UNIVERSITY OF SOUTHAMPTON

A STUDY OF ROAD TRANSPORT DEVELOPMENT DURING THE INDUSTRIAL REVOLUTION: SOUTHERN HAMPSHIRE, 1750-1850

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- In Memoriam -

James and John Freeman (1819-1889, 1821-187?),

Alresford-Winchester carriers

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UNIVERSITY OF SOUTHAMPTON

ABSTRACT

FACULTY OF ARTS

GEOGRAPHY

Doctor of Philosophy

A STUDY OF ROAD TRANSPORT DEVELOPMENT DURING THE INDUSTRIAL REVOLUTION: SOUTHERN HAMPSHIRE, 1750-1850

by Michael John Freeman

The road transport developments in Britain during the period 1750-1850 have long been recognised as a vital element in the Industrial Revolution, yet, paradoxically, there have been few scholarly and detailed examinations of the nature and significance of these developments. A wide variety of sources is drawn upon - Parliamentary records, turnpike trust documentation, newspapers and directories, principal among them, while considerable use is made of graph theory as an aid to describing and analysing the region's developing transport system. Road transport in Southern Hampshire during the earlier eighteenth century was at a point of crisis: roads were in a poor condition, the mechanisms for maintaining them were ineffective and inadequate, and as a result, traffic expansion was much impeded. The solution came with the widespread adoption of the turnpike concept from 1750. By the 1770s, a comprehensive and well-integrated system of turnpike roads was in existence and development continued up to 1841. Under the auspices of the region's turnpike trusts, far greater funds were devoted to road maintenance than ever before, and concerted efforts were made to streamline the road system through widening, construction of 'cut-offs' and lowering of hills. The significance of these various changes is clearly reflected in the remarkable growth of traffic during the period, especially in the public transport sector. The traffic expansion was accompanied by a considerable improvement in rates of travel, often at no great advance in costs in relative terms. Viewed as a whole, such transport developments formed a highly important permissive, and at times positive, force in the movement towards greater regional urbanisation, in regional agricultural expansion and improvement, and in the decline of traditional industries and crafts. Preliminary comparison with the Yorkshire West Riding suggests that the experience of Southern Hampshire was more than repeated in the developing industrial regions.

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NOTES AND ABBREVIATIONS

Measurements: these are all given in the metric system, except where weights or transport rates are involved.

Figure and table captions: since virtually all the figures and tables included in the thesis are placed immediately opposite the text pages where they are discussed, separate captions are not given. However, a full list of captions is included on pages (vi) - (xi).

B.M.	- British Museum
B.P.P.	- British Parliamentary Papers
Hants. R.O.	- Hampshire Record Office
H.L.R.O.	- House of Lords Record Office
Ports. R.O.	- Portsmouth Record Office
P.R.O.	- Public Record Office, Chancery Lane, London;
Soton R.O.	- Southampton Record Office
W.C.M.	- Winchester College Muniments
Winch. Cath. Lib.	- Winchester Cathedral Library
Winch. R.O.	- Winchester Record Office
Agric. Hist. Rev.	- Agricultural History Review
Business Hist.	- Business History
Econ. Hist. Rev.	- Economic History Review
Geogr. Annlr	- Geografiska Annaler
Geog. Rev.	- Geographical Review
Geogrl Stud.	- Geographical Studies
Indus. Arch.	- Industrial Archaeology
J. Econ. Hist.	- Journal of Economic History
J. Hist. Geogr.	- Journal of Historical Geography
J. Transport Hist.	- Journal of Transport History
Scott. Geogr. Mag.	- Scottish Geographical Magazine
Trans. Inst. Br. Geog.	- Transactions of the Institute of British Geographers
Transport Hist.	- Transport History
Wessex Geogr.	- Wessex Geographer
L.S.W.R.	- London and South Western Railway

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A thesis of this kind inevitably depends heavily for its primary source material on the co-operation of record offices and libraries. I would therefore like to express my particular gratitude to the archivists/librarians and staffs of the Hampshire Record Office, the Portsmouth Record Office, the Southampton Record Office, the Winchester Record Office, the Winchester College Muniments, the House of Lords Record Office, the Southampton University Library, the Winchester College Library and the City of London Guildhall Library, Without their patient assistance, my task would have been doubly difficult. This applies especially to Mr. C.R. Davey, Deputy Archivist of the Hampshire Record Office, who not only guided me through the considerable wealth of relevant local documentation, but also kept an alert eye open for new material.

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INTRODUCTION

The improvements in inland transport that occurred in Britain between the 1750s and the 1830s have long been recognised by economic historians as a vital element in the Industrial Revolution.[1] Mathias, discussing the role of inland transport during the period, notes that 'industrialisation could proceed only with the development of investment and innovation in transport keeping pace with investment and innovation in production'.[2] In a similar discussion, Hartwell states that 'in 1830, Britain was producing three quarters of Europe's mined coal, half of Europe's cotton goods and iron, and most of Europe's steam engines. Without improved communications, there would have been a limit to the size of markets for these growing industries, a generally higher cost structure, and wider disparity between the development of different parts of the country'.[3] The two main elements involved in such transport improvements were the canals and the turnpike roads. During the past 50 or so years, the canals have attracted (and still continue to attract) the attention of numerous scholars, both geographers and historians. For example, the history of British canals has been carefully reconstructed by Hadfield in his series of well-known regional surveys,[4] whilst more detailed work is to be found amongst the many regional and local monographs on British inland waterways

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[1] The term 'Industrial Revolution' is used in this thesis to refer to the fundamental technological and organisational changes that occurred in British industry between 1750 and 1830, and equally as important, the impact that these changes made upon the overall development of the British economy during the period.

[2] P. Mathias, The First Industrial Nation: An Economic History of Britain, 1700-1914, (London, 1969), 106

[3] R.M. Hartwell, 'The Industrial Revolution in England', Historical Association Pamphlett No. 58, (1965), 17

[4] See, for example, C. Hadfield, The Canals of Southern England, (London, 1955); The Canals of the East Midlands, (London, 1966); The Canals of South Wales and the Border, (London, 1960). The same author has also written a valuable introduction to the history of canals in Britain in British Canals, (London, 1950)

available in both published and unpublished form.[1] In direct contrast, and as chapter one shows, a surprisingly limited amount of scholarly research, particularly of a geographical nature, has been done on the turnpike roads, while even less attention has been paid to the traffic passing over them. As a result, there is little information upon which to assess the precise contribution of road transport in the period. Its importance, on the other hand, is undoubted. As late as the 1830s, for instance, few areas of Britain possessed a dense network of canals. Indeed, in some parts, there was little alternative to road transport and even where water transport was available, turnpike roads performed an essential complementary function.

The primary aim of the thesis is to explore the possibilities open for reconstructing the country's developing road transport system during the period of the Industrial Revolution. The exploration is carried out within the context of Southern Hampshire[2] and stresses the highly dynamic quality of road transport development over the period from 1750 to 1850. The selection of a primarily agricultural region like Southern Hampshire as the area for study might be considered by some as unusual or even illogical. In several respects, however, the region was quite typical of the time. For instance, there were many other parts of the country where agriculture constituted the dominant form of economic activity. In addition, Southern Hampshire in the eighteenth century

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[1] For selected bibliographies of such work, see W.T. Jackman, The Development of Transportation in Modern England, (2nd edition, London, 1962), xiv-xxiv and 750-89; H.J. Dyos & D.H. Aldcroft, British Transport: an economic survey from the seventeenth century to the twentieth, (Leicester, 1969), 404-5 and 411-412; P.S. Bagwell, The Transport Revolution from 1770, (London, 1974), 420-2. For the Hampshire area, see for example, E. Course, 'The Itchen Navigation', Proc. Hants Field Club, 24, (1967), 113-26; E. Welch, 'The Bankrupt Canal: Southampton and Salisbury, 1795-1808', Southampton Papers No. 5, (1966). Details of some of the unpublished work are to be found in a series of articles, 'Transport History in University Theses', published in the J. Transport Hist., viz. 4, (1960), 161-73; 7, (1965), 54-6; 2, (1974), 234-8

[2] The term Southern Hampshire is normally accepted as referring to the region between the South Downs and the coast, centred on the Hampshire Basin. In this thesis, however, the term is used to refer to a somewhat larger region, extending northward to include the areas around the towns of Andover and Alton. During the eighteenth and early nineteenth centuries, these were economically orientated toward the coastal region rather than to Basingstoke and the Thames Valley as they tend to be today. The Isle of Wight, it should be noted, is excluded altogether.

possessed a significant measure of small-scale, generally rurally-based industrial activity, and this pattern was again very much a familiar one in other regions of Britain. Moreover, one effect of the Industrial Revolution, mediated through improved transport systems, was the almost countrywide destruction of such local industrial enterprise, a change in which Southern Hampshire shared as much as any of its counterparts.

Just as various aspects of Southern Hampshire's economic geography evolved over the course of the later eighteenth and early nineteenth centuries, so its road transport system evolved too. The bulk of the thesis is concerned with this theme, or more precisely, with reconstructing, describing and analysing the changing nature of the system as represented by its chief components - the turnpike roads, the stage-coach and the carrier services. Considerable problems exist, however, in the realm of sources and methodology and these are discussed in detail in chapters two and three respectively. Since the focus of the study is the road transport system, no concerted attempt is made to explore the relationship between transport development and geographic change. The broad outlines of this relationship, though, are discussed in chapter ten, the conclusion.

CHAPTER ONE

REVIEW OF THE LITERATURE

1.i) National studies

The road transport developments of the Industrial Revolution period have featured in many of the general works published on the history of British transport. The most comprehensive of these treatments is still Jackman's exhaustive and scholarly work, first published in 1916, but reprinted in 1962 with a valuable bibliographical introduction by W.H. Chaloner.[1] The appendices Jackman includes on the changing cost and speed of coach travel between 1750 and 1830,[2] and on the changing cost of the land carriage of goods over the same period,[3] are particularly useful in assessing, in some kind of quantitative manner, the significance of the transport improvements effected during the period. A less detailed, though more up-to-date, examination is that by Dyos and Aldcroft, published in 1969.[4] This work is especially valuable for its extensive bibliography. The most recent treatment of the subject, however, is that by Bagwell, published in 1974.[5] In comparison with Jackman's work, Bagwell's contribution is somewhat brief. Nevertheless, he does make a concerted attempt to chart, within a quantitative framework, the rise and decline of the public coach and carrier systems between 1790 and 1850 by examining changes in such facilities at ten of the country's leading urban centres.[6] In addition,

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[1] W.T. Jackman, The Development of Transportation in Modern England, (2nd edition, London, 1962)

[2] W.T. Jackman, op. cit., 683-715

[3] Ibid., 716-23

[4] H.J. Dyos & D.H. Aldcroft, British Transport: An economic survey from the seventeenth century to the twentieth, (Leicester, 1969)

[5] P.S. Bagwell, The Transport Revolution from 1770, (London, 1974)

[6] P.S. Bagwell, op. cit., 44, 56

like Dyos and Aldcroft, Bagwell includes a useful and wide-ranging bibliography. Numerous other authors of general works on the history of British transport have touched upon the subject of the road transport developments of the period.[1] However, the majority of these studies are essentially superficial in their treatments; few are the product of research on primary sources.

The study of road transport developments during the Industrial Revolution has not just been confined to transport historians alone. Economic and social historians have also shown rather more than passing interest in the subject. Ashton, for example, makes reference to road transport developments in his well-known text on the economic history of the eighteenth century,[2] while Mathias includes a similar contribution in The First Industrial Nation.[3] Amongst the literature of social history, perhaps the most useful account is a chapter by Beales entitled 'Travel and Communications', forming part of a two-volume work on Johnson's England.[4]

Turning from these more general works to look at studies that deal specifically with the road transport developments of the period, the neglect that the subject has suffered becomes readily apparent. The only work to have examined this theme explicitly is that by Copeland, published in 1968.[5] The first appearance of this book aroused great expectations among economic and transport historians, but as Chaloner pointed out in his review,[6] it is not the definitive

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[1] See for example, C.E.R. Sherrington, A Hundred Years of Inland Transport, 1830-1933, (London, 1934); C.I. Savage & T.C. Barker, An Economic History of Transport, (London, 1975)

[2] T.S. Ashton, Economic History of England: The Eighteenth Century, (London, 1955), 63-90

[3] P. Mathias, The First Industrial Nation: An Economic History of Britain, 1700-1914, (London, 1969), 106-20

[4] H.L. Beales, 'Travel and Communication', in A.S. Turberville, (ed.), Johnson's England, I, (Oxford, 1933), 125-59

[5] J. Copeland, Roads and their traffic, 1750-1850, (Newton Abbot, 1968)

[6] W.H. Chaloner, Book review: J. Copeland, Roads and their traffic, 1750-1850, Econ. Hist. Rev., 23, (1970), 190-1

work on the subject. It is true that the author has succeeded in bringing together a great deal of scattered information, and the result does add significantly to our knowledge of the subject, but as Chaloner remarked, Copeland failed to get down to the hard but vital work of trying to estimate the volume and nature of the traffic using the major roads, or to chart the chronology of regional turnpike expansion.[1] The value of the book is further diminished by the almost complete absence of maps.

A rather greater amount of research has gone into individual aspects of the road transport developments of the period. Turnpike roads, for example, have formed the main subject of two books of considerable academic standing. The first, by the Webbs,[2] was published in 1913, and although it deals with roads from the Middle Ages until the early twentieth century, by far the greater part is devoted to an examination of turnpikes. In common with Jackman's almost contemporary study,[3] it bears the stamp of detailed and painstaking research over a number of years, and this is especially apparent in the comprehensive lists of notes and references that append each chapter. However, the work of the Webbs on turnpikes has recently been supplemented, and in some respects superseded, by that of Albert.[4] In a study of the Turnpike Road System of England, Albert fairly convincingly demonstrates that roads were not turnpiked in a scattered and random manner, as the Webbs have led economic historians to believe. He showed, instead, that the turnpike system developed in an economically rational manner. The major roads, particularly those radiating from London, were the first to be turnpiked, while the secondary and cross roads followed later. To the main section on the development of the turnpike system, Albert adds a series of useful discussions on various other aspects of turnpikes,

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[1] W.H. Chaloner, op. cit., 191

[2] S. & B. Webb, The Story of the King's Highway, (London, 1913)

[3] W.T. Jackman, op. cit.

[4] W. Albert, The Turnpike Road System in England, 1663-1840, (Cambridge, 1972)

including trust administration and trust road repair.[1] However, a major omission is the failure to include a series of maps showing the spatial and chronological pattern of turnpike development for England as a whole. The absence of even a map to show the extent of the turnpike system, at its peak, in 1840, is hard to excuse. A further drawback of the book, and one that the author himself acknowledges, is that in attempting to present a nationwide survey, much important regional detail has been lost and many factual errors thereby encouraged. If the details on Hampshire turnpikes included in the appendices are in any way representative, the overall volume of error must be considerable. Albert's work has since been extended by Pawson, in a study which examines turnpike road development in England and Wales within the general framework of diffusion theory.[2] A major advantage of this particular study is the valuable series of maps that it contains showing the spatial and chronological pattern of turnpike development up to 1770. The development pattern after 1770, though, still awaits cartographic reconstruction.

