling, 26.2.62, AP/CF/1/149d)

The two road reports were commended by the Ministry upon their publication in April 1963. J.R.Oxenham considered them to be

> 'an excellent basis for review of the development plan', and 'to break new ground in consideration of the city region and in the application of computers to highway design'.
> (J.Oxenham to A.Ling, 7.6.63, AP/CF/1/204cont)

Interest in traffic and population studies eventually fused in the Ministry's authorisation of the West Midlands

Regional Study, much to Coventry's satisfaction.

> 'This investigation is something we have been
> longing for, for some time and should be enthus-
> iastically supported.'
> (Minutes, 8.4.64, Plan. and Redev. Comm.)

By 1965, Coventry had become something of a mascot for

progressive thought within the Ministry. Before the Review

Plan had been finalised, Oxenham was asking the Department

to stage an exhibition in London, an exhibition that would

go on tour in the Ministry's regional centres (Minutes,

2.6.65, Plan. and Redev. Comm.). The Committee expressed

'general agreement with the desire to stage... a first

class exhibition', and George Thomas (Principal Planning

Officer) stated:

> 'I anticipate that this exhibition will have a
> considerable impact in the country, particularly in
> the areas where members of the PAG report are now
> employed, and find that Coventry has produced a
> document so much in line with this report.'
> (Minutes, 8.10.65, Plan. and Redev. Comm.)

Furthermore, the Department was only too willing to lend

its experience of technique, and planning procedure

generally, to a short-staffed PAG group compiling new

development plan regulations (Minutes, 6.7.66, Plan. and

Redev. Comm.).

In the space of a few years, then, central government's

approach to Coventry altered from disinterested advice on

statistical matters, to extensive support for new planning

practices. Ministry support confirmed planning method as a branch of knowledge, while investing it within the broader planning culture.

7.2.2 Planning offices and the migration of technique

It was suggested in Chapter Two that during the 1950s the new administrative apparatuses of town and country planning were 'filled in' by a new professional planning culture. By the late 1960s and early 1970s many of the functions of the TPI in that planning culture had been taken over by the planning schools: functions of skill transmission, research into methods, case studies, and intellectual leadership. However, for a period in the early and middle 1960s there was a distinct phase of inter-authority cooperation in which the planning office led the planning school, and innovation occurred directly in the workplace without the need for transmission from a body of intellectuals. Coventry provides a good example of the new relationships being formed between planning authorities and the migrations of technique these relationships made possible.

It was the centrality of the traffic problem that first led Coventry to expand its horizons and make contacts with other planning authorities. The Planning and Redevelopment

Committee had received reports from its officers during 1957 on the seriousness of traffic overloading in the city centre and the increasing journey-to-work (Minutes, 29.8.57, 11.9.57 and 13.9.57, Plan. and Redev. Comm.). Ling announced his intention to apply for an English Speaking Union grant to tour the United States for eight months and study the traffic situation with a view to making recommendations for Coventry (Minutes, 8.3.59, Plan. and Redev. Comm.). This prompted the Town Clerk to circulate notes on the American traffic problem he had made during a trip to the US in 1955 (Minutes, 26.5.59, Plan. and Redev. Comm.).

Shortly after the 1960 O and D survey, the Ministry of Transport sought the cooperation of the City Engineer and City Architect and Planning Officer in a study of the long-term problems of motor traffic in urban areas. Simultaneously, the Department of Applied Economics at Cambridge University asked for the Department's support in a study of the economics of car-parking. Both offers were gratefully accepted (Minutes, 6.12.61, Plan. and Redev. Comm.). Meanwhile, the Proceedings of an international symposium on 'Urban Survival and Traffic', held at Durham University in April and attended by Audrey Lees and Roy Cresswell, were circulating within the Department. They included papers by Professor D.S.Berry on the survey and

analysis procedures laid down by the National Committee on Urban Transportation in 1955, and by Alan Vorhees on the calculation of growth factors in urban development. Without these studies being immediately comprehensible, it was clear new resources for analysis were at hand.

In July 1962, Ling learnt that Gordon Logie of the London County Council Architecture Department was to hold a small informal conference

> 'to enable people known to be interested in trip
> generation to get together and exchange ideas and
> information'.
> (CAPO to CE. 5.7.62, AP/CF/1/149d)

Peter Wood and John Lomas were immediately despatched to the meeting. The Trip Generation conference held at County Hall on 18 July 1962 was a fundamental step towards local authority cooperation in the field of transport planning. With delegates from London, Newcastle, Surrey, Coventry, MHLG and the Road Research Laboratory, the conference was designed to familiarise everyone with the studies currently under way, and to encourage standards of questionnaire design and methods of analysis (Anon, 6.62, AP/CF/1/149d). M.A.Taylor (RRL) revealed that four further trip generation studies were planned, at Gloucester, Northampton, Reading and Stevenage. There was a certain degree of convergence around the need to standardise data collection and to make survey material comparable between studies. Logie promised to pass on any local information received by him, and a

further meeting was arranged for the end of the year. It was through Logie's mailing list, for example, that Wood received papers on the Origin and Destination survey undertaken by Newcastle City Planning Department (G.Logie to P.Wood, 2.10.62, AP/CF/1/149d). Another recipient of the LCC summary was Michael Eliot Hurst, then working on a PhD at Durham University . He offered to exchange his data on traffic circulation with planners at Coventry, and in addition planned to circulate an information bulletin amongst all planning authorities engaged in traffic research.

> 'It may eventually be feasible to coordinate all
> such surveys carried out in the British Isles, and
> my thesis may go some way towards this'.
> (M.Eliot Hurst to P.Wood, 18.1.63, AP/CF/1/149d)

In May, June and July of 1963, Ling was writing on behalf of his officers to the most advanced planning agencies in North America, requesting reports and information on mass transit technology and the methodology of land-use/ transportation studies. For example, Ling wrote to the Information Officer of the Penn-Jersey Transportation Study:

> 'We have read with tremendous interest outline
> reports of your 1960 Survey of Mass Transportation
> and would be very grateful if you could possibly
> send copies of your more detailed reports. We would
> particularly appreciate specimens of your
> questionnaires and any notes on the computer
> programme which could be useful to us.'
> (A.Ling to A.Sinks, 9.5.63, AP/CF/1/172)

6 out of 20 internal Penn-Jersey reports were subsequently purchased (A.Ling to A.Sinks, 12.6.63, AP/CF/1/172). Other bodies were contacted, including the Chicago Area Transportation Study (A.Ling to J.Douglas Carroll, 18.6.63, AP/CF/1/172), the Toronto Transit Commission (A.Ling to H.E.Pettett, 4.7.63, AP/CF/1/172), the Atlanta Region Metropolitan Planning Commission (A.Ling to A.R.M.P.C., 16.7.63, AP/CF/1/172), and the National Capitol Transportation Planning Agency (A.Ling to N.C.T.P.A., 12.6.63, AP/CF/1/172). Ling also contacted Stockholm on that city's public transport passenger surveys (A.Ling, 12.6.63, AP/CF/1/172), and in July 1963 Audrey Lees, Bassil Rossiter (APPO, Development Control) and Roy Cresswell visited the city on a study tour (Minutes, 1.5.63, Plan. and Redev. Comm.).

The next focus for inter-authority transactions appeared around poulation projection. Following discussions held in Birmingham between A.B.Neale, Valerie Jackson, Peter Wood and IBM representatives, Arthur Ling informed the GRO of the utility of Scale A 1961 Census data to the projection of population.