The work of the Webbs, Albert and Pawson, apart, many other writers on British roads have given some attention to turnpikes, though more usually under the general heading of 'coaching roads'.[3] However, little of this work is of any value to the serious student, and some of it contains alarming factual errors. On a slightly different level, the Amateur Historian (now the Local Historian) has from time to time published some brief but useful articles on turnpikes. Probably the best of these is that by Cossons,[4] which draws attention to a surprising

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[1] A useful critique of some of these later chapters is provided by G.R. Hawke, Book review: W. Albert, The Turnpike Road System in England, 1663-1840, Econ. Hist. Rev., 26, (1973), 156-7

[2] E.J. Pawson, 'The Development of the Turnpike Road System in the Eighteenth Century', (unpubl. D.Phil thesis, Univ. of Oxford, 1975). See also E.J. Pawson, 'The Turnpike Trusts of the Eighteenth Century: a study of Innovation and Diffusion', Univ. of Oxford, Sch. of Geogr. Res. Pap. 14, (1975)

[3] See for example, G. Boumphrey, British Roads, (London, 1939); C.H. Hartmann, The Story of Roads, (London, 1927); L.A.G. Strong, The Rolling Road, (London, 1956)

[4] A. Cossons, 'Misconceptions about Turnpikes', Amateur Historian, 5, (1962), 39-43. See also E.C.W. French, 'Turnpike Trusts', Amateur Historian, 2, (1954), 4-7; G. Pennethorne, 'Payment on the Road', Amateur Historian, 1, (1953), 102-6

number of inaccuracies amongst the literature of the subject. Finally, two further items deserve mention. The first, a work by Searle, published in 1930,[1] represents a kind of turnpike miscellany, full of interesting anecdotes and profusely illustrated, but of limited academic value. The second, a work compiled by Smith,[2] is more recent and much shorter, and reproduces in facsimile a selection of the wide range of documentary sources which are available for the period. The work also includes reproductions of an interesting collection of contemporary illustrations by W.H. Pyne, and these are accompanied by a text written at about the same time.

A second aspect of the road transport developments of the period to have attracted writers' attention is the subject of coaching. Indeed, of all that has been written on the various aspects of road transport development during the Industrial Revolution, coaching has proved to be by far the most popular. Thus, Albert, in the preface to his book on the Turnpike Road System in England, is led to state: 'As it is felt that little new information can be added at this stage to the already voluminous literature on coaching, this subject has not been dealt with in this study'.[3] However, by far the greater part of this literature is of an intensely romantic and antiquarian kind, much of it written towards the end of the nineteenth century, and of limited interest to the serious scholar.[4] The two main exceptions are the works by Harper and by Nimrod (C.J. Apperley).[5] While Harper's work

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[1] M. Searle, Turnpikes and Toll-bars, (London, 1930)

[2] P. Smith, The Turnpike Age, (Luton, 1970)

[3] W. Albert, op. cit., vii-viii

[4] The output of the 'romantic school' was quite remarkable, and no attempt is made here to provide an exhaustive list of such work. However, the following selection is fairly representative: E. Corbett, An Old Coachman's Chatter, (London, 1890); T. Cross, The Autobiography of a Stage Coachman, (London, 1861); S. Harris, The Coaching Age, (London, 1885); W.P. Lennox, Coaching, (London, 1876); W.O. Tristram, Coaching Days and Coaching Ways, (London, 1903)

[5] C.G. Harper, Stage-coach and Mail in days of yore, (London, 1903); Nimrod (C.J. Apperley), The Chace, the Turf and the Road, (London, 1837)

bears all the hallmarks of the romantic antiquarianism so typical of its age, several of the chapters are sufficiently informative and useful to warrant more than a cursory glance. Nimrod's work is rather different in that it was written much earlier, during the height of the coaching age, and contains much illuminating first-hand information about the organisation and economics of coach operations, absent in much of the later work. In addition, it incorporates an amusing but telling illustration of the extent of the improvements that were made in coach travel during the 50 or so years between the 1780s and the 1830s.

Among the more modern work, the best introduction to the history of coaching is probably that by Bovill, published in 1959.[1] This is usefully supplemented in a later work by the same author, which appeared in 1962.[2] Mail-coach operations have received detailed examination by Vale.[3] A much shorter and less detailed study of the same theme has been made by Kay.[4] Margetson provides a very readable account of coaching in the period, and in fact covers considerably more ground than the sub-title of the book suggests,[5] while a particularly useful selection of notes on coach travel has been assembled by Hart.[6] The three most recent works on the subject of coaching, however, are those by Bates, the Andersons and Mountfield.[7] Bates' work is exactly what its title

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[1] E.W. Bovill, The England of Nimrod and Surtees, 1815-54, (London, 1959)

[2] E.W. Bovill, English Country Life, 1780-1830, (London, 1962)

[3] E. Vale, The Mail-coach Men of the late Eighteenth Century, (London, 1960)

[4] F.G. Kay, Royal Mail - the story of the Posts in England from the time of Edward IVth to the present day, (London, 1951)

[5] S. Margetson, Journey by Stages - some account of the people who travelled by Stage-coach and Mail in the years between 1660 and 1840, (London, 1967)

[6] H.W. Hart, 'Some Notes on Coach Travel, 1750-1848', J. Transport Hist., 4, (1960), 146-60

[7] A. Bates, Directory of Stage-coach Services, 1836, (Newton Abbot, 1969); R.C. & J.M. Anderson, Quicksilver - A Hundred Years of Coaching, 1750-1850, (Newton Abbot, 1973); D. Mountfield, The Coaching Age, (London, 1976)

suggests, a stage-coach directory, or as the publisher's note describes it, 'The Bradshaw of the height of the stage-coach era'. There is little to be said about the basic work itself. Instead, the main criticism lies in the appalling lack of explanatory and background information offered in the mere 17 lines of introduction. In particular, the list of sources that were used in the directory's compilation is vague, and no attempt is made to place the work in its correct historical context. The work by the Andersons must, like Copeland's book of some five years earlier,[1] have aroused many expectations. Again, though, it is far from being the definitive work on the subject. To be fair, the authors have drawn together a great deal of useful material to make a most readable book, and it will undoubtedly replace much that was written on the subject towards the end of the last century. Unfortunately, however, the work is cast in the same romantic vein that is so characteristic of the later nineteenth century authors. No attempt is made to estimate, even in crude numerical terms, the size and scope of the coaching business, or to chart the way in which it developed over time. Some of the amusing anecdotes and lengthy quotations could well have been sacrificed to make way for analyses of this kind. This would have increased the depth of the book significantly, without prejudicing its overall appeal. Mountfield's work follows closely the pattern set by the Andersons. It is cast in the same nineteenth century romantic tradition and adds little to existing knowledge.

One aspect of road transport developments during the Industrial Revolution that has received remarkably little attention in any form is the subject of carriers. The practice of operating regular waggon services for the carriage of goods between Britain's towns dates back to the early seventeenth century, and possibly even earlier.[2] With the expansion of internal trade which accompanied the upsurge in economic activity during the Industrial Revolution, the frequency and regularity of these services increased markedly. By the early nineteenth century, carriers closely rivalled stage-coaches in terms of the range and efficiency of the facilities that they offered. Despite their undoubted economic significance, though, few attempts have been made to study the nature or importance of carrier operations, or the way they developed

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[1] J. Copeland, op. cit.

[2] See for example, J. Taylor, The Carriers' Cosmographie, (London, 1637)

over time. The Pickford Company records have inspired two useful articles, one by Halfpenny and one by Turnbull,[1] although both are really little more than business histories. The complex question of the cost of the transport of goods by land has been examined in articles by Willan and Albert,[2] while the land transport of goods during Tudor and Stuart times is dealt with by Crofts.[3] These works apart, the only remaining references to carrier operations are contained in studies concerning the production and distribution of industrial goods.[4]

1.ii) Regional and local studies

In any discipline, national studies invariably bring numerous drawbacks. The wider the area which a study embraces, the greater the incidence of factual error. In addition, the study of a subject at a national scale must inevitably dull, and in some cases obscure or even misrepresent, the rich fabric of regional and local detail which frequently exists. Thus, researchers in many disciplines have been drawn to the regional and local study as a means of avoiding such problems, and valuable work has been done at this level. This is true in the context of road transport developments in Britain during the Industrial Revolution, although it should be stressed that disciples of the 'romantic school' have still found the regional and local study as effective an outlet for their enthusiasm as the national study.

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[1] E. Halfpenny, 'Pickfords: Expansion and Crisis in the early 19th century', Business Hist., 1, (1958), 115-25; G.L. Turnbull, 'The Railway Revolution and the Carriers' response: Messrs. Pickford & Co., 1830-50', Transport Hist. 2, (1969), 48-71; see also G.L. Turnbull, 'Pickfords 1750-1920: A Study in the Development of Transportation', (unpubl. Ph.D. thesis, Univ. of Glasgow, 1972)

[2] T.S. Willan, 'The Justices of the Peace and the Rates of Land Carriage, 1692-1827', J. Transport Hist., 5, (1962), 197-204; W. Albert, 'The Justices' Rates for Land Carriage, 1748-1827, reconsidered', Transport Hist., 1, (1968), 105-29

[3] J. Crofts, Packhorse, Waggon and Post: Land Carriage and Communications under the Tudors and Stuarts, (London, 1967)

[4] See for example, R.A. Lewis, 'Transport for Eighteenth Century Ironworks', Economica, 18, (1951), 278-84; T.S. Ashton, Iron and Steel in the Industrial Revolution, (Manchester, 1924)

Few authors of regional and local works have examined, as a whole, the subject of road transport developments during the period.[1] Instead, far greater attention has been focused on certain of its individual aspects within a regional or local context. The turnpike roads, in particular, have drawn considerable interest, though more frequently amongst historians than geographers. The best regional study to have been published on turnpikes is undoubtedly that by Cossons on the Nottinghamshire turnpike roads, which appeared in 1934.[2] In this work, the author offers a great deal of useful information about the establishment of turnpikes at the national scale, and about the machinery involved in their operation. At the same time, these details are carefully illustrated through a case-study of the development of the Nottinghamshire turnpike system. Some helpful information is also included about sources, clearly in the hope of stimulating further work on the subject. In addition, the study incorporates a number of comprehensive appendices. Perhaps the most significant point about Cossons's work, however, is the value that he attaches to the collection of information about toll receipts as a means of working out the details of the progress of the Industrial Revolution. The same author has made several similar studies for Warwickshire, Norfolk and Northamptonshire,[3] but none of these meet up to the standard of that on Nottinghamshire. The turnpike roads of Lancashire have been examined in an article by Tupling.[4] This particular work, though, lacks a reasonable selection of maps, and the surviving primary source materials

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[1] A useful regional study covering just the nineteenth century is that by Williams - L.A. Williams, Road Transport in Cumbria in the Nineteenth Century, (London, 1975)

[2] A. Cossons, 'The Turnpike Roads of Nottinghamshire', Historical Association Pamphlett No. 97, (1934)

[3] A. Cossons, 'Warwickshire Turnpikes', Trans. B'ham. Arch. Soc., 64, (1941-2), 53-100; A. Cossons, 'The Turnpike Roads of Norfolk', Norfolk Archaeology, 30, (1947-52), 189-212; A. Cossons, 'The Turnpike Roads of Northamptonshire with the Soke of Peterborough', Northants Past and Present, 1, (1950), 29-46

[4] G.H. Tupling, 'The Turnpike Trusts of Lancashire', Memoirs and Proceedings of the Manchester Literary and Philosophical Soc., 94, (1953), 39-62

are given only superficial treatment. The Lancashire turnpikes have received further attention in a paper by Harrison,[1] which although written almost a century ago, contains a surprisingly well-executed map. The turnpike roads of the Cotswolds are given brief mention in a chapter on transport included in a recent new survey of that area by the Hadfields,[2] while the development of roads (including turnpikes) in Surrey and Sussex is dealt with in an article by Fuller[3] and constitutes one of the few studies of the subject to have appeared in the geographical literature. Examination of turnpike roads at the regional level has also proved a relatively popular topic for higher degree theses, though the majority of these have concentrated upon administrative rather than geographical aspects.[4] Much of the remaining work is rather too local in character or too amateur in approach to be of any real academic value. Nevertheless, there are a number of exceptions to this general rule, the best of which are perhaps Copeland's article on an Essex Turnpike Gate,[5] Payne's study of a South London turnpike trust,[6] and Austen's paper on a turnpike in Sussex.[7] Finally,

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[1] W. Harrison, 'The Development of the Turnpike System in Lancashire and Cheshire', Trans. Lancashire and Cheshire Antiquarian Soc., 4, (1886), 80-92

[2] C. Cox, C. Hadfield, & D. Bick, 'Transport', in C. & A.M. Hadfield, (eds.), The Cotswolds: a new study, (Newton Abbot, 1973), 139-77

[3] G.J. Fuller, 'Development of Roads in the Surrey, Sussex, Weald and Coastlands, 1700-1900, Trans. Inst. Br. Geog., 19, (1953), 37-49

[4] See for example, W.G. Dodds, 'The Turnpike Trusts of Northumberland', (unpubl. M.A. thesis, Univ. of Durham, 1965); A.H.T. Lewis, 'The Development and Administration of Roads in Carmarthenshire, 1763-1860', (unpubl. M.A. thesis, Univ. of Wales, 1968). Further items may be found in the series of articles, 'Transport History in University Theses', op. cit.

[5] J. Copeland, 'An Essex Turnpike Gate', J. Transport Hist., 6, (1963), 87-94. Much of the material contained in this article is also included in Copeland's later book, op. cit.

[6] P.L. Payne, 'The Bermondsey, Rotherhithe, and Deptford Turnpike Trust, 1776-1810', J. Transport Hist., 2, (1956), 132-43

[7] B. Austen, 'John Loudon McAdam and the Lewes to Eastbourne Turnpike', Transport Hist., 7, (1974), 41-59

it is important to mention that as far as the author is aware nothing has been published on the turnpike roads of the Hampshire area, although as might be expected, they do form the subject of passing comment in a number of books and articles which deal with the region.[1] The only unpublished work of any note is that by Parry on the Southampton-Winchester turnpike.[2]

While it is clear that relatively little scholastic research has gone into the study of turnpike roads at the regional and local level, by contrast, even less has been done on coaching. In fact, the only work of any real value to have been published on this particular aspect of road transport development during the Industrial Revolution at the regional or local level is that by Dickinson on the West Riding of Yorkshire, published in 1959.[3] In what was then intended as a pioneering article, the author successfully reconstructs the pattern of stage-coach activity in this part of Yorkshire in the decade immediately prior to the advent of the railways, using a local directory and local newspapers as sources. In his introduction, Dickinson observes that public transport needs during the Industrial Revolution were largely met by the canal and the stage-coach, and that the canal has received far more thorough and systematic examination than the stage-coach. Yet, as the author further points out, there is much that can be learnt about a region's economic life in reconstructing the pattern of stage-coach activity. Despite the unquestionable value of such studies, however, Dickinson's efforts failed to inspire any further published work on the subject of comparable standing.[4] In the unpublished field,

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[1] The most important of these is probably C. Cochrane, The Lost Roads of Wessex, (Newton Abbot, 1969)

[2] D.R. Parry, 'The Southampton-Winchester Turnpike', (unpubl. B.A. thesis, Univ. of Southampton, 1959)

[3] G.C. Dickinson, 'Stage-coach services in the West Riding of Yorkshire between 1830 and 1840', J. Transport Hist., 4, (1959), 1-12

[4] Two recent articles by Heath and Kennett, for instance, fall a long way short of the standard set by Dickinson - J.E. Heath, 'Stage-coach routes in 18th and 19th century Derbyshire', Derbyshire Miscellany, 5, (1969-70), 172-3; D.H. Kennett, 'The Geography of Coaching in Nineteenth Century Northamptonshire', Northants Past and Present, 5, (1974), 107-20

a number of higher degree theses have included reconstructions of regional patterns of coaching activity, although these are usually only a small part of a quite different and much wider problem. For example, Caroe has reconstructed the pattern of coach movements in East Anglia for the year 1839.[1] Such a study clearly has some comparative value for those examining coaching activity in other areas, but the discussion of sources and the analysis of the pattern of movements are insufficiently detailed to be of any real significance in the field as a whole.

Although very little serious work has been done on regional and local aspects of coaching activity, there is much in print in the romantic tradition. Harper, probably the most prolific writer on coaching, produced a whole series of books, about the turn of the century, on the principal coaching roads of the country - on the Brighton Road[2] and on the Dover Road,[3] to name two examples. Two works dealing with specific regions as opposed to specific roads are those by Bradley and Jamieson,[4] both covering areas of Northern England. For the Hampshire region, a number of works on local history make reference to coaching. For example, Gates, in his History of Portsmouth,[5] includes a separate chapter on the town's coach facilities. In addition, of course, there is the inevitable volume by Harper,[6] which for all its trivia, does contain some valuable facts. Lastly, and demonstrating that the output of the 'romantic school' is far from exhausted, two short articles on local aspects of coaching have recently been published in the Hampshire Magazine,[7] the first of them characteristically titled 'Tan-tivvy-tara! on the Portsmouth Road'.

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[1] L. Caroe, 'Urban Change in East Anglia in the Nineteenth Century', (unpubl. Ph.D. thesis, Univ. of Cambridge, 1966)

[2] C.G. Harper, The Brighton Road, (London, 1892)

[3] C.G. Harper, The Dover Road, (London, 1895)

[4] T. Bradley, The Old Coaching Days in Yorkshire, (Leeds, 1889); M. Jamieson, Coaching Days in the North Country, (Newcastle, 1969)

[5] W.G. Gates, History of Portsmouth, (Portsmouth, 1900), 469-73

[6] C.G. Harper, The Portsmouth Road, (London, 1895)

[7] J.C. Marsh-Edwards, 'Tan-tivvy-tara! on the Portsmouth Road', Hampshire Magazine, 14, (1973), 49-50; M. Scott, 'Hampshire's Coaching Days', Hampshire Magazine, 15, (1975), 39-40

The aspect of road transport developments during the Industrial Revolution period to have received the least attention of all at the regional and local level is carrier activity. As far as the author is aware, no detailed regional or local studies, either published or unpublished, have been made of carriers during the period 1750 to 1850, despite their undoubted importance in the economic expansion of the country at the time. Willan highlights this omission in his recent study of the trading activities of Abraham Dent, a Kirkby Stephen shopkeeper in the eighteenth century.[1] He shows that Dent's supplies came from many different parts of the country, from as far away as Norwich and London, suggesting the existence of a relatively well-developed transport system. The principal figure in that system was the carrier, a figure which, according to Willan, has been strangely neglected. However, whilst there have been no detailed regional or local studies of carriers during the Industrial Revolution period, it should be mentioned that some attention has been given to the examination of regional and local patterns of carrier activity in the second half of the nineteenth century. Everitt, for example, has made a specific study of the role of the village carrier in Leicestershire in the later Victorian period.[2] In addition, a number of authors have examined regional patterns of carrier activity in the second half of the nineteenth century, as a means of delineating spheres of urban influence.[3] Similarly, Caroe, in her work on urban change in East Anglia in the nineteenth century,[4] reconstructs the pattern of carrier activity in the area for the years 1839, 1846 and 1869-70, but as

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[1] T.S. Willan, An Eighteenth Century Shopkeeper - Abraham Dent of Kirkby Stephen, (Manchester, 1970)

[2] A.M. Everitt, 'Town and Country in Victorian Leicestershire: The Role of the Village Carrier', in A.M. Everitt, (ed.) Perspectives in English Urban History, (London, 1973), 213-240. See also A. Greening, 'Nineteenth Century Country Carriers in North Wiltshire', Wilts. Arch. & Nat. Hist. Mag., 66, (1971), 162-76; A.M. Everitt, 'Country Carriers in the Nineteenth Century; J. Transport Hist., 3, (1976), 179-202

[3] See for example, H. Carter, 'Urban grades and spheres of influence in South-West Wales: an historical consideration', Scott. Geogr. Mag., 71, (1955), 43-56; P.R. Odell, 'Urban spheres of influence in Leicestershire in the mid-nineteenth century', Geogrl. Stud., 4, (1957), 30-45

[4] L. Caroe, op. cit.

mentioned earlier, these reconstructions are merely part of a much broader discussion, and carrying in itself is not treated in any great depth. The attention given to carrier activity in the second half of the nineteenth century, however, highlights further the neglect of the subject over the 100 years preceding. This is despite the more significant role played by carriers in the national transport system during the second half of the eighteenth and the early part of the nineteenth centuries.

1.iii) Summary and appraisal

The preceding discussion has demonstrated very clearly that remarkably little scholarly research has gone into the study of road transport developments in Britain during the Industrial Revolution period. At the national level, these developments have been accorded surprisingly little attention. With the exception of the brief and often superficial treatments of the subject contained in general works on the history of British transport, only one book has been published that examines this theme explicitly,[1] though with no great degree of success. Of the different aspects of road transport developments at the national level, the turnpikes have proved the focus of the more valuable work, notably that by Albert and Pawson,[2] although neither author makes any attempt to examine or estimate the traffic using key roads. Coaching, in contrast, has suffered from a surfeit of romantic and antiquarian writing, and remarkably little work has been published which can be considered to be of true value. Carrying, meanwhile, proves to have been almost totally neglected, with but a handful of published articles in existence of any kind. The picture at the regional and local level is little different. Once again, the turnpikes have proved the focus of the more valuable work, the best of which appeared in a paper published over 40 years ago.[3] In the realm of coaching, Dickinson's pioneer article on stage-coach services in the Yorkshire West Riding[4]

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[1] J. Copeland, Roads and their Traffic ..., op. cit.

[2] W. Albert, The Turnpike Road System ..., op. cit.; E.J. Pawson, The Development of the Turnpike Road System ..., op. cit.

[3] A. Cossons, The Turnpike Roads of Nottinghamshire ..., op. cit.

[4] G.C. Dickinson, op. cit.

remains the only really serious regional study of the subject. Finally, detailed regional or local studies of carrier activity seem to be entirely absent, in spite of the encouraging results of investigations on carriers in a rather later period.

The explanations for this neglect are by no means clear. It is clear, however, that the time for full re-examination of the whole subject is long overdue. At present, one is faced with the curious paradox whereby on the one hand economic historians are in close agreement about the vital role played by inland transport developments during the Industrial Revolution period, while on the other our knowledge and understanding of a major part of these developments is far from complete. Recently, writers on British transport history in the Industrial Revolution period have been criticised for failing to relate developments in transport to the process of economic change. Thompson, for example, has asserted that 'the exact relationship between transport and the growth of the economy is one of the least understood aspects of the British Industrial Revolution'.[1] However, an essential pre-requisite to examination of this relationship is a full understanding of the transport developments themselves, and in the case of road transport this is very much lacking. The present thesis cannot hope to remedy such a basic omission. It can, though, serve to highlight it, and in so doing, stimulate similar research on other regions of Britain. Only then will it be possible to examine fully the relationship between transport developments and the process of economic change during the Industrial Revolution.

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[1] A. Thompson, The Dynamics of the Industrial Revolution, (London, 1973), 39

CHAPTER TWO

SOURCES

The study of any aspect of a region's historical geography is closely influenced by the nature of the sources. The type, range and survival rates of source materials invariably have a strong conditioning effect on the form of study and on the approaches to analysis. In addition, the reliability of source materials must be taken carefully into account, as this has a direct bearing on any conclusions that may eventually be drawn. The central concern of the present chapter is to survey the type, range and survival rates of the source materials upon which the major part of this thesis draws and to comment upon their reliability. The aim is not only to assist the reader's understanding of the form of study adopted and the approaches to analysis employed, but also to offer some guide-lines for future researchers in the field.

One of the distinguishing marks of studies in British historical geography in the past two decades has been the common tendency to rely upon a single source. The tendency is epitomised in the work of Darby and others on Domesday England[1] and is reflected further, for example, in studies by Baker, Sheail, Kain, and Phillips and Walton.[2] Whilst there are often sound reasons for adopting such a line of investigation - particularly in the medieval period - there are many inherent dangers. Historical sources, by their very nature, frequently impose interpretative restrictions, and to accentuate these through reliance upon a single source is hard to justify. The present study, though admittedly by no means the first, breaks well away from the single source tradition. Instead, firm emphasis is placed on an eclectic approach to sources. In no sense does this imply that aspects of the study have not been moulded

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[1] See for example, H.C. Darby & E.M.J. Campbell, The Domesday Geography of South-east England, (Cambridge, 1962)

[2] A.R.H. Baker, 'Evidence in the Nonarium Inquisitiones of contracting arable lands in England during the early 14th century', Econ. Hist. Rev., 19, (1966), 518-32; J. Sheail, 'The distribution of taxable population and wealth in England during the early 16th century', Trans. Inst. Br. Geog., 55, (1972), 111-25; R.J.P. Kain, 'Tithe surveys and landownership', J. Hist. Geogr., 1, (1975), 39-48; A.D.M. Phillips & J.R. Walton, 'The distribution of personal wealth in English towns in the mid-nineteenth century', Trans. Inst. Br. Geog., 64, (1975), 35-48

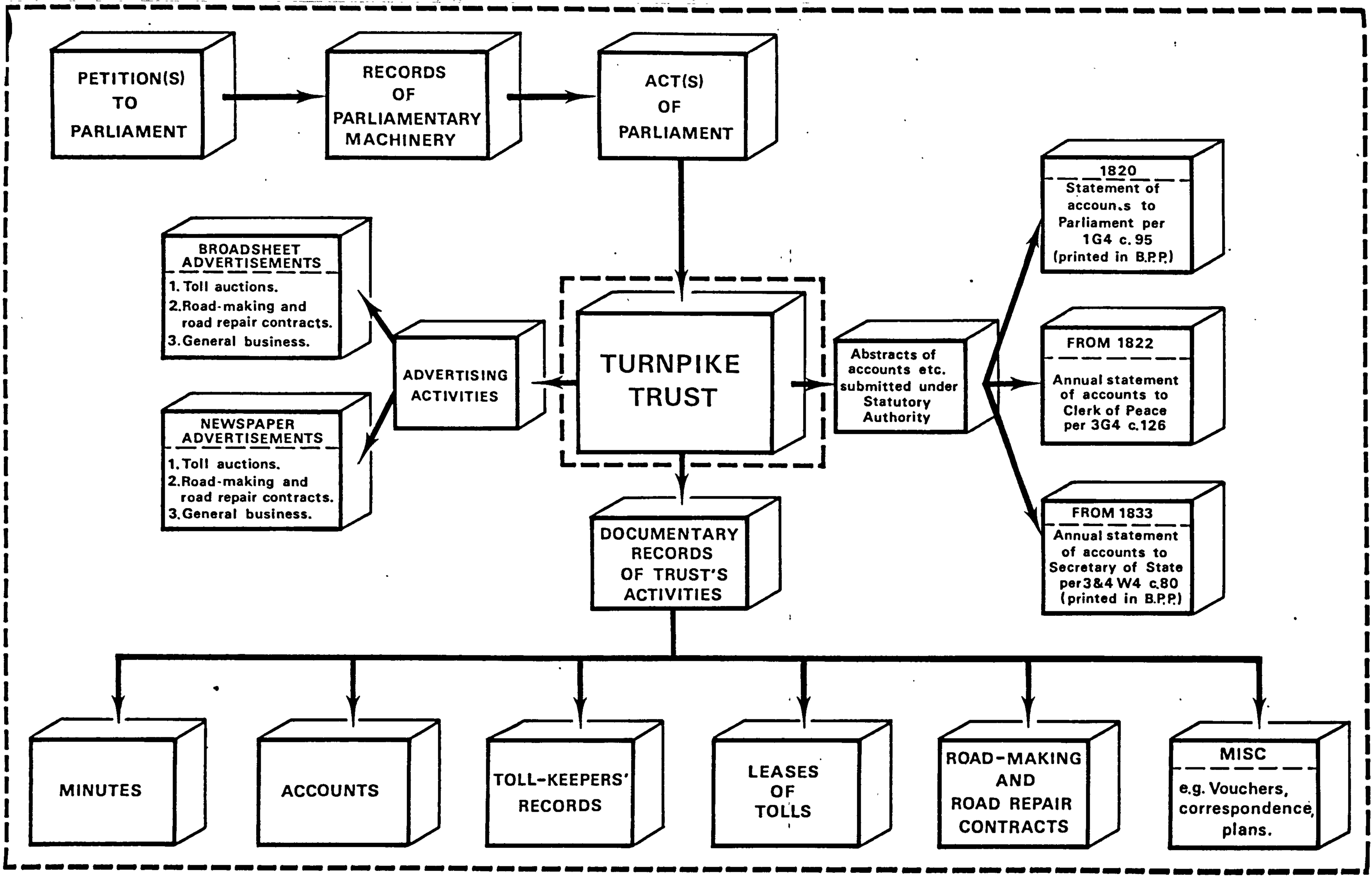
PETITION(S) TO PARLIAMENT
RECORDS OF PARLIAMENTARY MACHINERY
ACT(S) OF PARLIAMENT
BROADSHEET ADVERTISEMENTS
1. Toll auctions.
2. Road-making and road repair contracts.
3. General business.
NEWSPAPER ADVERTISEMENTS
1. Toll auctions.
2. Road-making and road repair contracts.
3. General business.
ADVERTISING ACTIVITIES
TURNPIKE TRUST
Abstracts of accounts etc. submitted under Statutory Authority
1820
Statement of accounts to Parliament per 1G4 c. 95 (printed in B.P.P.)
FROM 1822
Annual statement of accounts to Clerk of Peace per 3G4 c.126
FROM 1833
Annual statement of accounts to Secretary of State per 3&4 W4 c.80 (printed in B.P.P.)
DOCUMENTARY RECORDS OF TRUST'S ACTIVITIES
MINUTES
ACCOUNTS
TOLL-KEEPERS' RECORDS
LEASES OF TOLLS
ROAD-MAKING AND ROAD REPAIR CONTRACTS
MISC
e.g. Vouchers, correspondence, plans.

FIGURE 2.1

by the dictates of the sources; it implies rather that subject and not source has remained uppermost throughout investigations.