> 'As this information would be of continuing value
> if population projections were calculated using age
> specific fertility and death rates, and assumed
> migration rates, I have approached IBM(UK) Ltd.,
> and found that a computer programme for a 20 years
> population projection for these areas could be
> produced for an extremely reasonable fee.'
> (A.Ling to GRO, 16.7.63, AP/CF/1/143)

He added:

> 'I wish to circularise all Local Authorities who
> are purchasing Census Data in this form, as they
> may welcome the use of this programme.'
> (A.Ling to GRO, 16.7.63, AP/CF/1/143)

At the end of July 1963, a general request for cooperation
in the development and financing of a computer-based
population projection was sent to a large number (total
unknown) of county boroughs, counties and universities
(A.Ling, 31.7.63, AP/CF/1/143). 35 authorities replied, 20
of them moderately or enthusiastically supportive. Negative
responses were due to current possession of a satisfactory
method of projection (eg. the West Riding of Yorkshire's
cohort survival model - A.Bates (CPO) to A.Ling, 7.8.63,
AP/CF/1/143); existing cooperative arrangements (eg.
Cheshire linking with Liverpool and Manchester Universities
- K.Male to A.Ling, 7.8.63, AP/CF/1/143); or alleged
unsuitability of the area for projection (eg. Glamorgan's
small size - E.John Powell to A.Ling, 14.8.63, AP/CF/1/
143).

Positive responses came from a wide variety of planning
authorities, including London, Liverpool, Manchester,
Middlesex, East Sussex, Wolverhampton, Birmingham,
Lancashire, Kent, Southampton and Leicester. Whereas some
merely wished to be kept in touch or to attend a joint
meeting, others saw in the projection programme a specific

example of the potential for computers in planning. Leslie

Jay (CPO, East Sussex) hoped that

> 'the particular study you have in mind, if it
> succeeds, will lead to programme sharing over other
> fields of likely interest'.
> (L.Jay to A.Ling, 12.8.63, AP/CF/1/143)

Hertfordshire had recently had a computer installed in its

Treasurer's Department, and its CPO was therefore

> 'particularly interested in the possible uses to
> which computers may be put in planning work. This
> particular use which you mention should be
> thoroughly explored'.
> (E.Doubleday to A.Ling, 20.8.63, AP/CF/1/143)

The Architecture and Planning Department was still

promising results and a meeting of interested authorities

at the end of November 1963 (eg. A.Ling to H.Bennett (LCC),

25.11.63, AP/CF/1/143), but technical difficulties

prevented the projection from being programmed as

originally conceived. Walter Bor (Liverpool) and Wilfred

Burns (Newcastle) both sought progress reports in December

(W.Bor to A.Ling, 11.12.63, AP/CF/1/143; W.Burns to A.Ling,

27.12.63, AP/CF/1/143), but Coventry admitted defeat early

in the new year. The ice having been broken, however,

contacts were maintained around common interests. For

example, Bor told Ling that his own Department was studying

'the possible computer applications of population

projections', and suggested Liverpool and Coventry

'exchange information when some definite progress has been

made' (W.Bor to A.Ling, 21.4.64, AP/CF/1/143).

Cooperation between planning offices also took the form of the circulation of staff, either as visitors or to take up new appointments. Coventry Council was strongly supportive of staff development, and expected its

> 'high calibre staff should be given the widest opportunity to obtain the knowledge and the knowhow from whatever sources were available. We visited other authorities on a regular basis, we attended courses regularly'.
> (B.Redknap, interview, 26.8.83)

Those in the redevelopment sections were particularly closely involved with the other heavily damaged cities: Reece and Cresswell recall meeting planners from the LCC, Bristol, Plymouth, Swansea, Hull and Cardiff, and from the New Towns as well (M.Reece, 28.8.83 and R.Cresswell, 8.8.83, interviews). In the mid-1960s the circulation of ideas was reinforced by the circulation of staff, as many of the leadership posts in the Planning Division and in the Department as a whole were vacated. In large part this was due to the opening of the new 'planning only' departments in cities like Liverpool, Newcastle and Leicester. Coventry played an important part in supplying these new departments with experienced and progressive personnel.

> 'Everyone who left Coventry has done quite well for themselves, because there was impetus, and this kind of big wheel which was going round.'
> (P.Aubrey, interview, 23.8.83)

Reece takes the circulation of staff even further back, to the LCC, with Coventry 'a sort of Charing Cross of... planning career development' (M.Reece, interview, 28.7.83).

Coventry's relationship with Liverpool was particularly marked.

> 'There was a bandwagon going in Coventry and
> another bandwagon was beginning to roll in
> Liverpool... it was too good an opportunity to
> miss... lots of us put our hats in the ring to go
> to Liverpool, and quite a few of us got there:
> Audrey Lees, Peter Wood, *myself, Tony Moscardini*...
> David Lewis... and I think one or two others...
> certainly tried, if they didn't get there.'
> (M.Flynn, interview, 5.7.83.)

Peter Wood speaks of 'a transfer of the avant-guarde approach', and how his spell at Liverpool merged together the redevelopment and overspill experience of Birmingham with

> 'the technique and, I suppose, the extended
> thinking that had taken place in Coventry'.
> (P.Wood, interview, 4.5.83)

Such transfers of approach were also criticised precisely for their homogenising tendency across local government.

> 'One was a bit concerned that, for example, in the
> Leicesters and Liverpools, all that was being done
> was an application of things studied in Coventry,
> where, as particularly in Liverpool, other problems
> were there.'
> (M.Reece, interview, 28.7.83)

Coventry's experience could not always be quoted in the new planning authority (Wilfred Burn's experience in Surrey – M.Reece, interview, 28.7.83), but it did provide some of the means for re-thinking planning practice across a much broader range of authorities.

Another dimension to the migration of technique was the creation and consumption of specialist circulating

documentations. In the first instance, the Department possessed a useful library with its own librarian. It offered books and slides for loan, and took a wide selection of periodicals including the Town Planning Review, Planning Outlook, Journal of Planning and Property Law, as well as much related architectural material (Research Group, 15.5.57 and 10.10.57, AP/CF/1/202). According to Mike Flynn, 'there was ready access to good materials... the service was there and people did use it' (M.Flynn, interview, 5.7.83). Perhaps of more interest, however, is how the office became a producer of documentation.

Coventry was unusual for a local planning authority in the early 1960s in making so much of its report of survey available outside the Planning Division. The first survey reports in the late 1950s were duplicated sheets destined for the Planning and Redevelopment Committee, and other relevant Council Committees. However, the technical nature of later work, and a certain amount of typical Coventry pride, led the Department to publish its main survey documents. Between 1963 and 1965, all the major aspects of the Review appeared in attractive covers: population, traffic, shopping, housing, industry, etc.

In June 1963 the Planning and Redevelopment Committee

authorised the distribution of the two traffic survey reports (Anon, 20.6.63, AP/CF/1/204cont). The first copy of the first volume was sold in late May 1963 to N.H.Stockley (City Engineer, Liverpool) (N.Stockley to A.Ling, 29.5.63, AP/CF/1/204cont). Of the first volume's initial print run of 600, no less than 348 were distributed in a year free of charge to planning organisations (Anon, 7.64, AP/CF/1/204cont). The second volume, on highway network design, was distributed free of charge to 361 bodies during its first year. Only 50 copies of each were actually purchased. Practically every borough, metropolitan county and county borough in Britain was sent on request Roads System Survey, Roads System Design, Coventry City Region, Work in Coventry and Shopping in Coventry. At 31 January 1967, some 3,411 copies of the 7 basic survey reports had been distributed, and they continued to sell for the rest of the decade (Anon, 2.67, AP/CF/1/204cont).

The enlargement of documentation was quite deliberate, and closely related to the research's status as 'method'.

> 'I think it was really saying: we're doing work in a way here we ought to fully document each step we go through, document in a way other people can inspect - check - our methodology. I think it was good practice.'
> (P.Wood, interview, 4.5.83)

The circulation of method both corrected errors, and reinforced Coventry's leadership of progressive planning. According to Reece, planners in the authority were

> 'delighted to know there was a certain income from
> the sale of documents, and one's own ego was
> sufficiently warmed by the fact that the work one
> was doing was regarded as leading work in the
> professional field'.
> (M.Reece, interview, 28.7.83)

The final dimension to the migration and duplication of technique was Coventry's inveterate conference-going. Coventry's planners, especially the senior staff, were frequent conference attenders. In 1962, Arthur Ling thanked J.A.Campbell of the London IBM Education Centre for the Traffic Seminar members of the Department had attended.

> 'As you may be aware we have advanced some way in
> traffic analysis, and the lectures and discussions
> proved most useful'.
> (A.Ling to J.Campbell, 2.10.62, AP/CF/1/149d)

He requested six copies of the lecture notes and manuals. IBM returned the compliment a year later when they asked permission to use road survey material from Coventry for their stand at the Traffic Engineering and Control Conference (D.Thompson (Birmingham Branch Manager, IBM), 26.6.63, AP/CF/1/149d). The trip generation and population progression conferences have been mentioned above; also in 1963, Tom Hughes and D.Walton attended the Conference of Urban Research Workers at University College London, and Ling, Lees, Cresswell and Rossiter visited the People and Cities conference hosted by the TPI and the British Road Federation. Bartlett School of Architecture held an urban planning research symposium in January 1965 to which F.A.P.Hicks (APPO, Coventry) was invited. At a conference

on urban structure in December 1965, Malcolm Reece heard John Friend deliver a paper on 'Planning models' based on the Coventry IOR study. A party from the Department, totalling no less than 38, took a guided tour of the Paris region in April 1966, and they inspected - among much else - new zones of development and original transportation methods.

> 'These lectures and discussions will be of considerable benefit to the officers in formulating the regional plans defining the future growth of Coventry in its sub-region.'
> (T.Gregory, minutes, 29.4.66, Plan. and Redev. Comm.)

A Departmental delegation also flew to Japan in May 1966 for the 28th Congress of the International Federation for Housing and Town Planning, and was particularly taken by the sessions on transportation systems and the urban pattern (T.Gregory, Minutes, 2.6.66, Plan. and Redev. Comm.).

In April 1966, Coventry City Council became a corporate member of the Regional Studies Association (Minutes, 6.9.67, Plan. and Redev. Comm.). At no previous time had exchange between authorities found such an immediate and tangible object as the discourse on methodology. The new found substantiality of plan-making encouraged the interpolation of method into less progressive planning teams. Coventy's interest in traffic, population and city regional analysis became something alive in the whole

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planning culture. It is a measure of Coventry's leadership in these fields that it learnt most from American planning authorities and least from other British planners; while the British planners looked to Coventry in preference to their own professional traditions.

7.3   COVENTRY AND THE INSTITUTE

The early 1960s represented an important phase in the changing relationship of the TPI and the Department. Without centres of urban research or a fully independent apparatus of planning education, the professional organisation of planners was the central arena for technical debate. Both nationally and regionally, planners organised through the Institute, and the Institute connected planning offices in ways that were not officially possible. This helps explain how it was possible for a coalition of planning skills to emerge before the planning teams to which they could rightfully belong. The emergence of such a coalition around method can be seen clearly in the case of the West Midland Branch of the TPI.

The Branch had been originally formed in 1943 by nine members of the Institute. The Committee included Herbert Manzoni and Donald Gibson, but Ernest Doubleday was

'primarily responsible not only for its establishment but also for its continued growth and success' (L.Stephens, Minutes, 10.10.47, W.M.T.P.I.). A Junior Section was formed in 1950, at the same time as the Midlands Branch split into North and West sections, to counter claims that not enough young planners were included in the Branch's activities, and also as a counter-attraction to a breakaway Town Planning Officers section for the Midlands (Minutes, 29.4.49, W.M.T.P.I.).

The Junior Section soon became the focus of education and debate for the Branch as a whole, to the extent that a note had to be inserted in its constitution stating:

> 'the facilities afforded by the Junior Section are
> intended to be supplementary and not alternative to
> the facilities afforded by the West Midlands
> Branch'.
> (Minutes, 5.10.51, W.M.T.P.I.)

An officer from Coventry, M.J.Shelley, was requested to circulate information on the Junior Section to all students in the region and to Associate Members under 35. By the spring of 1953, the Junior Section had organised 16 meetings, with an average attendance of 14 (Minutes, 18.4.53, W.M.T.P.I.). Section meetings took the form of lectures from invited speakers, and site visits; meetings revolved around Coventry, until A.H.Kenyon (Chairman, Junior Section) 'expressed the hope that meetings in areas other than Warwickshire might be arranged in the future'

(Minutes, 10.4.54, W.M.T.P.I.).

The Junior Section maintained an annual programme of talks into the 1960s. It took a consistent interest in progressive planning practice, with meetings on traffic problems in 1956 and 1961, regional planning in 1957 and 1958, and transport and power in 1960. Middle and lower ranking officers from Coventry were strongly represented. Malcolm Reece was Chairman of the Junior Section 1959-60, and Roy Cresswell followed him for the session 1961-2. Creswell was also a member of the Section's Executive for some time and its Treasurer.

> 'I think the idea basically was to attract speakers who'd be talking about something; newer ideas... activities which were slightly outside the mainstream.'
> (R.Cresswell, interview, 8.7.83)

Where the Junior Section and the Branch most combined their energies was in the promotion of professional planning skills. The Branch had taken a close interest in planning education since the School of Planning and Architecture was opened at Birmingham College of Art in 1956.

> 'A close liaison should be maintained between the Branch and the School and... the help of the Branch would be available if Mr. Ginsberg should need it in connection with the work of the School.'
> (Minutes, 14.12.56, W.M.T.P.I.)

An Advisory Committee was set up to formalise this arrangement, on which the Branch Chairman served. In 1960 the Junior Section prepared a report on possible changes to

the syllabus of the Institute's external examinations
(Minutes, 14.5.60, W.M.T.P.I.), and this may have been the
stimulus to a Branch conference of Chairmen and Secretaries
(4 out of 5 from Coventry, including Audrey Lees and
Malcolm Reece), which submitted two resolutions to the
Branch Executive. The first expressed concern at

> 'the present shortage of qualified and experienced
> planning staff (especially in county boroughs), and
> its effect on both the amount and the quality of
> planning staff'.
> (Minutes, 6.7.60, W.M.T.P.I.)

The second recommended to the Institute a programme of
research into the composition, functions and distribution
of its membership, so as to obtain 'a general view of the
adequacy of the profession to deal with the work lying
ahead' (Minutes, 6.7.60, W.M.T.P.I.). These resolutions
displayed a certain scepticism towards planners'
traditional craft skills, and also confirmed the planning
authority as the arbiter of skill in planning practice.

Documentation for the first half of the 1960s is lacking,
but the Section apparently continued to flourish and to
attract the most progressive talent. In July 1966 the
Junior Section hosted a weekend meeting in Wolverhampton on
'Regional planning: goals and techniques'. There were
papers read by H.W.E.Davies (Teeside Survey and Plan) on
comprehensive and flexible planning for urban regions;
Graham Lomas (University of Birmingham) on techniques of

regional analysis; Dr. A.Ridley (GLC) on models of transportation and land use; and Donald Harris (University of Leeds) on the education of the regional planner. According to officers from Coventry who were present,

'several of the lectures present really new information and all provided a realistic basis for future regional thinking'.
(T.Gregory, Report P.17/66, Minutes. Plan. and Redev. Comm.)

While some in the Department (notably Ling) achieved influence within the Institute at national level, it was still the case that most operated at a local level, in educational and skill-sharing activities. It was this level of professional organisation which most actively pursued a new constellation of skills for several years before the planning schools and Lanchester in particular assumed responsibility for accumulating, codifying and transmitting planning-relevant knowledge.

7.4   COVENTRY AND THE PLANNING SCHOOLS

Beside the planning office, the planning school. The modalities of this relationship were sketched out in Chapter Two, where it was suggested that craftsmanship was disrupted not only by machines and machine-like thinking, but also by the erosion of craft secrets in a separate,

non-professional education. The changing fortunes of the Coventry planning office at the hands of the local planning schools demonstrates the complete reversal of power that was taking place.