The survey is divided into three main sections: the first deals with turnpikes and relates to chapters six and seven; the second deals with stage-coaches and concerns chapter eight; the third deals with carriers and concerns chapter nine.

2.i) Turnpikes[1]

Unquestionably the most significant feature about sources on turnpikes is that all turnpike roads were administered by statutory authorities. Each was established under separate Act of Parliament,[2] and from the early nineteenth century, the regulations governing their form and running became progressively standardised.[3] The result is that sources on turnpikes exhibit a degree of uniformity which is somewhat uncharacteristic in the normal run of historical evidence. The type and range of sources are indicated in figure 2.1 and the following discussion is structured with this diagram in mind.

a) Parliamentary records (legislative)

Since a turnpike road and the body responsible for its administration - the turnpike trust - could be established only by Act of Parliament, there is a wealth of documentation amongst Parliamentary records.[4] The House of Lords Record Office holds full collections of

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[1] For a useful short guide to sources on turnpikes, see B.F. Duckham, 'Turnpike records', History, 53, (1968), 217-20

[2] It should be noted here that these Acts were virtually always for a limited duration - usually 21 years. Continuation was effected by obtaining a renewal Act - again usually lasting 21 years. In most cases, the granting of a renewal was semi-automatic.

[3] Two important landmarks in this standardisation process were the General Turnpike Acts of 1773 and 1822 (13 Geo. III c. 84; 3 Geo. IV c. 126) which consolidated the various regulations.

[4] For a general guide to the Parliamentary records relating to transport history, see M. Bond, 'Materials for transport history amongst the Records of Parliament', J. Transport Hist., 4, (1959-60), 37-52

turnpike petitions and turnpike bills presented before Parliament, and the passage of the latter through the complex Parliamentary machinery can be readily traced by referring to the Journals of the House of Commons and the House of Lords, which provide a summary day-to-day record of Parliamentary business. The successful passage of a bill resulted in the granting of an Act of Parliament and the House of Lords Record Office holds copies of all Turnpike Acts. The originals are in the form of manuscript rolls, but sometimes printed versions are available as well. Printed versions may also survive in local record offices, amongst the deposited records of the local turnpike trusts. As Bond has indicated, however, a number of these are almost certainly just bills at one stage or other on their progress through Parliament.[1]

The Turnpike Acts, both initial and renewal,[2] form a central source in turnpike studies. They provide vital information on a great variety of matters, the most important in respect of the present study being the courses of the roads turnpiked, the schedules of tolls charged, and the numbers of tolls payable. Amongst the other types of information incorporated are the names of the trustees, the numbers of trustees required for a quorum at meetings, details concerning toll exemptions, and the extent of trust rights to the removal of repair materials from commons, wastes and private lands. In themselves, these other types of information are of little relevance to the geographer, but where, for example, frequency of trust meetings is being examined, or where toll income is being used as a traffic indicator, they are often of critical importance, as will become clear later.

b) Trust records

A second consequence of the statutory nature of turnpike roads, and more particularly, of the trusts set up to administer them, is that they were legally obliged to keep records of their various activities. The power that trusts possessed to raise money on the security of the tolls also made such record-keeping essential. The documentary records of

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[1] M. Bond, op. cit., 38

[2] See this chapter, p. 20 Note 2 - The necessity to renew an Act after 21 years provided a valuable opportunity for making amendments. Hence, many renewal Acts are termed amending Acts.

trusts' activities fall into a number of well-defined categories, and these are often coincident with the functions of the various trust officials.

The most important category of records is probably that made up by the minutes, which were kept by the trust clerk.[1] These invariably provide a fairly detailed record of the business transacted at trust meetings, including orders made regarding road maintenance and improvements, and are a natural starting point for any study of trust activities. Some early minutes also contain information on trust accounting, and later minutes are seldom without some reference to financial matters.

A second major category of trust records is that made up by the accounts, which were the responsibility of the treasurer. Although exact methods of accounting varied from one trust to another, the general pattern was for accounts to be balanced on a six-monthly or annual basis and for a clear distinction to be made between income and disbursements within the accounting period. The amount of detail included, though, is highly variable. Some of the accounts of Southern Hampshire trusts, for instance, are very full in the information that they contain - in the case of disbursements, sometimes even giving their exact purpose as well as the names of the payees and the amounts involved.[2] Other accounts, in contrast, contain only the barest information.[3] Such variability obviously imposes significant restrictions on the forms of analysis that may be employed, and the picture is often complicated further by continuity deficiencies. These are especially evident where the office of treasurer changed hands several times over a fairly short period, as was the case with the Gosport trust in Southern Hampshire between the late 1790s and the early 1820s.[4] Here,

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[1] Up to 1822, the clerk often held the post of treasurer as well, but from that date the practice became illegal under the provisions of 3 Geo. IV c. 126

[2] See for example, Hants. R.O., Treasurers' Accounts of the Southampton North, Winchester-Stockbridge, Winchester-Stephen's Castle Down and Gosport trusts, 4M30/14-16; 4M30/5-6; CC, 4M30/10-11; 36M72

[3] See for example, Hants. R.O., Treasurers' Accounts of the Ringwood-Wimborne trust, 8M47/1

[4] The office passed from James Bedford to John Pooke in 1797, from John Pooke to William Maidman in 1808, and from William Maidman to George Grant in 1820 - Hants. R.O., 36M72

Southampton Turnpike Tolls, taken at Marlbrook Pond Gate, the 6th Day of August 1840

Descripton.	Rate	12 to 8				8 to 4				4 to 12				Total.		
		Particulars	£.	s.	d.	Particulars.	£.	s.	d.		£.	s.	d.	£.	s.	d.
Horses drawing light Carriages	3	—				7 Horses at 3d		1	9	6 Horses at 3d		1	6		3	3
Ditto drawing Stage Carriages, Vans, Caravans, &c., not including regular Stage Coaches																
Horses or other Beasts drawing Waggons or Carts, having Wheels of 6 inches and upwards																
Ditto having Wheels 4½ inches, and less than 6 inches	4d	4 Horses		1	4	—									1	4
Ditto having Wheels of less than 4½ inches	4½	6 Horses		2	3	7 Horses at 4½		2	7½	2 Horses at 4½			9		5	7½
Ditto drawing Stone or Timber Waggons, payable more than once a day. Half Toll																
Horses, &c., not drawing	1d	5 Horses			5	4 Horses at 1d			4	4 Horses at 1d		4			1	1
Oxen and Cows																
Calves, Swine, Sheep, or Lambs																
Carriages drawn or impelled by Machinery							1									
Overweights																
														£	0	11	3½

I Robert Pearce hereby certify, that the before mentioned Sums are the whole amount of the Collections received at the Marlbrook Pond Turnpike Gate and Side Bar, this day at the several times named; and that I have not suffered any thing to pass the above named Gate and Side Bar, without paying every legal Toll due thereat. Likewise I am willing to make oath when required, that I have not purloined, or kept, any part of the money received at the above named Gate and Side Bar, as witness my hand, this 6th day of August 1840

Robert Pearce

FIGURE 2.2

the changes of treasurer were accompanied by marked changes in accounting methods.

A third category of trust records consists of tollkeepers' accounts. Although the tollkeeper had little to do with the overall running of the trust, he was, nevertheless, a highly important figure in trust operation and was invariably required to keep some kind of record of his takings. Like trust accounts, tollkeepers' accounts all conform to the same general pattern, in the sense that regular balances were struck - normally on a weekly basis. Unfortunately, and like trust accounts again, the amount of detail included about tolls taken is highly variable. In some cases, the information extends to giving details of vehicle types and numbers of horses drawing: in others, only the date and the toll paid are itemised. A number of the larger trusts supplied tollkeepers with specially printed forms on which various details had to be inserted. This practice was followed by the Southampton South trust from the 1830s onwards[1] (fig. 2.2). For the purpose of examining traffic movement, however, this particular series of records is virtually useless, since the forms are set out in such a way as to record horses or other animals in draught, and not vehicles.

A category of records which is closely related to tollkeepers' accounts is that comprising toll leases. Before a trust could let its tolls, a formal agreement or lease had to be drawn up. -These agreements or leases always record the size of the annual payment involved, and they provide a valuable indicator of traffic magnitudes.

The practice of letting or 'farming out' was not confined to the sphere of toll collection; it was also common, for instance, in the realm of road-making and road repair. Instead of undertaking such work itself, a trust often found it advantageous - on account of the reduced administrative burden - to contract it out to private individuals or partnerships for a set payment. As with the letting of tolls, this involved the drawing up of a formal agreement or contract and thus road contracts form a further category of trust records. In most cases, they contain fairly detailed specifications as to the nature of the work required, including the type of materials to be used, and where

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[1] See Soton. R.O., D/PM 8/8/1

Trust	Year of first Act	Minutes	Accounts	Toll-keepers' accounts	Toll leases	Road Con-tracts
Portsmouth-Sheet Bridge	1710	+				
Kingston-Sheet Br. Lower	1749					
Sarum-Eling	1753	*	+			
Winchester Upper	1753					
Winchester Lower	1753					
Andover	1755		+			
Stockbridge	1756	+				
Whiteparish-So'ton	1756					
Gosport	1758		+	+	+	+
Southampton North	1758	*	+			
Southampton South	1758	*	+	+	+	+
Winchester-Stockbridge	1758	*	+		+	
Winchester-S.C. Down	1758	*	+			
Popham-Winchester	1759					
Winchester-Romsey	1759	+	+			
Romsey-Ringwood	1759					
Ringwood-Wimborne	1759	*	+		+	
Winchester-Andover	1762					
Winchester-Newtown	1762					
Cosham-Chichester	1762					
Romsey-Stockbridge etc.	1764					
Lymington	1765					
Botley	1765					
Andover-Chilton	1766					
Petersfield-Ropley	1772					
Basingstoke-Alton etc.	1795				+	
London-Southampton	1801	*	+	+	+	
St. Cross-Park Gate	1810	+				
Titchfield-Cosham	1810					
Winchester-Petersfield	1825					
Midhurst-Sheet Bridge	1825					
Farnham-Petersfield	1826					
Cranbourne & New Forest	1832					
B. Waltham & F. Pond	1833			+	+	+
Andover station	1840					
Christchurch-Lyndhurst	1841					

* Complete from date of first Act to 1850

\+ Partially complete from date of first Act to 1850

TABLE 2.1

new roads were being made, the precise road width, road elevation, and the form and dimension of ditches and banks.[1]

In addition to the five categories of records so far identified, there are a whole variety of other kinds of trust records, and for the purposes of this discussion, these are grouped under the general heading of miscellaneous. Examples of such records are provided by vouchers or bills relating to work done on trusts' behalf, correspondence arising from the diverse range of trusts' business activities, and scale plans of trusts' roads.

While the type and range of trust records may be varied and considerable, the benefit to the researcher depends upon the survival rate of records. In common with most kinds of local records, survival rates for turnpike trust records vary markedly from one part of the country to another. Rather fortunately for the present study, Hampshire is in a fairly favoured position here (relatively),[2] a considerable quantity of trust documentation having found its way into the several local record offices. The survival rates for records of the 36 Southern Hampshire trusts, distinguishing the five categories identified earlier, are indicated in table 2.1. Minutes form the most well represented category, with complete or partially complete sets surviving for eleven trusts. Accounts survive in partially complete form for ten trusts, and tollkeepers' accounts in partially complete form for four trusts. Lastly, toll leases are extant for seven trusts and road contracts for three. As might be expected, there is a fairly clear pattern of survival, with trusts generally having either several categories of records to their credit, or else none at all. This is almost certainly a reflection of the way trust documentation has tended to be deposited in bulk from local solicitors' offices. At first sight, the survival rates indicated in table 2.1 may seem poor. However, when account is taken of the Parliamentary records discussed earlier, along with the records associated with trusts' advertising activities[3] and the records arising from returns

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[1] See for example, Hants R.O., Gosport road contracts (Wickham-Droxford section), 1829-36, CC. 28; Hants. R.O., Bishop's Waltham and Fisher's Pond road contract, 1833, 5M54/145

[2] Personal communication from Dr. Eric Pawson, University of Canterbury, New Zealand

[3] See this chapter, p. 29-30

made by trusts under statutory authority from 1820,[1] this apparent poverty is rendered considerably less significant.

A problem of equal importance to survival rates, though one very much open to dispute, is the question of the reliability of trust records. Turnpike trusts have been criticised on numerous occasions for their defective administration, almost to the point that corrupt practices are considered to have been universal.[2] Albert has recently cast considerable doubt on this view by demonstrating that a substantial number of trusts were administered fairly competently, particularly when measured against the overall quality of contemporary administration.[3] The aim here is to place the reliability question into clear perspective, and in the light of this, to comment briefly on the position concerning the surviving trust records for Southern Hampshire.

The reliability question is undoubtedly of greatest relevance on the financial side of trusts' activities. It is here that there was most scope for the operation of corrupt practices. The trust officials most at risk were the treasurer, the tollkeeper and the surveyor. The treasurer had overall responsibility for a trust's financial affairs and the accounts form the record of his work. The treasurer's primary position obviously lent itself to fraud, but his work in no sense passed unchecked, in that it was common practice when balances had been struck for a treasurer's accounts to have to be approved by an assembled group of trustees. It is quite possible that with some trusts such approval was semi-automatic, but where trusts had a vigilant group of trustees, the picture was almost certainly different. In addition to this particular check, from 1820 trusts were obliged by law to submit financial returns to independent authorities.[4] Whilst this in no sense provided a direct check on the 'bona fides' of a treasurer's accounting, it undoubtedly constituted a deterrent to indulgence in corrupt practices through the virtual imposition of a standardised accounting procedure, especially after 1833. Although the treasurer's primary

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[1] See this chapter, p. 31-32

[2] See for example, S. & B. Webb, The Story of the King's Highway, (London, 1913), 114-64

[3] W. Albert, The Turnpike Road System in England, 1663-1840, (Cambridge, 1972), 91-2

[4] See this chapter, p. 31-32

position in trust financial activities thus offered considerable scope for fraud, there are sound reasons for believing that the situation in practice was less serious. This conclusion is reinforced by what is known about the kinds of people who were appointed to the posts of treasurer. Invariably, appointees were persons of considerable substance and prominence. They had to be of considerable substance because under the 1773 General Turnpike Act[1] a financial bond was required before commencement of duties; they had to be of considerable prominence because this was more likely to ensure and encourage trust investment. Hence many posts of treasurer were occupied by well-known local townsmen, and increasingly from the early nineteenth century, by local bankers. Finally on the reliability of treasurers' accounts, there is the question of the nature of the accounts themselves. It is arguable that detailed scrutiny of such accounts must offer at least a modicum of insight into their reliability. Where, for instance, the accounting system follows a fairly regular pattern, where the balancing is generally arithmetically correct, and where there is fairly close tie-up with other categories of records, it is not unreasonable to assume that reliability will be greater here than in situations where such conditions are not met or approached. Inevitably, this is very much a subjective test, but it is not without value.