The Planning Division's first experience of planning education came in 1956 with the establishment of a School of Planning at Birmingham College of Art. Founded by Leslie Ginsberg, and including John Holliday, Tony Goss, Norman Dennis and later Tony Travis among its staff, the school offered a part-time (evening) Diploma in Town Planning. From the beginning Coventry supported the course, indirectly via TPI supervision and advice, and directly by the training of junior staff at the school. In 1960, some 8 staff of the Department were already, or about to, study at Birmingham. They were aged between 18 and 34, usually with a first degree or initial professional qualification, and seeking the external route to TPI membership (Anon, n.d., AP/CF/1/212). Furthermore, several senior staff from the Department lectured at the school: Malcolm Reece on landscaping and traffic engineering, Roy Cresswell on traffic, and Keith Platt on transport policy and planning (M.Reece, 28.7.83, R.Cresswell, 8.7.83 and K.Platt,20.9.83, interviews).

Both students and staff remember the course as demanding.

Mike Flynn, who took the last two terms of the 1959-60 academic year before starting the Diploma course proper in October 1960, had to attend lectures after working hours twice a week. He and his fellow students were 'struggling along on Ginsberg's night school without any help whatsoever' (M.Flynn, interview, 5.7.83). Malcolm Reece recalls

> 'it was pretty heavy going at Birmingham. There were two hundred students on that course, part-time. And with the sudden departure of Ginsberg, who was a very good architect-planner but a hopeless administrator, there were severe problems'.
> (M.Reece, interview, 28.7.83)

The school had a definitely subordinate role in this relationship of planning authority and education. It met the training needs of the office, relayed everyday planning skills and duplicated the office division of labour exactly between skilled individuals and apprentices. The office, on the other hand, was dependent on the school only in the sense that there was 'an actual need to bid for the supply of planners' (M.Reece, interview, 28.7.83).

It was out of this need to increase the supply of trained planners that Coventry attempted to set up its own local planning course (K.Carter, interview, 1.1.84). In the early 1960s, Colin Buchanan was promoting the idea of an express route to TPI membership for non-planning professionals. Arthur Ling sought to implement this

proposal in Coventry by recruiting ten trainees already qualified in another professional skill and placing them on a new planning course. Lanchester College of Technology, and its Civil Engineering Department became interested and offered study and lecturing facilities. The Head of the Department proposed a non-planning member of staff lead a part-time course. Ling contacted the West Midlands TPI and prominent educationalists in the region, and they argued for a separate planning department in the College, mindful of the lack of resources and staff at Birmingham.

This caution was justified, in view of the ramshackle nature of the Lanchester course.

> 'The students would say... they were largely self-taught. They organised a sort of self-teaching programme for themselves.'
> (K.Carter, interview, 1.1.84)

The students agree: the Lanchester course was

> 'very poorly funded.... They hadn't lined up anyone of any merit to actually lecture to us'.
> (K.Platt, interview, 20.8.83)

Therefore the students learned off each other as much as they did from lectures, and in fact produced sections of the course themselves.

> 'In some subjects we split it up between us and did research ourselves and wrote our own notes.'
> (P.Aubrey, interview, 23.7.83)

The advantage the Lanchester students had over the Birmingham students was that they had time off to attend

lectures and to study. 8 of 'the ten' attempted the Final Examinations of the TPI in 1962 and 7 passed: Keith Platt received the TPI award for the highest exam marks (Minutes, 5.9.62, Plan. and Redev. Comm.).

Meanwhile, Holliday was assuming an increasingly important liaison role between the City Council, the College and the regional and national TPI. In 1964, Lanchester agreed to a separate planning department running its own undergraduate programme, and Holliday was appointed its first head. He set about recruiting lecturers, and by February 1965 he and Ken Carter were the full-time core of the Department. However, they were not satisfied with the curriculum for the undergraduate course that the Department of Civil Engineering had submitted to the Department of Education and Science the year before, and had seen approved. So while they were teaching the first intake of a dozen students in October 1965, they decided to re-design the teaching programme. The object was to align the course more with the social sciences, with a foundation in quantitative methods, a sandwich structure, and a positive,reforming approach to current planning practice. The course was to last four years. They were assisted by staff of Oxford Polytechnic who were currently going through the same process of setting up a new course. The old degree structure was by-passed by submitting the new curriculum to

the recently created Council for National Academic Awards. CNAA had not been asked to validate a planning degree before, as the predominant form of planning education was a postgraduate conversion course in the universities. Therefore it set up a Town Planning Board, drawn chiefly from the TPI Education Committee and other TPI nominees, including the Committee Chairman Roy Kantorowich. The degree was duly passed. This was a crucial step in the autonomisation of planning education. Some members of the TPI locally still proclaimed a proprietorial interest in the content and management of the course, but Holliday and Carter succeeded in convincing TPI and CNAA visiting boards that they were engaged in a properly educational function, which should be left in the hands of the professional educators.

Via staff, students and consultancy work, the Department of Urban and Regional Planning developed complex links with the Coventry Planning Department.

In terms of staff, the planning lecturers were closest to planners of their own age and background working in the city.

> 'Our relationships were more with the shopfloor chaps who were doing the day-to-day work, on the planning policy front.... The informal system which we had in those days worked through the bottom of the office. Lecturers who were in their mid-twenties, thirties, that sort of thing, worked with

> 'as soon as they got something which was more or
> less working, we were then teaching it to our
> students; this was before the book was published'.
> (K.Carter, interview, 1.1.84)

From 1966 the Department began making bolder approaches to
the whole of the profession, taking over the 'Practice
Notes' in the TPI Journal, and holding a series of advanced
seminars and day schools for planning officers and
academics. The first seminar, called 'Town planning and the
computer', was held at the College on 24-5 March 1966,
when Ted Osborne gave a paper on 'Practical applications
of computer techniques in Coventry'. Planning educators
were similarly attracted to the new course.

> 'Probably all the planning schools that were set up
> in the late '60s and early '70s made tracks to our
> door at one stage or another, to find out what we
> were doing.'
> (K.Carter, interview, 1.1.84)

The intervention of the planning school in the education of
planners made it less possible than ever for planning
techniques to remain a craft secret within a personal
communication of master to apprentice. Instead, the office
was progressively emptied of its educational content, a
specialist staff of full-time educators was formed, craft
knowledge was codified, and certain rights of review and
reform remitted to the school. This recognisably modern
scenario dates from the middle 1960s.

C H A P T E R   E I G H T

CONCLUSIONS TO THE CASE STUDY

8.1   INTRODUCTION

It was never obvious, even to the exceptional team assembled in Coventry between 1961 and 1964, that one day all their professional thoughts and activities would have to submit to a 'process'. Today, we are still too close, too indebted to the 'planning process' to obtain an independent evaluation of it. It would be tempting to ascribe a rational origin to rational methods in Coventry's planning office. Yet in Coventry least of all did method arrive 'reasonably' and in a 'timely' manner. On the contrary, it took an opportunistic and hostile stance towards the profession's traditional body of knowledge and ways of working. It falsified craft knowledge and practice, and to the extent that the discourse on methodology was assembled from the bottom-up, then we might speak of an 'ascending falsification' of established values. These conclusions suggest that craft modes of working were discredited and made false, while conversely, methodology was - in certain areas - being affirmed and 'made true'. The affirmation of method required, and announced as fact,

a new combination of planners and the means of planning. It was in the innovative combinations assembled for the Development Plan Review that planning methods recived their 'truthful' character, and became the representative of science as well as the planning profession.

8.2 ORIGINS OF METHODOLOGY IN COVENTRY

In considering the history of Coventry's planning, the fundamental experience to which we return again and again is the war, and in particular the long night of aerial bombardment 14-15 November 1940. A large part of the wartime and immediately post-war administration of planning can be sen as compensation for 'Coventration'. After 1945, the alliance of Labour leaders and architect-planners not only repeated the pre-war vision of socialist planning, but also took into acount the need to functionally reconstruct the city centre and its devastated industry and infrastructure. The subsequent investment of resources in the central area redevelopment, and above all in the precinct and inner ring road, contained lasting implications for the type of planning and the type of planner that was required.

Throughout the 1950s, forward planning was on the defensive

against site-specific development, the placing and detailing of a number of linked building projects. This was especially the case after the Development Plan had been submitted to the Minister in 1952 and staff were switched to implementation. As a result there was no programme of work to conserve the skills and experience won in the Development Plan survey and analysis. For two years 1953-55, the Plan even disappeared as an administrative section within the Planning Division. When it re-appeared in the later 1950s, further survey work was hampered by the chronic shortage of skilled staff and the Review was effectively delayed for a further three years. In retrospect, this period of implementation gives the burst of plan-making activity between 1947 and 1951 a somewhat isolated character. Neither the Plan nor the planning team behind it constituted a powerful enough force to maintain momentum into the later 1950s and the early 1960s.

1960 represented a decisive turning point in the review of the Development Plan. A period of debilitating staff shortage and turnover was ended with the arrival of new layers of middle-ranking and junior staff below Arthur Ling. As a result of their different professional backgrounds and experiences, the chapter-by-chapter review of the Plan was completely recast. For the first time it became possible to name the destabilising factor in the

region: 'growth'. The identification of growth, the
measurement of growth, the separation of valid growth from
invalid growth, were all tasks introduced into the review.
The increases in population, industry and intensity of land
use converged on a single growth factor: traffic. It was in
the name of the 'traffic problem' that planners scrutinised
the region and re-thought old plans. Conceptually, the city
was re-defined as a functional entity with a boundary given
by the furthest commuter. Therefore, problems experienced
in commuting signified 'a general problem of structure'
(DPR/6 10.57, p.5).

Concepts of 'growth' and the 'city region' were used
aggressively against both the professional and political
guardians of the central area redevelopment. The
architect-planners were unprepared for development
pressures that did not manifest themselves in the demand
for new built forms. The staunchest supporters of Labour's
replanning had to adjust to a situation in which the 'civic
centre' concept of Ford and Gibson was now swamped by
the traffic problem. But the reaction against the car never
took the form of a retraction of the original Gibson plan,
however. High rates of car ownership in the city had
created a car lobby of producers and consumers. 'That's how
Coventry was. It was car-borne, a car city. And so, almost,
our plan had to reflect that' (K.Plat, interview, 20.8.83).

The City Council was favourably disposed towards plans and studies that incorporated the car and explored the implications of increased vehicle use. At the same time, Hodgkinson and others wished to preserve the city centre in its reconstructed form.

As Chapter Six has suggested, the direction chosen by both Labour's leaders and the Review planners was to plan the reconstruction of the outer areas, in terms of a new motorway link, the containment and diversion of new industry, and the channelling of residential growth to the city margins. In this way, Gibson's plan was redescribed for the 1960s as a central area component of a wider transport system. Defended from the worst of the region's traffic loads, its modest pedestrian precinct was radicalised into a triple segregation scheme for pedestrians, service vehicles and private traffic. This was the basis for a new alliance between the Labour council and the city regional planners. Transport planning on a regional scale reconciled the planners' resistance to full motorisation with the council's historic attachment to the reconstructed centre.

It was at this point that technical questions, matters of calculation and procedure, first arose within the Division. For many years, planners had been shielded from traffic

calculations by a division of labour that assigned these duties to the City Engineer. Furthermore, the City Engineer's Department held operational responsibility for designing and building new roads or road improvements. The first Origin and Destination survey in 1960 was in fact undertaken by engineers as part of their advance preparations for the first phases of the inner ring road. After 1961 this separation of land use and traffic planning became somewhat harder to sustain, given the acknowledged dependence of trip generation upon the pattern and planning of land uses. The scale and scope of the outer area traffic survey and analysis exceeded the historical experience of the City Engineer, and in fact the engineers were no better qualified than the planners to plan such a large calculation. If anything, the Development Plan Review caused the Planning Division to actively seek leadership over the planning activities of the City Engineer. Planners involved in the Joint Roads Team were the first to criticise 'roads led planning', and to demand a transportation policy that checked untrammelled use of the private car and open-ended highway construction programmes.

Between 1961 and 1965 the Planning Division went through two complete cycles of survey, analysis and plan. The 1961 Origin and Destination survey substantially increased the volume of work passing through the Department. It was the

largest data capture ever undertaken by the City; it employed the largest computers in Europe; it made the first application of Fratar's growth factor formula to British data; and it used hundreds of staff in a variety of design, clerical, computing and supervisory tasks. As a piece of project management it was surpassed only by the 1964 study, representing the first modal choice study in the country, and which led directly to Wilson's pioneering linear regression forecasting model.

The impact of these studies on the Department was considerable. In general terms, they established the importance of antecedent calculation. Judgement required support before it could function as true. The critique of unsupported judgement was carried into management itself. The diagram (Figure 8.1) with which Peter Wood (1963 p.271) illustrated the Coventry traffic study showed how a project could be coded as a sequence of instructions. The reduction of discretion to a stream of simple instructions was taken so far that processing of data by machines played a significant part for the first time. The traffic study was the Planning Division's first experience of machine processing, and encouraged it to simplify and code other routine activities.

One immediate problem consisted of how to quantify planning

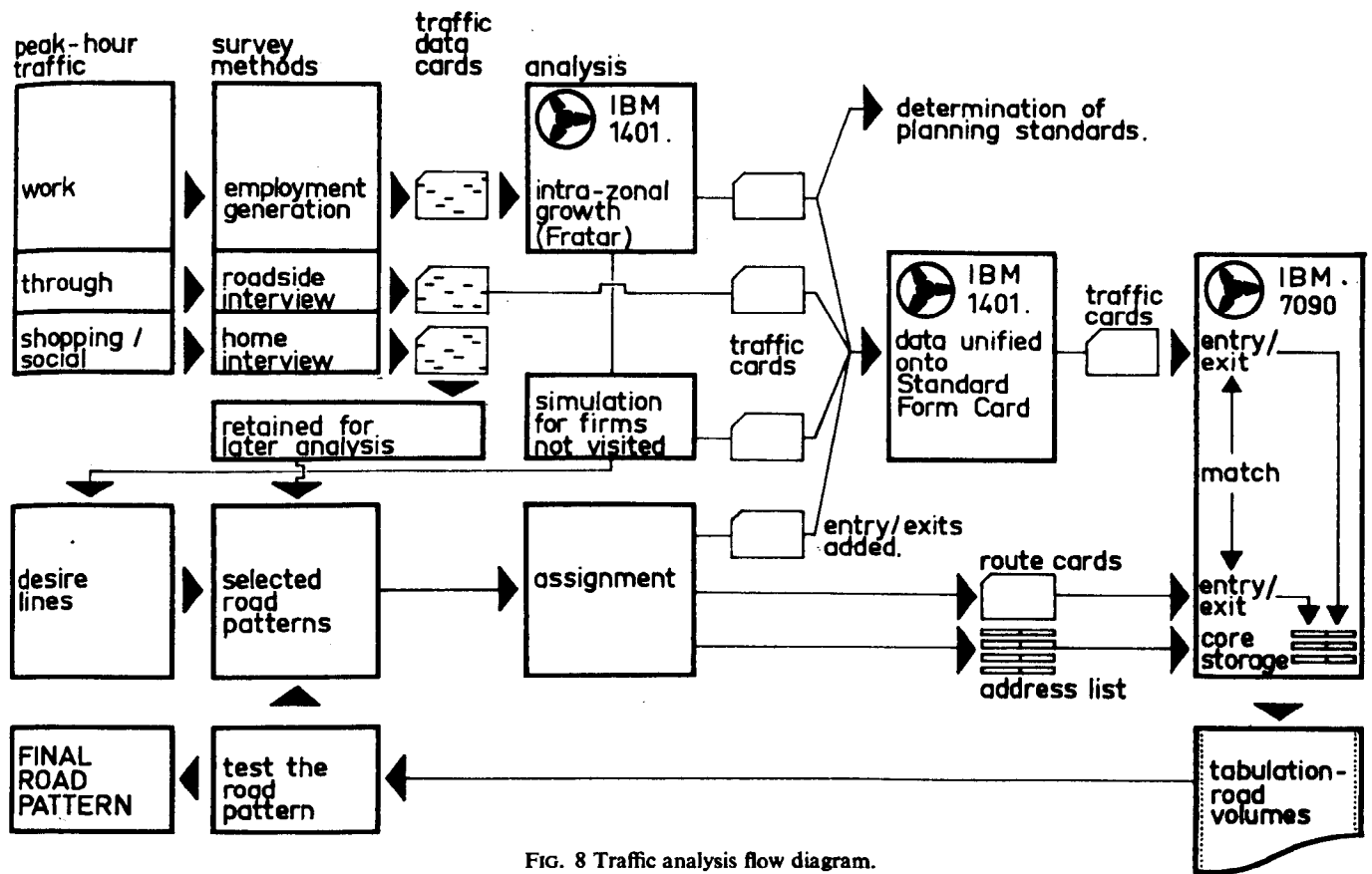FIGURE 8.1   Wood's traffic analysis chart, 1963

FIG. 8 Traffic analysis flow diagram.