Like the post of treasurer, the posts of tollkeeper and of surveyor offered much scope for fraud, and perhaps even moreso. For example, there were no well-established mechanisms for checking that all the tolls collected at a gate were passed on to the treasurer. It is true that tollkeepers were normally required to keep a written record of their takings, but there was nothing at all to prevent items being omitted and a significant illegal profit thereby obtained. For this reason, the reliability of tollkeepers' accounts must be regarded with some suspicion. In turn, this must also affect the reliability of treasurers' accounts. However, as was stated previously in connection with treasurers' accounts, it is arguable that detailed scrutiny of tollkeepers' accounts - particularly the consistency of general magnitudes - must offer some insight into their reliability, although again this is very much a subjective test. The position in respect of surveyors was rather similar. The surveyor had almost sole responsibility

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[1] 13 Geo. III c. 84

for organising road repairs and improvements. It was the surveyor who engaged the labourers and tradesmen and it was normally through him that all bills and payments passed. The opportunities for fraud here were clearly considerable and it is quite conceivable that sizeable quantities of funds which were recorded in the treasurers' accounts as having been expended on the roads in fact went into the surveyors own pockets. Checks on surveyors' activities, though, were not completely absent. Treasurers, for instance, could insist on dealing with all financial transactions themselves, while reasonable vigilance on the part of the trustees, particularly as to the condition of the road, would have made it difficult for large-scale misappropriation of funds to go undetected.

Most trusts were very much aware of the scope that tollkeepers and surveyors possessed for engaging in fraudulent practices, and increasingly from the later eighteenth century onwards they resorted to the system of 'farming out' wherever possible. By letting tolls in return for a fixed annual payment, they avoided the possibility of fraud amongst tollkeepers. Similarly, by contracting road-making and road repair work out for set payments, they avoided the possibility of fraud amongst surveyors. 'Farming out' was not adopted universally, but there is no doubt that it was widespread by the early years of the nineteenth century, and particularly in respect of toll collection.

In the light of these various considerations, what can be said about the reliability of the surviving trust records for Southern Hampshire? The picture in respect of treasurers' accounts is a favourable one. Examination of extant corresponding minutes, for instance, shows that it was regular practice for treasurers' accounts, when balances had been struck, to be approved by an assembled group of trustees, and for some trusts there is fairly clear evidence that this was not semi-automatic.[1] Similarly, the legal obligations of trusts, from the early 1820s, concerning the submission of annual statements, had a clear effect on the form of accounting. Entries became increasingly more standardised after this date, with income and disbursements distinguished into specific categories, and the scope for corrupt practices to go undetected was thereby lessened. Furthermore, appointees to the posts of treasurer were, more often than not, persons of considerable substance and prominence, and increasingly from the early nineteenth

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[1] For example, where the approval of a treasurer's accounts was on the agenda of a trust meeting, trustee attendance frequently rose significantly.

century, local bankers.[1] Finally, with at least five out of the seven fullest sets of surviving accounts, the accounting system follows a fairly regular pattern, the balancing is generally arithmetically correct, and there is fairly close tie-up with other categories of extant records.[2]

The picture in relation to the tollkeeper and the surveyor is rather more difficult to establish. The basic problem here is the paucity of surviving tollkeepers' accounts[3] and the almost complete absence of formal surveyors' accounts.[4] However, some indirect record of tollkeepers' accounts is, of course, to be found in treasurers' accounts, and careful scrutiny of such entries - particularly the consistency of general magnitudes - gives a relatively favourable picture. It is true that fluctuations in monthly or weekly toll income levels are far from absent, but where these do occur, they can invariably be explained by examining the timetable of annual fairs or other similarly important events affecting the region.[5] Only one clear instance of possible fraud on the part of a gatekeeper was discovered. This was for the Southampton North trust in 1778/9 when a change of tollkeeper was accompanied by a virtual doubling of toll income.[6] Treasurers' accounts also, of course, provide some indirect record of surveyors' accounts or activities. However, the considerable variety of accounting items involved here - compared with just one in the case of toll

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[1] In 1816, for instance, Messrs. Wickham & Co., bankers of Winchester, were appointed to the posts of treasurer to the Southampton North, Winchester-Stockbridge and Winchester-Stephen's Castle Down trusts - Hants. R.O., 4M30/2

[2] The five sets are those for the Gosport (excepting 1797-1820), Southampton North, Southampton South, Winchester-Stockbridge, and Winchester-Stephen's Castle Down trusts.

3 This paucity is made even worse by the fact that three of the four sets of surviving accounts cover periods of less than a year.

[4] As will have been noticed from the earlier discussion, formal surveyors' accounts do not form a significant category of trust records, anyway.

[5] This is ignoring fluctuations due to changes in levels of tolls.

[6] Hants. R.O., 4M30/14

income - makes assessment of reliability difficult. The extent to which treasurers dealt with all financial transactions themselves is similarly hard to assess. The trustee check on the misappropriation of road expenditure funds, though, is normally revealed in the minutes and the picture here is by no means unfavourable. There are quite frequent instances amongst the surviving minutes of trustees dismissing or suspending surveyors due to either the defective condition of parts of their roads or other clear misappropriation of funds.[1] Finally, it must not be forgotten that the possibility of fraud could be avoided by resorting to 'farming out'. The practice was first employed by trusts in the region in the early 1780s, and by the early nineteenth century it had become widespread, in respect of both toll collection and road repair, especially in the former case. Thus, one is probably justified in concluding that the reliability question in relation to the tollkeeper and the surveyor diminished in importance over the passage of time.

c) Advertising records

Since turnpike trusts were concerned with the administration of public rights of way, and since they often desired to 'farm out' aspects of their various activities to other parties, there was necessarily a strong commitment to advertising. There were two ways of meeting this commitment: trusts could commission the printing of special broadsheets or handbills and arrange for these to be posted in appropriate public places; alternatively, they could insert notices in the local newspapers. Most trusts used both of these methods at various times during the course of their existence, and some used the two concurrently.

The most significant item in trusts' advertising activities, particularly from the 1780s, was without doubt the toll auction notice. Although this was in part due to the growing popularity of 'farming out', it was also a reflection of the fact that, under the General Turnpike Act of 1773,[2] trusts were obliged to advertise in advance if they intended to lease (viz. auction) tolls. They were also obliged to include on the

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[1] See for example, Hants. R.O., Minutes of Southampton North trust, 1778, 4M30/1; Hants. R.O., Minutes of London and Southampton trust, 1809, 5M54/111

[2] 13 Geo. III c. 84

advertisement the sum for which the tolls were let the previous year, or if they had not been let, the total tolls collected. The inclusion of this particular information is of considerable importance, since it permits the examination of toll income patterns where few or no actual trust records survive. Some Southern Hampshire trusts, when giving notice of toll auctions, gave toll income figures for three or more previous years, and particularly where tolls were being offered for auction for the first time.[1] Clearly, the value of toll auction notices is therefore considerable.

The second most important item in trusts' advertising activities was the notice inviting tenders for road-making or road repair. Unlike toll auction notices, these rarely give details of the sums for which previous contracts were made, but they often provide useful information about trusts' road-making or road repair plans, and notably where minutes are not extant.

Like trust records, the utility of advertising records is closely conditioned by the rate of survival. The position for Southern Hampshire here is fairly clear. There are remarkably few surviving broadsheets or handbills, but there are full collections of local newspapers. It might be suggested that there can really be no survival problem with local newspapers since full sets invariably survive in either local or national repositories. However, this is not entirely true, and particularly in the case of those newspapers which ran for a limited period. In addition, of course, exhaustive search of particular newspapers is often only practicable where they are available close to the research base. Four local newspapers were consulted during the course of research: the Hampshire Chronicle (est. 1772), the Salisbury and Winchester Journal (est. 1772),[2] the Hampshire Telegraph and Sussex Chronicle (est. 1799), and the Hampshire Advertiser (est. 1823).[3] Of these four, the Hampshire Chronicle and the Hampshire Advertiser were subjected to comprehensive scrutiny, the former for the period 1772 to 1830, the latter for the period 1823 to 1850. The main reason for the selection of these two papers was that they were the ones showing the greatest degree of contiguity with the study area as measured by local news coverage. The Hampshire Chronicle was not examined beyond 1830 for reasons of time.

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[1] See for example, Hampshire Chronicle, 3/6/1793

[2] Formerly the Salisbury Journal (est. 1729)

[3] Until 1827, this paper was called the Southampton Herald

d) Statistical records submitted under statutory authority

As mentioned previously, from 1820 trusts were obliged by law to submit financial returns to independent authorities. There were three separate Acts involved here. The first, which was passed in 1820,[1] required every trust to make a detailed submission to Parliament noting such things as mileage, annual income and expenditure (both averaged over three years), balance of accounts, and dates of authorising Acts. Unfortunately, this was a 'one-off' return only, but the complete series for all trusts is available in printed form in British Parliamentary Papers.[2] The second Act, which was passed in 1822,[3] required every trust to send a full financial statement annually to the local Clerk of the Peace. This time, though, there was no specific stipulation as to the form of the return, nor as to the period of the year to be employed. The result is that such returns, where they survive, present considerable difficulties of comparison. The third Act, which was passed in 1833,[4] was unquestionably the most significant of the three. It required every trust to submit a highly detailed financial statement annually to Parliament, and the complete series for all trusts is available in printed form in British Parliamentary Papers.[5] Trusts had to distinguish no less than 38 different categories of information and the period of the year was set at January to December. As a result, there are virtually no difficulties of comparison.

The statistical returns arising from the 1833 Act are the ones drawn on most heavily in the present study. Not only do they provide extremely valuable information on toll income and road expenditure over the period 1834 to 1850, but they generally obviate the need for examining in detail the surviving trust accounts after 1833. Apart from such advantages, though, they are in fact the only 'run' of statistical returns available for Southern Hampshire trusts, since none of those sent to the local Clerk of the Peace have survived.

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[1] 1 Geo. IV c. 95

[2] B.P.P., 1821 (747) iv. 343

[3] 3 Geo. IV c. 126 - This was the second General Turnpike Act.

[4] 3 & 4 Wm. IV c. 80

[5] The series begins in B.P.P., 1836 (2) xlvii. 297 - For reasons which are unclear, there are no statements for 1846

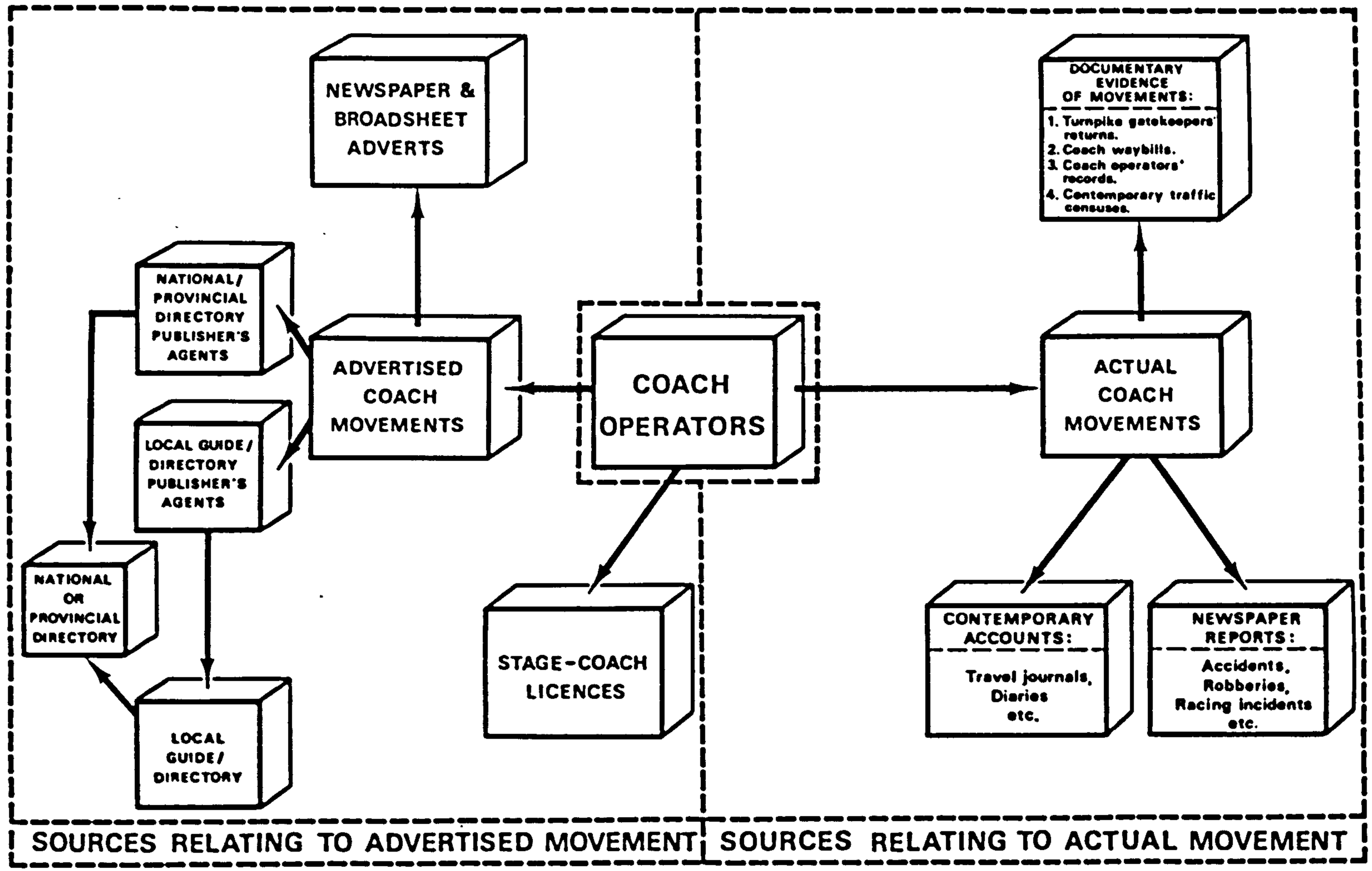
NEWSPAPER & BROADSHEET ADVERTS
DOCUMENTARY EVIDENCE OF MOVEMENTS:
1. Turnpike gatekeepers' returns.
2. Coach waybills.
3. Coach operators' records.
4. Contemporary traffic censuses.
NATIONAL/ PROVINCIAL DIRECTORY PUBLISHER'S AGENTS
ADVERTISED COACH MOVEMENTS
COACH OPERATORS
ACTUAL COACH MOVEMENTS
LOCAL GUIDE/ DIRECTORY PUBLISHER'S AGENTS
NATIONAL OR PROVINCIAL DIRECTORY
STAGE-COACH LICENCES
CONTEMPORARY ACCOUNTS:
Travel journals, Diaries etc.
NEWSPAPER REPORTS:
Accidents, Robberies, Racing incidents etc.
LOCAL GUIDE/ DIRECTORY
SOURCES RELATING TO ADVERTISED MOVEMENT
SOURCES RELATING TO ACTUAL MOVEMENT

FIGURE 2.3

Finally in this discussion on turnpike sources, it is important to draw attention to the considerable number of reports on individual turnpike trusts produced by Parliament towards the middle of the nineteenth century, and also the four county reports on turnpike trusts produced by Parliament at about the same time. All these reports are available in printed form in British Parliamentary Papers, and as they in many ways represent a by-product of the post-1833 'run' of statistical returns, it is appropriate to mention them briefly here. The reports on individual trusts were invariably associated with applications for renewal Acts. Three such reports exist for Southern Hampshire and they yield useful information on a variety of matters.[1] The four county reports, one of which covers Hampshire,[2] form comprehensive surveys of the local turnpike trusts, though with particular emphasis on the effects of railway competition. The reports are accompanied by valuable statistical tables and maps, the former based closely on the post-1833 returns.