Source: Wood (1963) Fig. 8

inputs to traffic calculations. The most important planning input was the level and distribution of population over the life of the plan. Demographic projection was made possible both by the transfer of experience from the traffic study, and by the support of central government in releasing Census data in machine-readable form. The GRO's choice to machine code and process the 1961 Census clearly stemmed from the huge labour costs to be expected from manual processing; yet it also created the conditions for local and autonomous processing of data. Decentralisation of the means of projection introduced considerable variety into local authority demographic projection, and Coventry played a small part in trying to cancel that diversity and develop a common model.

The significance of demographic data processing was far from restricted to the Planning Division or to the one year of 1961. The Division itself attempted to re-describe the city in a number of statistical area profiles, as support to its area planning teams. More importantly, the Division assumed responsibilty for the distribution of Census information within the Corporation as a whole. The offer of detailed demographic information obliged service departments to re-assess their existing data sources, and to forward plan their programme-related information requirements. Planning became identified with information,

it was an information-handling activity.

The distribution of Census data appears to be the starting
point for Coventry's interest in information systems. Ling
found the 1961 ED data 'quite invaluable', and wrote to the
Registrar General in the hope that similar data would be
released from the 1966 sample census (A.Ling to Registrar
General, 20.12.63, AP/CF/1/143). It was not just the data
that were valuable, but the system which delivered them.

> 'Whilst we are not making an attempt in this
> department to learn the programming language, I
> feel that a picture of the necessary requirements
> and the methods of expressing our problems in
> computer terms is becoming considerably clearer.'
> (CAPO to City Treasurer, 20.3.64, AP/CF/1/209i)

After October 1963, all computer applications were routed
through the Establishment and O and M Office, with
technical support from the O and M and Systems Analysis
sections (Minutes, 17.10.63, Est. and Gen. Admin. Comm.).
As a result, the technical advantages of the Division and
its favoured status with the Birmingham and London Bureaux
were quickly eroded. Nevertheless, it was on account of its
success as an information handling body that the Planning
Division retained its pre-eminence within the Corporation.

By 1964 the first steps had been taken in summarising and
reviewing the various sector studies. However, the momentum
of the earlier phase of analysis did not maintain itself
into the later phase of plan-making. The loss of many

senior staff (including Ling) introduced discontinuity into the review, and there was also pressure from the City Council to convert preliminary proposals from the sector studies into the planning framework for spending programmes. As a result the period which Coventry's planners spent discussing policy was highly abbreviated; there was less innovative thinking about its form and function; and policies were simply brought forward from the sector studies into the final draft of the Review Plan. Meanwhile the PAG team had introduced uncertainties as to the future of the 1947-style Development Plan. Commitment to the Review Plan dropped away as the Corporation edged towards a more strategic and resource-based type of plan. In these unfavourable conditions the Review Plan was published in 1966 and submitted to the Minister in 1967.

The final Plan did not complete the phase of experimentation begun in the early 1960s, but was instead overtaken by it. As an official document it translated the review process into a series of land allocations and development intentions. The process itself moved into new areas of work and entered a period of diversification and specialisation. Area teams and border plans took over the implementation of the Plan, while the research function gravitated to the centre of the Corporation and assumed general information and policy support roles. Specialist

teams appeared outside the Division tackling transportation and the planning of the sub-region. In the late 1960s the corporate planning process was initiated and the planners' land use database incorporated within a larger corporate information system.

In the course of these changes, 'professionalism' came to denote less a performance of an indefinable skill, and more an ability to manage an activity publicly and competently. The Planning Division felt the transition between the two definitions all the more keenly because of its involvement in planning education. Since 1956 the Division had supplied students and staff to the Birmingham School of Planning, and had directly or indirectly assumed proprietorial rights over it. Whatever the defects of the course, training and practice were almost indivisible: the students' lecturers were also their superiors. The vulnerability of this type of office-led planning education to funding decisions, and the national trend towards more autonomous planning schools, contributed to the termination of the Lanchester experiment and to the opening of the new, permanent Department of Urban and Regional Planning. The staff on the course returned to the profession in a critical spirit. They held it to account for its omission of planning theory, the social sciences, quantitative methods and the lessons of American practice. The school destabilised the

profession's grasp of knowledge by teaching advanced methods of calculation, most notably in the case of Friend and Jessop's 'technology of strategic choice'. This accounts for the somewhat radical and reforming image of the school in the mid and late 1960s, and its resistance to any lingering professional control over the curriculum and course development. In a complete reversal of the relationship established a decade before, the school assumed the right to review planners' skills, to inject into practice new methods, and finally, to assert an interest in planning practice as the putative expression of a 'model' of plan-making.

If we return again to our starting point, which is the origins of methodology in Coventry, then it is clear that it did not originate fully formed. It took the Review of the Development Plan, a certain combination of staff and a historic sequence of events to create the conditions in which zones of calculation could be formed inside large public sector spending programmes. As these zones of calculation swarmed and multiplied, they became the object of affirmation of specialist or 'one sided' planners. Craft planners were defenceless against the migration of technique because it made planning activities more calculable than before. Method exposed the sturdy independence of the master planner as an excess of

individuality. In Coventry the lines were drawn up between the city centre architect-planners and the city-regional planner-researchers, a division reinforced by age, experience and training.

The victory of the city regional planners consisted of having Gibson's master plan subsumed within a regional framework, and the Review Plan mounted on a hierarchy of more or less complex projections. This numericalisation of description was the outward sign of a rigorous inwards standardisation of thought. However, the Planning Division was still a pre-bureaucratic phenomenon, and despite contemporary claims the Review Plan was drawn up without reference to formal procedural testing. This was the endowment of a later generation of planners. To program an organisation as one might program a computer - this was the outer limit on planning thought in Coventry in the mid 1960s.

C H A P T E R   N I N E

FINAL CONCLUSIONS

9.1   INTRODUCTION

It will be recalled that the object of this research was
not 'planning methods' or even a 'history of planning
methods', but the conditions of appearance of a discourse
on planning methodology. One case study is not sufficient
grounds for a definitive explanation of this discourse's
emergence in Britain during the 1950s and 1960s. Never-
theless, it is desirable to bring the material collected
from Coventry into a closer relationship with the
historical commentary supplied in Chapter Two and the
conceptual analysis performed in Chapter Three. Chapter
Nine now poses three essential questions:

(a) Where and how did a discourse on planning methodology
    become possible?

(b) What could be promoted and prohibited in the name of
    methodology?

(c) Which tools and skills were enlisted by this discourse,
    and what systems did it create?

Some responses to these questions are given in the next
three sections. 9.2 examines the inhibiting effect on

planning method of the early post-war social insurance strategy for town and regional planning, and indicates a line of mutation to more impersonal, routinised, quantitative and machine-dependent practices. Then 9.3 takes up the methodologists' critique of the inconsistent and unaccountable craftsman, and the implications of this critique for the appearance of a new type of planner and planning education. Finally, 9.4 explores the relationship of methodological discourse to the machinery of calculation, including calculating machines superceded or compromised by the computer.