2.ii) Stage-coaches

In common with turnpike sources, sources on stage-coaches are both numerous and varied. Their type and range are indicated in figure 2.3 and the following discussion is structured with this diagram in mind. Broadly speaking, the sources may be divided into two kinds: those relating to actual coach movements and those relating to advertised coach movements.

Among the sources relating to actual coach movements, those providing documentary evidence of movements are particularly important. The business of coach operations involved considerable administrative work both on the part of the operator and also his various contractors and employees, and records of this work form a valuable source. Operators' memoranda and accounts, for instance, cast useful light on the organisation and economics of coach operations, while guards' waybills offer valuable information about coach loadings (fig. 2.4). Since stage-coaches nearly always used turnpike rather than parish

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[1] The three reports cover the Farnham-Petersfield trust (B.P.P., 1850 (1187) xlix. 319), the Romsey-Stockbridge etc. trust (B.P.P., 1852 (1452) xliv. 60), and the London-Southampton trust (B.P.P., 1852 (1443) xliv. 5)

[2] B.P.P., 1852 (1521) xliv. 263 - The other counties covered are Kent, Surrey and Sussex.

LONDON and SALISBURY,

From the WHITE HORSE INN, FETTER LANE, London, on Monday Jan 25th 1836

WAY BILL.

INSIDE.

Salisbury 1 Lewis — GEH.

Do 1 Henry at Houndsw. 1

OUTSIDE.

Salsbury, 2 Lewis —

PARCELS.

Salsbury 1 pp Davis Alton

Andover 2 " Lewis.

Do Brodie — Ward

Herald Office — do

Paid. | To Pay.

1 Cooley | Cooley 5

1 Cooley | Cooley 5

1.16 Cooles

0 0 0 3 6 0

1 Chas Hills

9CH 19/ H H

Mr Higgins have the goodness to send me a Schedule of Friday and 15 lot you send me.

ROAD BILL.

INSIDE.

Thomas 1 Brodie — Cooley

OUTSIDE.

Thomas 1 Brodie —

Welch 1 Lendor —

Laurence 1 — from Andover —

PARCELS.

Andover Bailey Bas²

Barton - Crowdery, "

Hunt Park Fellowes "

Thos Low

P J Willcock

22/ HHO

Paid. | To Pay.

18 Cooley

15 Cooley

6

7 5 0

12 6

Carter

2 5 0

3 6 0

1 13 0

£ 7 19 0

£ 7 18 0

15 -

£ 8 13 0

FIGURE 2.4

roads, records of their movements are invariably to be found amongst tollkeepers' accounts. With some of these accounts, it is impossible to distinguish the stage-coach entries, but with others entries for stage-coaches are specifically itemised. The Southampton South trust, which as mentioned earlier, supplied tollkeepers with specially printed forms for entering tolls,[1] required stage-coach entries to be made entirely separately - on the reverse side of the forms. The range of information required to be entered was considerable (fig. 2.5). A further group of records providing documentary evidence of movements are contemporary traffic censuses. More often than not, these form parts of evidence presented before Parliamentary Committees on railway bills. Before presenting a petition to Parliament, railway promoters - in the early development period especially - frequently commissioned the making of traffic estimates. The making of such estimates usually involved taking censuses of the existing traffic over the routes concerned, and these often contain valuable material on coach movements and also on coach loadings. 1 The censuses taken in 1834 on behalf of the promoters of the London and Southampton Railway, for instance, cover all coaches operating in the vicinity of the proposed line and include detailed surveys of coach loadings at three different geographical locations. This particular body of material is available in printed form in British Parliamentary Papers,[2] but more usually, such censuses are preserved only amongst the manuscript minutes of the Parliamentary Committees, i.e. in the House of Lords Record Office.

In addition to these various documentary sources, a certain amount of useful evidence on actual coach movements can also be found in local newspapers and amongst contemporary accounts (travel journals, diaries etc.). The newspaper evidence normally takes the form of reports about accidents, robberies and racing incidents and is of particular value for information on coach loadings. The evidence amongst contemporary accounts is understandably much more personalised in character, but can still often yield significant material. One example in respect of Southern Hampshire is provided by the letters of Jane Austen,[3] who lived

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[1] See this chapter, p. 23

[2] B.P.P., Report of the Lords Committees on the London and Southampton Railway bill, 1834 (H.O.L. 106) XXIII, 34-8

[3] R.W. Chapman, (ed.) Jane Austen's Letters, (Oxford, 1932)

6" August 1840

Marlbrook Pond Gate

£	s	d
0	11	3½

Detailed Accounts of Stage Coach Tolls, received at Marlbrook Pond **Turnpike Gate,**
the 6" **day of** August **184** 0

Name of Coach.	From what Office	No. of Horses	No. of ~~Horses~~ Tolls	Amount of each Toll.	Total. s	Total. d	Remarks
Telegraph	Curtis	3	2	– 9	1	6	
Oxford	Curtis	4	2	1	2	"	
Red Rover	Matcham	4	2	1	2	"	
Plough	Matcham	4	2	1	2	"	
Newberry	Fountain	2	1	– 6		6	

FIGURE 2.5

at Southampton and Chawton (near Alton) in the years 1806-9 and 1809-17 respectively.

The sources relating to advertised coach movements cover a slightly broader range. One particularly useful group from the point of view of the detail provided is that comprising the lists of licensed stage-coaches, published annually during the 1830s by order of the Commissioners for the Affairs of Stamps. Stage-coach operators had been liable to stamp duty in one form or other from the 1770s, but it was only during the 1830s that lists were published.[1] They appeared, almost exclusively, in William Robson's series of London and Country directories and were intended primarily as a form of advertisement - hence their classification under this source category. The lists are normally in two parts: the first concerns coaches licensed in London, while the second part concerns coaches licensed in the 'country' or in the provinces. The information incorporated ranges from the places between which a coach ran and the name of the proprietor to the number of journeys made on each day of the week (fig. 2.6).

Another particularly useful group of sources on advertised movement - again from the point of view of the detail provided - is that made up by newspaper and broadsheet advertisements. As stage-coach operators were offering public services, it was obviously in their best interests to ensure that as many members of the public as possible were made fully aware of these. They could either arrange for the printing of broadsheets or handbills and post them in appropriate public places, or else they could insert notices in the local newspapers. Most operators used both of these alternatives, although some favoured one more than the other. As well as incorporating the places between which a coach operated, the days of running and the name of the proprietor, newspaper and broadsheet advertisements frequently include valuable information on fares and on journey times. These are two questions on which the majority of other groups of sources are silent.

The final group of sources on advertised movement is that made up by national, provincial and local directories, and by local guides. From the later eighteenth century onwards, largely in response to the country's growing commercial expansion, there was a marked increase in both the number and scope of these directories and guides, and a

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[1] It should be noted that all original records relating to the payment of duty were destroyed sometime during the later nineteenth century.

ROBSON'S

KEY TO THE MAIL AND COACH CONVEYANCE LIST FOR 1839.

COMPRISING

A LIST OF COACHES

LICENSED TO RUN *TO* AND *FROM* LONDON,

AND THE

BRANCH AND OTHER *COACHES* LICENSED IN THE *COUNTRY*.

Printed by Special Authority of the Commissioners for the Affairs of Stamps.

[ENTERED AT STATIONERS-HALL.

ADVERTISEMENT.

The following List has been compiled under the Authority of the Commissioners of Stamps, with the view of affording to the public at large a convenient reference to all the Stage Coaches Licensed in London and the Country.

The List of Coaches Licensed in the Country, it is expected will be found particularly useful to Commercial Travelers, by informing them of all the Public Carriages which pass between the Places to which they may wish to go.

To the Proprietors of Stage Coaches, these Lists will shew in what manner all the Coaches running upon their respective Roads are Licensed at their respective dates, so that should any individual be incorrectly licensed either as to the route travelled, or the kind of Carriage used he may point out the irregularity to the Commissioners of Stamps for Correction.

The List of Coaches Licensed in London is arranged alphabetically, according to the names of the Places to which they run. In the List of Coaches Licensed in the Country, the names of the principal places stand first.

☞ The [*] which is prefixed to some Figures in the Sunday column, denotes that the Journeys are performed every alternate Sunday.

LIST of STAGE COACHES LICENSED in LONDON.

Places between which running.		*No. of Plates.*	*Proprietors.*	*No. of Miles.*	*No. of Passengers* in	out	*Number of Journies* M	T	W	T	F	S	S
Addlestone	Bolt in Tun, Fleet street	2776	Gray, R, and Co...	23½	4	11	2	2	2	2	2	2	
Alton.	Belle Sauvage, Ludgate hill..	2950	Nelson, J. and Co.	49	4	8	1	1	1	1	1	1	
....	do.	2843	Collyer, A.	42	4	8	1	1	1	1	1	1	
....	Farnborough Station	10209	Bargent, G. and Co.	15	4	5	2		2			2	
Amersham	New Inn, Old Bailey.....	3043	Allen, J.	28½	4	11	2	2	2	2	2	2	
Aylesbury	King's arms, Snow hill.....	3168	Parker, J. H. & Co.	40½	4	8	1	1	1	1	1	1	
....	do.	3169	do.	40½	4	8	1	1	1	1	1	1	
....	Pendley Station	10165	do.	9	4	8	4	4	4	4	4	4	4
Balham Hill	Gracechurch street	1655	Heathcote, Geo. ..	5	12	3	6	6	6	6	6	6	6
....	do.	1656	do.	5	12	3	6	6	6	6	6	6	6
....	do.	1657	do.	5	6	9	6	6	6	6	6	6	6
....	do.	1687	Riches, W.	5	12	3	8	8	8	8	8	8	8
....	do.	1776	do.	5	6	9	8	8	8	8	8	8	8
....	do.	1777	do.	5	6	9	8	8	8	8	8	8	8
....	do.	1755	Render, R.	5	6	9	4	4	4	4	4	4	
....	do.	1771	Nayler, J.	5	12	3	6	6	6	6	6	6	6
....	do.	1804	Hilton, W.	5	10	5	8	8	8	8	8	8	8
....	do.	1805	do.	6	6	9	8	8	8	8	8	8	8
....	Red Lion, Strand	1663	Porter, J.	5½	6	6	6	6	6	6	6	6	6
....	Charing cross	1774	Sheldrick, W.	6	6	9	6	6	6	6	6	6	6
....	do	1775	do.	6	12	3	6	6	6	6	6	6	6
Banbury	Kings arms, Snow hill.....	3035	Parker, J. H. and Co	77	4	8	1	1	1	1	1	1	
Banstead	Sutton	10172	Holden, T. and S.	5	4	5	2	2	2	2	2	2	2
Barking	Bull, Aldgate	5447	White, W.	7	6	9	4	4	4	4	4	4	4
Barton	Spread Eagle, Gracechurch	8854	Chaplin, W. & Co	107	4	8	2	2	2	2	2	2	
....	do.	8855											
....	do.	8856											
Basingstoke ...	Gerard's Hall, Basing lane ..	2941	Monk, J.	50	4	8	1	1	1	1	1	1	

A 1

FIGURE 2.6

particularly important element here was the growing attention and space given to providing information about public transport services, stage-coach services among them.[1] It is a common misconception that inclusion of any individual, establishment or service in a directory or guide was secured only through payment of a fee to the publisher, hence producing problems of interpretation. Whilst this may well be true in respect of individuals and establishments, it was not always the case with services, and certainly not with public transport services. No evidence was discovered during the course of research to indicate that stage-coach operators, for example, paid for their services to be entered. Instead, the practice seems to have been for information on public transport services to be included as a matter of course, in rather the same way as the general historical and topographical descriptions for each settlement. The task of collecting the public transport services data normally fell upon the directory or guidé publisher's agents. The procedure followed seems to have been to visit all the inns, coach and waggon offices in a town and in that way compile as full a picture of the available services from that town as possible. Thus, although the public transport entries in directories and guides represent a form of advertisement, they were the product of an independent survey rather than the product of operators' advertising activities. The information given about stage-coach services in directories and guides is arranged by settlement, as implied above, and it usually covers items such as the destination and route of a coach, the coach name, the days and times of departure, and the departure venue, the latter normally an inn or coach office (fig. 2.7).

The type and range of sources on stage-coaches are clearly varied and considerable, but as with sources on turnpikes - trust records especially - the benefit to the researcher is highly dependent on survival rates. The position of Southern Hampshire here is a somewhat variable one. There are remarkably few surviving sources relating to actual coach movements. The Hampshire area as a whole, for instance,

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[1] Invaluable bibliographical material about directories of the period is to be found in J.E. Norton, Guide to the National and Provincial Directories of England and Wales, excluding London, published before 1856, (London, 1950), and C.W.F. Goss, The London Directories, 1677-1855, (London, 1932)

Bankers.

Atkins John & Son, 2 *Green row.* Draw upon Stone, Martin & Co. London

Branch Bank of England, *High st.*
McCarthy C. E. ..... Agent
Henney J. ..... Sub-Agent

Burbey & Loe, *High st.* Draw upon Williams & Co. London

Grant & Co. *High st.* Draw on Ladbroke & Co. London

Savings Bank, *St Thomas st.*
Atkins J. E. ..... Actuary
Harrison W. ..... Secretary

Fire & Life Assurance Agents.

Argus Fire, 59 *High st* ..... Thos. H. Fiske
British Empire Fire, 81 *ditto* ..... Wm. Harrison
Crown Life, 53 *ditto* ..... W. J. Hay
Eagle Life, *St Marys st* ..... Geo. Martell
Globe Insurance, *St Thomas st* ..... H. G. Way
Hants, Sussex & Dorset Fire, *ditto* ... Chas. Manley
Hope Life, *ditto* ..... Lawrence Smith
Imperial, 46 *High st* ..... Thos. Burbey & Co.
Naval & Military Life, 14 *ditto* ... G. L. Groetham
Palladium Life, *St Thomas st* ... Callaway & Holland
Phœnix Fire, 103 *High st* ..... Wm. Peirce
Phœnix Fire, *St Thomas st* ..... Lawrence Smith
Provident Life & County Fire, *High st* ... D. B. Price
Standard of England, *Lombard st* ... Hendy & Son
United Kingdom, *Grand par* ..... E. H. Binsteed
West of England, *High st* ..... Edward Casher
Yorkshire, 27 *Broad st* ..... Thos. & Alfred Heather

Public Establishments.

Excise Office, *St Thomas st.*
Wright W. ..... Collector
Buckle John ..... Supervisor

Custom House, *Quay.*
Powell James ..... Collector
Case — ..... Comptroller

Stamp Office, 44 *High st*
Luscombe C. ..... Sub-Distributor

Guildhall & Guildhall Committee Room, *Market house, High st*

Philosophical Society, *St Mary st.*
Hawke Rev. Mr. ..... Secretary

Police Station, *Market house, High st.*

Gaol & House of Correction, *Penny st.*
Hunt E. ..... Governor

Newspaper.