9.2 PLANNING TECHNIQUES AND SOCIAL INSURANCE

Section 2.1.1 established that after the war, town planning was cast in a 'social insurance' role, implying an active alliance of the planner and the family and the worker against irresponsible economic forces. The defence of the social against the economic took the form of a socio-legal discourse laying down the rights of the resident vis-a-vis the developer of land. This emphasis on residential entitlement (to minimum floorspace, neighbourhood densities, local services, freedom from mixed uses, etc.) underpinned zoning strategies for the redevelopment of inner bombed areas, and for the layout of new communities

in the outer areas. Planning as social insurance reached its apogee in the post-war New Towns around London and Glasgow. Here, the design of neighbourhoods and the balance of employment were to prevent slums and poverty from occuring ever again.

On this basis, early post-war British sociology formed an rapprochement with the town planners. Sociological study of 'the community' paralleled the layout of communities. When science joined planning, therefore, it was a science of the social that informed planning practice and not, for example, the kind of mathematical science that had informed the rapid wartime growth of operational research. The sociologists' prejudice against the economy led them to characterise it as an essentially threatening object which had to be contained, zoned or held to account. If town and regional planning had an 'Achilles Heel' in the years 1945 to 1955, it was not because of the lack of science, but precisely because social science refused the claims of economic analysis. This strict demarcation of social and economic realms left it unwilling and unable to attempt quantitative and dynamic description of whole urban areas, as opposed to detailed accounts of particular residential communities. Planners acquired their knowledge of communities from the type of sociological study of which Young and Wilmot's is the emblem.

However, the insertion of social defence into planning legislation also led to a re-assessment of that relation- ship.

Development control under the 1947 Act was entrusted with the task of asserting and enforcing every citizen's and every family's minimum land-use entitlements. The nationalisation of development rights in land compelled social criteria to enter into most changes of use or types of development. It also caused a large and significant control documentation to appear as entitlements were established. Against each plot of land a file was opened, and the resulting correspondence formed that plot's case history. As a greater proportion of each settlement's surface area came under development control, so casework moved to the level of record-keeping and file-handling. The evidence from Coventry (section 5.3.2) confirms the publishd evidence (sections 2.2.2 and 2.2.3), that management of control records proved particularly problematic from the middle 1950s onwards.

At first, it was a matter of standardising the records themselves, so as to subordinate them to the day-to-day needs of the caseworkers. Later, and especially after the first round of Development Plans had been submitted, more

interest was shown in re-using casework material within the
planning department. In Coventry as elsewhere, maps were
drawn up of planning permissions and refusals so as to
evaluate how effectively the Development Plan had been
implemented. By the later 1950s, the Ministry was obliging
local authorities to exploit their control records for
purposes of land-use balance sheets. Land use accounting
marked the shift towards a records-based planning, in which
the regular accumulation of control documentation could be
systematically simplified and returned to forward planning
as an index of achievement and a measure of change.

Planning on the basis of records opened up the possibility
of an alliance with office administrators and efficiency
reformers, who until then had found little that was
amenable to reform in the planning office. A high degree of
standardisation in the control documentation suggested
transfer of files to a machine-readable document and,
typically, a punched card. A deck of cards could be
re-analysed on different topics and scales, or information
extracted under a combination of headings. In Coventry,
this concept lent statistical support to the community
areas policy; and in other towns it underpinned special
studies especially around housing. Where standard records
and machine-processing prevailed, a certain rigour entered
the process of record formatting and data entry. Every

record was a collection of fields, each field could take a permissible range of values. The procedure for constructing and interpreting records eventually became the subject of enquiry in its own right.

By 1960, several planners were willing to state that town planning rested for its effectiveness on the supply of land use information. Social accountability in the use of land would be impossible without a system of records as broad and comprehensive as the development processes themselves. While the sciences of the social were not absent fom this trend (and even benefitted from it in terms of technique), it was the presence of office management and the desire for public sector efficiency that directed planners' attention back from land use itself and into records of land use. The creation of a system of land records substantially altered planners' perception of land use and the means of managing it. While section 9.4 will take up the problem of records as it was solved computationally, the next section will consider the impact of impersonal methods on the traditional craft occupants of the office.

9.3   CRITIQUE OF THE CRAFT PLANNER

Sections 2.2.4 and 2.3.3 argued that for fifteen years

after the war, the planning activity had many of the characteristics of a craft. These craft characteristics included: a reliance on personal judgement, high levels of individual skill, an immediate relationship to 'tools of the trade', a subjective division of labour building on personal strengths, the on-site transmission of skills, training by 'apprenticeship', and leadership of the profession by an association of experienced craft planners. It followed that planning methods were inscribed within personal skill, and that differences in methods had no consistent rationale or an accountable source.

Some degree of testing and standardisation of skill occured in the 1950s as the profession sought to raise average and minimum levels of competence. There was also a small amount of personal skill lost to automatic routines. However, neither standardisation nor partial mechanisation were ultimately responsible for unseating the craft planner. The weakening, and then the denial, of craftsmanship in planning was the result of a specific critique. This critique sought out craft judgement, apparantly the craft planner's greatest asset. The submission of judgement to impersonal methods varied with the effectiveness of this critique across sections of the planning department and across planning authorities in Britain.

For many years, the craft planner had regarded the existence of choice inside plans as a foreign impurity to be eliminated. Craft judgement rested on the elimination of choice in design and the delivery of a single informed decision. Post-war planning legislation, with its reliance on a definitive cartographic expression of land allocations, supported this approach. But as section 2.3.1 has indicated, the elimination of choice was not compatible with the Developmemt Plan system as it struggled to keep up with the pace of development on the late 1950s and early 1960s. More decisions were required than the system allowed. The critique of craft judgement took two routes.

The first route was via science and the scientific evaluation of judgement. When geographers, economists and regional scientists turned to examine the knowledge on which plans were based, they freely expressed their incredulity at the planners 'rules of thumb' and 'tricks of the trade'. The scientific status of the planning standard was particularly suspect. From what range of values was it drawn? How did it improve judgement? What constituted a test of a standard? So many 'standards' represented an impermissible subjective interpretation of circumstances. Objectivity lay with the externalisation of knowledge and its public scrutiny. The collection of craft techniques in this manner provided a means of assessing planning practice

other than through further craft judgements. The greater
the scrutiny, the more likely it was that order and
simplicity could be introduced into method. Ultimately it
could be reduced to a series of steps or instructions,
perhaps algebraic or computational in nature. Judgement in
planning, as it incorporated these methods and their
results, therefore passed into a supra-individual
'process'. The concept of a 'planning process' refuted the
sturdy independence of the master craftsman.

The second route to a critique of craft judgement was via
the claims of democracy. By what right did planners make
choices on behalf of the public? The fifteen years
preceding Skeffington's (1969) report on public
participation in planning produced a string of critical
observations and polemics on the poverty of choice in
plan-making. Coventry's Development Plan Review was flanked
by a sequence of ward meetings, and the decision to consult
exposed a mass of local decisions to public examination.
Public participation and the campaign for it attacked the
insularity of planners and planning committees, and
compelled a sharing of choice. This line of critique
extended into the development plan function itself: a more
discursive description of policy favoured the public debate
of objectives, while the separation of 'tactical' from
'strategic' decisions reinforced the responsibilities of

local planning authorities to their electors and the political process generally.

The dual destabilisation of craft judgement by science and democracy confirmed for many planners that the old model of plan-making was ready for replacement. Planners who introduced technical variety into their work, or who encouraged extended plan-making with participation, found they had more in common with their North American colleagues than with their craft colleagues, and this affinity formed the basis for a brief episode of external leadership by American planners. In a wave of enthusiasm, a stream of admirers visited metropolitan planning agencies in the United States for a vision of their own future. Americanisation of method provided one means of grouping and motivating advanced British planners at a time when craft practices were still not dislodged from the office. In the one-off study groups, sub-regional planning teams, and new planning schools of the early-mid 1960s, a non-craft synthesis of skills took place. These advanced elements now reacted back upon the official structures of planning. In the TPI membership debates, in the PAG report, in the formation of the Centre for Environmental Studies, in the 1967 White Paper and the 1968 Town and Country Planning Act, a great weight of criticism was brought to bear on the established system of plan-making, and in

particular the complicity of craft judgement and map-based land allocations. It was left to Thomas Sharp and his colleagues to bemoan the fate of 'certainty' in planning, and the loss of the all-too-skilled craftsman.

By around 1965, planning methods were splitting into two: one stream delving deeper into linked sequences of calculation describing the structure and evolution of regions, the other stream drawing away into the study of rational choice itself and the ideal planning procedure. As section 6.4.3 argued, Coventry's Review Plan had begun in the first and just reached the boundary of the second at the moment of its publication. Section 7.4 indicated that the Lanchester Department of Urban and Regional Planning was more closely identified with the second stream, the study of choice, and for good reason; because it allowed the school to query the intellectual credentials of the profession when it claimed to choose on scientific grounds. The concept of a 'planning process' was teachable in a way that 'rules of thumb' were not, it encouraged specialisation within the planning team and therefore in the school curriculum, and it permitted the school to take a critical view of the profession which had founded it. As the schools deserted the craftsmen, so craftsmanship withered at its roots. The process of replacement took some years, but its origins can be traced to the mid-1960s and

this historical conjuncture.

9.4   METHODOLOGY AND MACHINES

The critique of craft practices singled out the isolated
and unsupported nature of professional judgement as its
prime target. The craftsman had introduced too much variety
into his work: he was 'all too human'. In fact, the whole
case for planning methodology rested on a refutation of the
human passions. Only the extra-human (reason, rationality)
and the inhuman (machines, automatic computation) could
purify judgement of excess or unplanned variation. Method
introduced repetition and the repeatabilty of events into
planning practice, as the very principle of its operation.
If a sequence of steps in a task could be specified without
reference to individual strengths or passions - if,
ideally, it could be reduced to a mechanical logic - then
the task would always be performed consistently and
accountably, irrespective of the quality of the human
operator. This distrust of the human passions worked itself
through planning practice over a period of years and with
definite results.

For many years, both before the war and again in the 1950s,
planners had been disturbed by environmental change, in as

much as it threatened their plans and caused them to fail. From the early 1960s, however, a contrary perspective was advanced: that change only disturbed planners because they held themselves aloof from it and refused to accept change as a method of planning. The division of time into regular segments and the plotting of values over time created the preconditions of a very special calculation: the projection. Traffic, household, population and other projections purged the imagination of speculative elements and radically increased the computabilty of the future. The measurement of change and rate of change in key planning variables directed the planning department towards an intelligence as mobile and as extensive as the phenomenon under study.

The implications of measured time were first explored in the traffic studies of the early 1960s. As the Coventry case study revealed (section 6.3.1), the forms of analysis were simple yet the computations were elaborate. What they accomplished was the rapid formation of a data archive, and the means of projecting archive data into the future. But the projection of traffic levels and distributions required estimates of future population levels and distributions. This was the incentive behind Coventry's initial attempts at a demographic model of the city (section 6.3.2). Census data formed the statistical basis for demographic

projection, and joined traffic data in the planners' archive. However, the maintenance of archive data represented a problem, in that such data could not be updated, or transferred easily between users. It was also stored separately from routine inputs and outputs to the land records currently in use.

The fusion of computer-based special studies and land use accounting took place in the concept of a data bank. Here, stocks of people, place and activity data could be concentrated and regularly refreshed. The computerisation of files vastly increased the storage available, and systematised I/O routines. In some data banks, the uniqueness of planning data was lost as many departments contributed to a common database. On the other hand, planning departments developed an expertise in information handling which granted them a pivotal role in the extension and refinement of technical support to service departments. The rigour and automation of such systems contributed to the residualisation of craft practices in the planning team.

However, it was soon realised that while people, place and activity data could reside together in the data bank, there had in addition to be some system for defining and connecting the individual items of information. The

craftsman had traditionally unified the knowledge at his command by a personally acquired survey, to which the land use base map was mute witness. The discourse on methodology depersonalised this kind of unity and entrusted it to a classification of activities and a numerical code for spatial reference. Once the data bank had a common framework for holding information, it could be refreshed on a systematic basis, drawing upon records generated internally within the department as well as periodically from external sources and surveys.

The greater the reliance on stored information and past learning, the greater the use of machines in planning. Before 1967, computer usage by planners was probably restricted to about a dozen authorities. But to this total can be added those authorities which had experience of punched card processing, and those which had rationalised their activities without using machines. As it was, some authorities had already been through two rounds of investment in calculation technology before they even thought of computing. As section 2.4.2 indicated, computer users were encouraged and supported by computer manufacturers in their demands for task-specific packages. IBM was the most notable case, with its widely used transportation modelling program. The manufacturers and computer bureaux provided a vital bridge in the development

of programs until more independent and specialised support
became available from within local government itself. This
was the situation in 1965, when urban and regional
modelling arrived in Britain and a new phase of calculation
was begun.

9.5   CONCLUSIONS

Sometimes it is necessary to preserve the enigmatic quality
in the formation of methods. Not because of the mystery of
human genius, but to guard against an excessive
determinism. All origins are to some extent hazardous,
undecidable, a time of rivalry. It is the same with the
origins of a discourse on planning method. It was not
inevitable that planners (and no others) should choose to
speak with unprecedented frankness on their work (as
opposed to speaking of their inspiration, their muse, their
genius). Neither was it predetermined that the craftsman in
the planning office should be slandered and discredited,
and replaced by a type of planner who could confidently
speak the 'discourse on methodology'. What has to be
questioned is the assumption that rational methods have
rational origins. But perhaps every type of reason has
pressed into its service all the immoral and slanderous
instincts necessary to evict its rivals. 'Does not almost

every precise history of an origination impress our feelings as paradoxical and wantonly offensive? Does the good historian not, at bottom, constantly contradict?' (Nietzsche 1982 p.9). It would be futile to search for continuities and the nobility of a lineage in the appearance of method in planning; it would be as easy to detect rivalry and dissimulation and the wearing of masks.

'Knowledge has replaced freedom', wrote Richard Clark (1966 p.23) in a startling essay on the challenge of the computer to town planners.

> 'The privacy of human motivation is now surrendered
> to the controlling authority just as individual
> freedom was steadily sacrificed for the overall
> benefit of society.'
> (Clark 1966 p.23)

In the absence of knowledge, planning was impaired, and where planning was impaired there was a definite social risk. However, the unplanned in society was not intrinsically unhealthy or wicked, as an earlier generation of social reformers had assumed. On the contrary, it merely represented force without a subject, force without the guidance a subject could exert over it. The objective of planning was to introduce guidance into subject-less forces such as 'the economy', 'demographic factors', or 'traffic growth'. Planners sought to generate accountability for forces that were too large to be treated like persons or restrained by existing means. It was the spectre of

unguided and unaccountable growth that haunted the town planner of the 1960s. Perhaps it is paradoxical that at just the moment the planning activity was undergoing thorough depersonalisation, it reached out to subjectify social and economic forces. But this is a paradox that has yet to be resolved in reality: the relation of science and democracy, or more generally, of truth and power.

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a. Development Plan Review reports

(M) = missing from Departmental files

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DPR/4   Green belt for Coventry. 21 November 1957.
DPR/5   Provision of special schools in Coventry.
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DPR/7   (M)

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DPR/58	Observations of the Warwickshire County Council, 22 June 1966.

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(All files take the prefix AP/CF/1/..., and each file is listed below by box number, file number and title.)

114	143	Population
128	149(d)	Traffic research
138	172	Transportation
139	172(a)	Transportation Study Group
145	190(b)	Traffic research
147	202	Articles and descriptive matter
147	204	Distribution of plans and reports
148	204	Distribution of plans and reports
150	205	Articles and descriptive matter
151	208	Exhibitions
155	209(f)	Bodies consulted at time of Review Development Plan
156	209(k)	Industrial survey
159	209(p)	Coventry city region
161	211	Local government boundary review
162	212	Administration and staff

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