Hampshire Telegraph, 81 *High st.* Published on Monday

Consuls.

Lindegren John, *Broad st* ... Brazilian, Sardirnian, Danish & Belgian

Vanderbergh & Sons, *Bath sq* ... Netherlands, Hanovarian, French, Lubec, Portuguese, Bremen, Hamburgh, Columbian & Austrian

Law & Public Officers.

Callaway & Hellard, *St Thomas st* ... Clerks to the County Magistrates, & Solicitors to the Parish of Portsmouth & to the Commissioners of Paving

Greetham S. *ditto* ..... Clerk to Magistrates

Howard John, 133 *High st* ..... Town Clerk

Martell T. *ditto* ... Coroner for Borough of Portsmouth

Sabine James, *Oyster st* ..... Relieving Officer

Public School.

National School. Established 1812. Supported by Voluntary Contributions. Limited to 150 Boys & 140 Girls; on the plan of Dr. Bell, & in the principles of the Established Church

Shaw Thomas ..... Master.
West Mrs. ..... Mistress.

Coaches to

Brighton, Defiance, from *Fountain & George Hotels, Vicat & Faulkner's Office, & Landport Arms,* 10 morn, through Havant, Emsworth, Chichester, Arundel, Worthing, & Shoreham; returns 5 aft.

Bristol, Celerity, from *Fountain & George Hotels, & Landport Arms,* 8 morn. through Southampton, Salisbury, Beckington, & Bath; ret. 7 even.

Bristol, Royal Mail, from *Vicat & Faulkners Office, & Londport Arms,* ½ p. 6 even. through Warminster, Bath, Southampton & Salisbury; returns 8 morn.

Cheltenham, Sovereign, from *Fountain Hotel,* ¼ bef. 7 morn. through Andover, Marlborough, & Cirencester; returns 9 even.

Chichester, Union, from *Fountain, Globe, & George Hotels, & Landport Arms,* 5 aft. through Costern, Havant, & Emsworth; ret. 11 morn.

London, The Accommodation Coach, Van, from *Globe Office, Extons Office, & Landport Arms,* 5 even. through Peterhead & Guildford; returns 7 morn.

London, Independent, from *Fountain Hotel,* and *Landport Arms,* 10 morn. through Cosham, Petersfield, & Farnham, thence per railway; returns ½ p. 3 aft.

London, Mail, from *Landport Arms,* ½ p. 9 even.; returns 6 morn.

London, Railway, from *Extons Office & Landport Arms,* 12 noon, through Petersfield, Guildford, & Kingston; returns 7 even.

London, Regulator, from *George Hotel & Landport Arms,* 9 morn. through Petersfield, Godalming, Guildford, Ripley, & Esher; returns 5 aft.

London, Rocket, from *Vicat & Faulkners Office, Extons Office, & Landport Arms,* 10 morn. through Godalming, Guildford, Petersfield, & Liphook; returns 4 aft.

London, Royal Mail, from *George Hotel,* ½ p. 9 even. through Petersfield, Godalming, Ripley, & Esher; returns 5 morn.

London, Royal Blue, from *Globe Office, Extons Office, & Landport Arms,* 8 morn. through Petersfield, Guildford, Kingston, and Wandsworth; returns 5 aft.

London, Star of Brunswick, from *Fountain Hotel, Vicat & Faulkners Office, & Landport Arms,* 9 even. through Petersfield, Godalming, & Guildford, *viâ* railway; returns 6 morn.

London, Times, from *Blue Posts & Landport Arms,* daily (Sun exc.), 1 aft. through Cosham, Horndean, Petersfield, Liphook, Mousehill, Guildford, Ripley, Cobham, Kingston, Putney; returns ½ p. 8. even.

Oxford, Oxonian, from *Fountain Hotel, Vicat & Faulkners Office, & Landport Arms,* 8 morn. through Petersfield, Alton, Odiham, Reading, & Wallingford; returns 6 even.

Winchester, Sovereign, from *Fountain Hotel & Landport Arms,* ¼ bef. 7 morn. through Fareham, Wickham, Bishops Waltham, and Twyford; returns 9 even.

Carriers to

Bath & Bristol, Waggons, from *Globe Office,* Tues. Thurs. Sat. & Sun. 12 noon, through Salisbury; and forwards goods to all parts of the West; return 4 days.

Chichester, Carriers from *Globe Office,* daily, through Havant and Emsworth.

Fareham, Carrier from *Globe Office,* Tues. Thurs. & Sat.

FIGURE 2.7

yielded two sets of operators' records,[1] one set of waybills,[2] four sets of tollkeepers' accounts,[3] and four sets of traffic censuses.[4] With newspaper reports of coach accidents, robberies and racing incidents, the question is more one of incidence than survival, since as mentioned earlier, there is no real survival problem with local newspapers themselves.[5] For the two main newspapers consulted,[6] a total of some 150 reports were discovered, approximately two thirds of which concerned coach accidents. With contemporary accounts, the question is more one of the number of travel journals and diaries where coach movements are mentioned, and the position of Southern Hampshire here is not favourable. Of the considerable range of travel journals and diaries consulted covering the local area,[7] only about half a dozen contain references to coach movements.

In the realm of sources relating to advertised movement, copies of Robson's series of London and Country directories - those containing the license lists - survive for all years in the 1830s. In contrast, there are only a handful of broadsheet advertisements or handbills extant for coaches operating in the Southern Hampshire area.[8] With

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[1] Winch. R.O., Account bills of London, Southampton and Poole mail-coach, 1790-1 - Winchester Corporation lease - reverse side: three messuages, stable etc., in Colebrook St. to William Thomas Foster, May 1822; Hants. R.O., Letters and notices concerning liabilities of Southampton Coach Co., 1838-40, 29M72/B1-5

[2] Hants. R.O., Waybills of London-Salisbury coach, 1836, 10M57/TR4

[3] See figure 2.3

[4] B.P.P., Report of the Lords Committees on the London and Southampton Railway bill ..., op. cit.; H.L.R.O., Minutes of Evidence, H.C., 1845, Vol. 7, Brighton and Chichester Railway bill Portsmouth Extension, table 1; H.L.R.O., Minutes of Evidence, H.C., 1845, Vol. 76, Southampton and Dorchester Railway, table 1; H.L.R.O., Minutes of Evidence, H.L., 1845, Vol. 13, Direct London and Portsmouth Railway, 131-4

[5] See this chapter, p. 30

[6] See this chapter, p. 30

[7] For an indication of the range, see bibliography, p.266-7

[8] The two main ones cover the London-Portsmouth/Gosport services of the Clark family - Ports. R.O., 1A/8, 11A/14/46

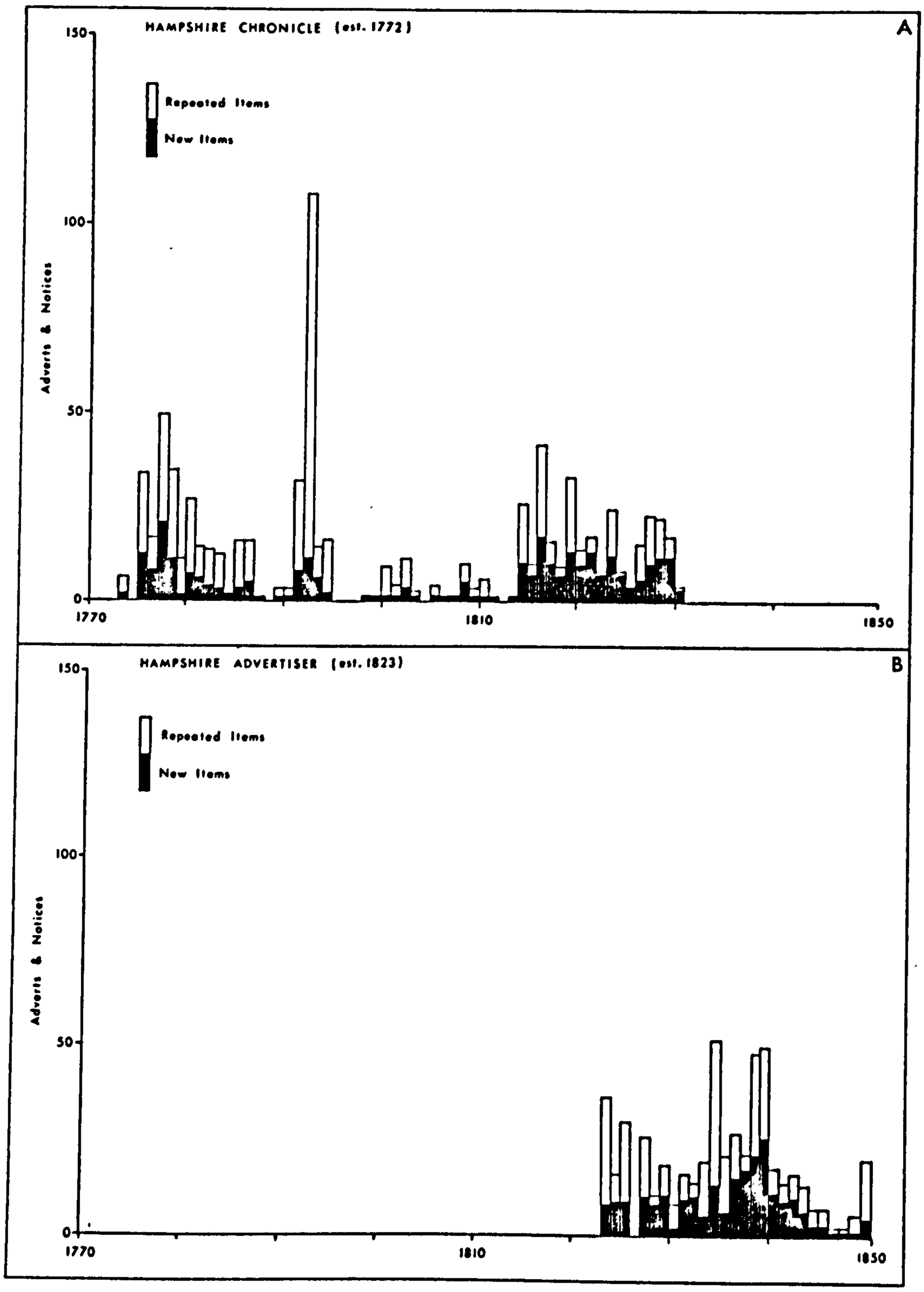
HAMPSHIRE CHRONICLE (est. 1772)
A
Repeated Items
New Items
Adverts & Notices
150
100
50
0
1770
1810
1850
HAMPSHIRE ADVERTISER (est. 1823)
B
Repeated Items
New Items
Adverts & Notices
150
100
50
0
1770
1810
1850

FIGURE 2.8

newspaper advertisements, the question is again more one of incidence than survival. The number of new and repeated items discovered in the two main newspapers consulted[1] is indicated in figure 2.8. The overall annual average for both newspapers, including new as well as repeated items, was 15, but as the histograms show, there were some interesting fluctuations and these will be referred to later in the study. Finally, the survival position for directories and guides is perhaps the most favourable of all. Remarkably few cases were found where directories or guides covering the Southern Hampshire area are known to have been published, but where no copies remain extant. The principal exception was the third general survey made by James Pigot over the period 1831-40. A directory covering a series of English counties, including Hampshire, is known to have been produced as a result of this survey, but no copy seems to have survived.[2] The highly favourable survival rate for directories and guides might be considered justification for leaving the other groups of sources aside. However, there are certain aspects of coaching activity upon which directories and guides are silent, and it is here that the other sources can prove valuable.

In addition to the question of source survival, of course, it is also important to consider source reliability. It might be expected that reliability would be greatest for those sources relating to actual coach movements, simply on account of their being related to actual events. In practice, this is not really the case. It is true that with coach operators' memoranda and accounts, there is unlikely to be a reliability problem, mainly because the coach operators would have been working for themselves. With tollkeepers' accounts, guards' waybills and traffic censuses, though, the reliability problem is fairly important on account of the greater incentive for fraud. The position in respect of tollkeepers' accounts has already been discussed and there is no need for repetition here. In the case of guards' waybills, there was little to prevent fares from passengers picked up 'en route' going straight into guards' own pockets and for no entry to be made on the waybill. Similarly, there was little to stop railway promoters from amending census results to suit their particular objectives, although the practice of Parliamentary Committees calling census-takers

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[1] See this chapter, p. 30

[2] See J.E. Norton, op. cit., 50-3

to give evidence probably discouraged promoters from doing this on any scale. The reliability problem is likewise fairly important with newspaper reports of coach accidents, robberies and racing incidents. The often indirect method by which the information for such reports found its way to local newspaper offices, coupled with the frequent strong editorial bias, inevitably places a question mark over their incidence and accuracy. Assessment of the reliability of the sources relating to actual coach movements which survive for Southern Hampshire is extremely difficult. With the sources providing documentary evidence of movements, the problem is their chronic paucity; with the newspaper reports, the problem is the complete absence of any means of checking.

The reliability of sources relating to advertised coach movements is decidedly more favourable. The lists of licensed stage-coaches, for example, are without doubt a true record of stamp duty payments by coach operators, simply because of their 'official' nature. It is wrong, of course, to forget the possibility of evasion, but the publication of such lists, coupled with the fact that fines could be imposed for evasion, would obviously have discouraged this considerably. With newspaper and broadsheet advertisements, similarly, there is almost certainly little question over reliability, since coach operators are unlikely to have tried to mislead the public deliberately. Directories and guides, on the other hand, present several distinct reliability problems. Publishers' agents, for instance, may not always have obtained a full picture of available services, and there is also the possibility of inaccuracies arising during the actual directory compilation process. Against this, however, it is fair to say that it was clearly in the sales interest of directory publishers to ensure that information was as accurate as possible at the time of going to press, so that the extent of these reliability problems is unlikely to be great. Cross-checking with other groups of sources can sometimes offer an indication as to reliability, but survival problems make this impossible on a large scale, and besides, there is still the question of the reliability of the sources used in cross-checking. Of the seven national and provincial directories used for examining stage-coach activity in Southern Hampshire,[1] the overall impression gained was that reliability was fairly good. This

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[1] For details, see figures 8.1 - 8.3

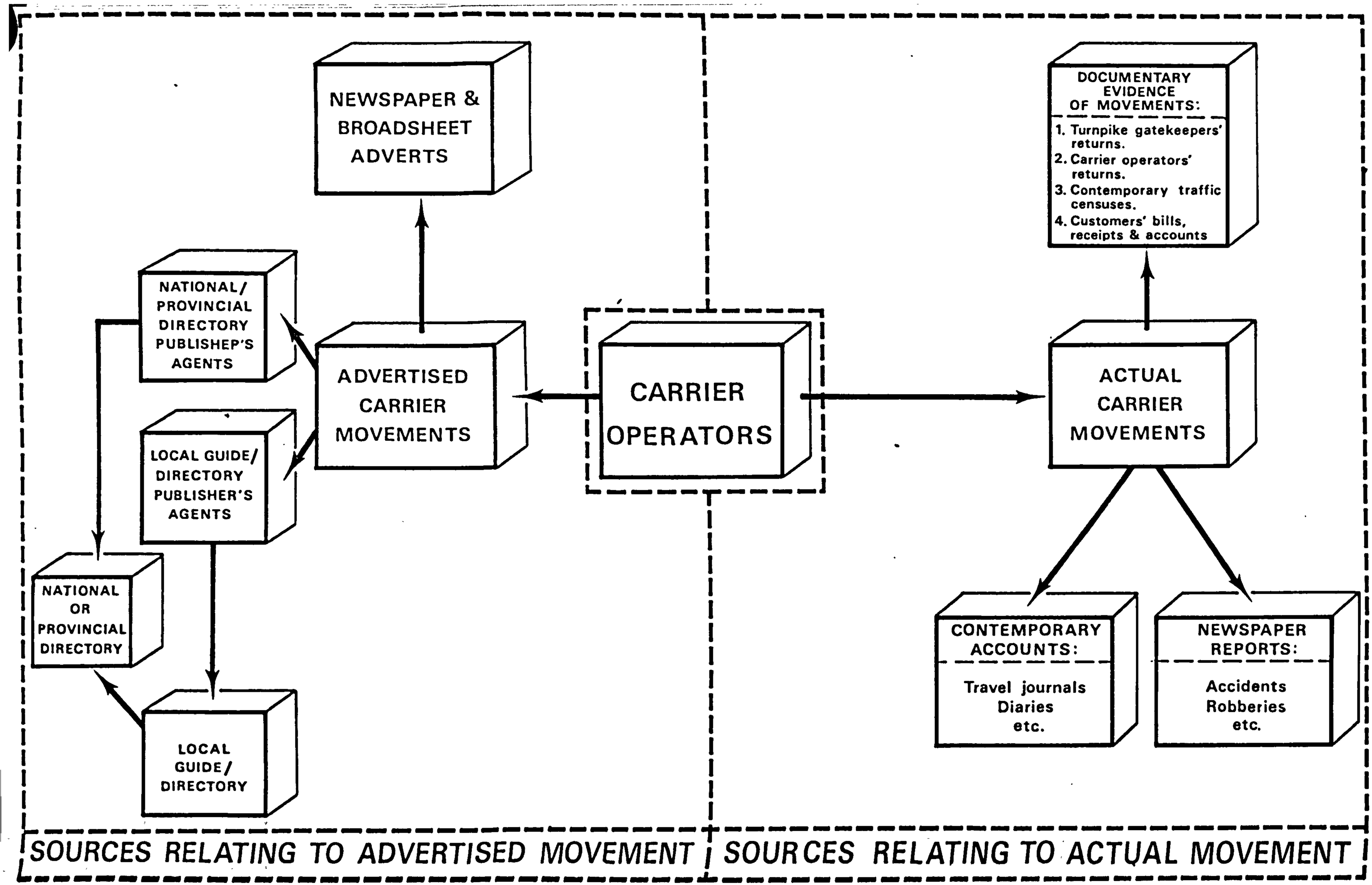
NEWSPAPER & BROADSHEET ADVERTS
NATIONAL/ PROVINCIAL DIRECTORY PUBLISHEP'S AGENTS
LOCAL GUIDE/ DIRECTORY PUBLISHER'S AGENTS
ADVERTISED CARRIER MOVEMENTS
NATIONAL OR PROVINCIAL DIRECTORY
LOCAL GUIDE/ DIRECTORY
CARRIER OPERATORS
DOCUMENTARY EVIDENCE OF MOVEMENTS:
1. Turnpike gatekeepers' returns.
2. Carrier operators' returns.
3. Contemporary traffic censuses.
4. Customers' bills, receipts & accounts
ACTUAL CARRIER MOVEMENTS
CONTEMPORARY ACCOUNTS:
Travel journals
Diaries
etc.
NEWSPAPER REPORTS:
Accidents
Robberies
etc.
SOURCES RELATING TO ADVERTISED MOVEMENT
SOURCES RELATING TO ACTUAL MOVEMENT

FIGURE 2.9

conclusion is based on the number of discrepancies[1] discovered when matching up entries of towns along individual coaches' routes. With Pigot's 1830 directory,[2] the number of discrepancies was found to be remarkably small - less than 20, and with the six remaining directories, the numbers never rose above 50. If publishers' agents were not always obtaining a full picture of available services and if compilation inaccuracies were considerable, the numbers of such discrepancies would undoubtedly have been very much greater.

2.iii) Carriers

Sources on carriers show a close degree of comparison with those on stage-coaches, in terms of both type and range (fig. 2.9). Once again, it is possible to distinguish two main kinds of sources: those relating to actual carrier movements and those relating to advertised movements. Among the sources relating to actual movements, those providing documentary evidence of movements are again particularly important. Operators' accounts, day-books particularly, shed highly useful light on the organisation and economics of carrying, and also on the kinds of commodities handled; similar information may also be gleaned from customers' bills, receipts and accounts. As carriers often used turnpike roads, information about their movement is invariably to be found amongst tollkeepers' accounts, although it is not always possible to distinguish carrier entries. Documentary evidence of carrier movements may also be found in contemporary traffic censuses. As noted earlier when discussing stage-coach sources, these censuses usually form parts of evidence presented before Parliamentary Committees on railway bills.

Leaving documentary sources aside, evidence about actual carrier movements is often available in local newspapers and amongst contemporary accounts (travel journals, diaries etc.). The newspaper evidence usually comes in the form of reports about accidents and robberies, and can offer valuable information about commodities carried, and perhaps more important, the incidence of passenger-carrying. As indicated under stage-coach sources, the evidence amongst contemporary accounts is

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[1] The word discrepancies is used here to mean positive contradictions or inconsistencies.

[2] J. Pigot & Co., National Commercial Directory, (London, 1830)

invariably fairly personalised in its nature, but despite this drawback, it can often provide relevant information.

In the realm of sources relating to advertised carrier movements, there is no counterpart to the lists of licensed stage-coaches published in the 1830s, but newspaper and broadsheet advertisements, along with national, provincial and local directories, and local guides, once again form a highly significant source grouping. As with stage-coaches, the newspaper and broadsheet advertisements normally include information on the places between which a carrier operated, the days of running, and the name of the proprietor. In addition, useful information is often also included on carriage rates and journey times - two aspects not touched upon in many of the other groups of sources. The data on carrier movements contained in directories and guides follow exactly the same pattern as that for stage-coaches, with the principal exception that the coach name is normally replaced by the name of the carrier operator. Once again, it is important to emphasise here that in almost all cases such data were included as a matter of course and not as the result of the payment of a fee.

As regards survival rates, Southern Hampshire is once more in a variable position. In the realm of sources relating to actual carrier movements, there is comparatively little surviving which provides documentary evidence of movements. The Hampshire area yielded four series of customers' bills, receipts and accounts,[1] four sets of tollkeepers' accounts,[2] and four sets of traffic censuses.[3] Regrettably, no operators' records were discovered at all. With newspaper reports of accidents and robberies, it is again more a question of incidence than survival. For the two main newspapers consulted,[4] a total of approximately 30 reports were found, almost half of which related to accidents.

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[1] W.C.M., Bills/receipts concerning carriage of wine, hops, etc. to Winchester College, 30638, 32311, 32337-8, 32340, 32350, 33177, 33346-51; Winch. Cath. Lib., Treasurers' Accounts, 1776-93, 1805-22; Ordnance Museum, Gosport, Letters regarding supply of naval stores, 1754, 1756, 1788; P.R.O., War Office Records: Ordnance Bill Books, WO51/288, 294 and Admiralty Records: Accountant General's Bill Books, Adm 18/116-8

[2] See figure 2.3

[3] See this chapter, p. 36

[4] See this chapter, p. 30

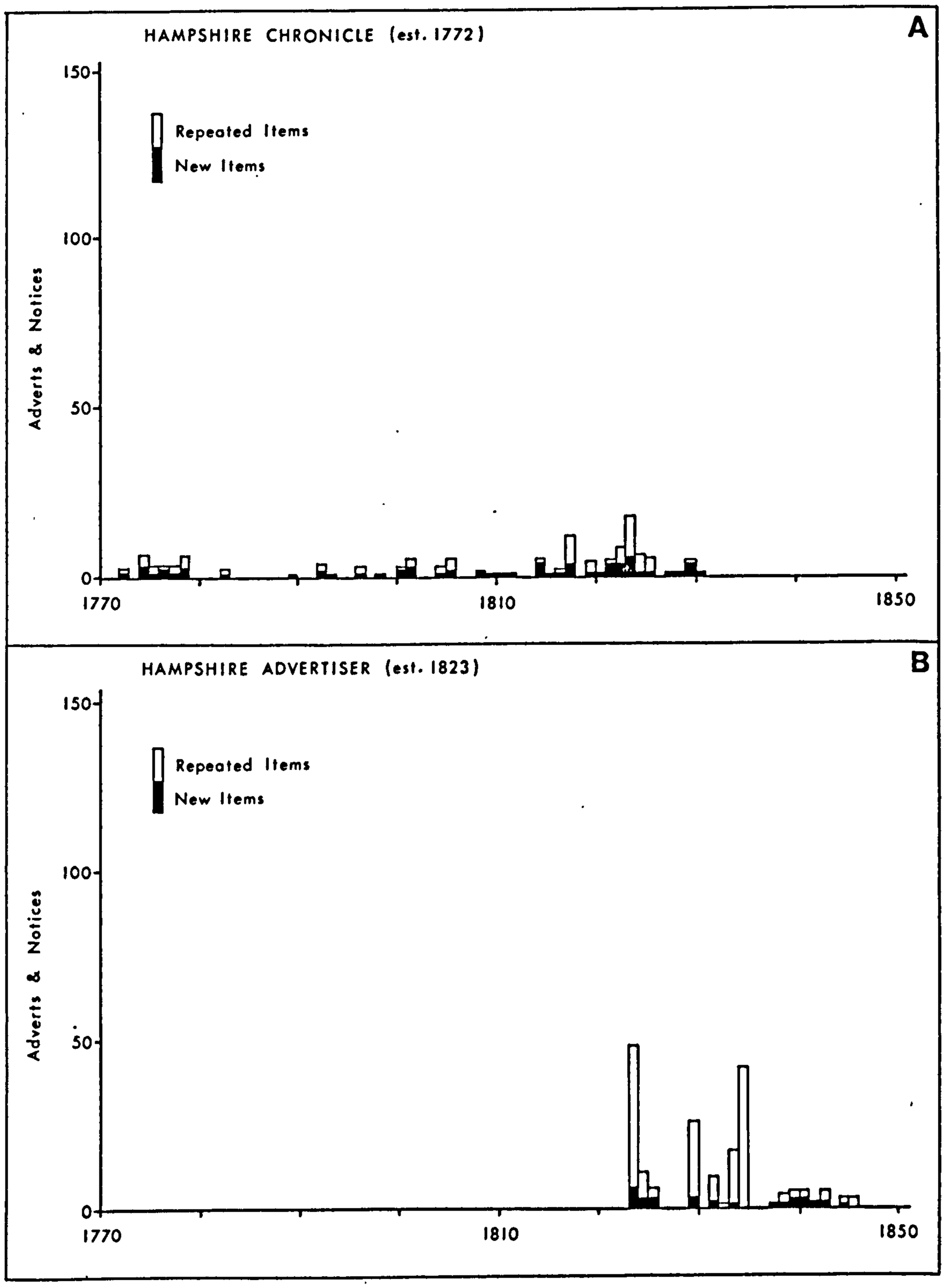
HAMPSHIRE CHRONICLE (est. 1772)
A
150
100
50
0
Adverts & Notices
Repeated Items
New Items
1770
1810
1850
HAMPSHIRE ADVERTISER (est. 1823)
B
150
100
50
0
Adverts & Notices
Repeated Items
New Items
1770
1810
1850

FIGURE 2.10

With contemporary accounts, the question is more one of the numbers of travel journals and diaries mentioning carrier movements in some way. Of the many travel journals and diaries covering the local area, which were examined, no more than a couple of relevant references were discovered.

With sources relating to advertised carrier movements, less than half a dozen broadsheet advertisements proved extant,[1] while in the case of advertisements in the newspapers, incidence is still the main concern. The number of new and repeated items found in the two main newspapers searched[2] is shown in figure 2.10. The overall annual average for both newspapers, including new as well as repeated items, was four. This is very much lower than the corresponding average for stage-coach advertisements and perhaps reflects an assured demand for public goods-carrying facilities. Finally, the survival position concerning directories and guides is, for obvious reasons, identical to that outlined in the discussion on stage-coach sources (i.e. -highly favourable), and thus no further elaboration is necessary here. The highly favourable survival rate for directories and guides might again be considered justification for disregarding the other groups of sources on carriers that have been mentioned. Once more, however, there are certain instances where such sources can be of considerable value.

As to reliability, among the sources relating to actual carrier movements, operators' accounts and the associated bills, receipts and accounts of customers are the only ones where there is unlikely to be a reliability problem. With the remainder - i.e. tollkeepers' accounts, traffic censuses and newspaper reports of accidents and robberies - reliability merits careful consideration, for reasons already outlined.[3] Once again, though, assessment of the reliability of sources of this kind surviving for Southern Hampshire is very difficult. In the case of the sources providing documentary evidence of movements, the problem is their paucity, while in the case of newspaper reports, the problem is the lack of any parallel source with which they may be checked.

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[1] The main ones cover the London-Portsmouth/Gosport services of the Clark family - Ports. R.O., 1A/8, 11A/14/46, TA:16.11.70

[2] See this chapter, p. 30

[3] See this chapter, p. 37-38

The reliability picture for sources relating to advertised carrier movements is rather more favourable. As mentioned in the discussion on source reliability related to stage-coaches, operators are hardly likely to have inserted advertisements in the newspapers or posted broadsheets which were intended to mislead the public deliberately. Similarly, while directory or guide publishers' agents may not always have obtained a full picture of available services, and while there was room for inaccuracies to arise during the actual directory compilation process, the sales interests of publishers would have demanded the attainment of certain accuracy levels. The overall impression gained from the seven national and provincial directories used for examining carrier activity in Southern Hampshire[1] was that reliability was fairly good. This conclusion is again based upon the number of discrepancies discovered when matching up entries of towns along individual carriers' routes. Bearing in mind the complex nature of regional carrier activity, particularly after 1820,[2] discrepancy rates for the various directories were not greatly different from the corresponding ones for stage-coaches.

The characteristics of the sources, as surveyed in this chapter, invariably exerted significant influence upon the form of the thesis. This proved particularly true in the realm of the research methods employed, and it is upon methodology that attention is focused in the following chapter.

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[1] For details, see figures 9.1, 9.2 and 9.4

[2] See figures 9.2 and 9.4

CHAPTER THREE

METHODOLOGY

The geographical study of a developing transport system through time presents the researcher with a number of problems. At the most basic level, there are the obvious historical ones of source utility, survival and reliability. In addition, though, there are the fundamental questions of how to describe and analyse the various spatial patterns exhibited by an expanding transport system, with its several component parts. It is to these various problems that this chapter is directed, as a necessary preparation to the research presented in the main section of the thesis.

3.i) Graph theory

The basic element in the developing land transport system of Southern Hampshire during the Industrial Revolution period was the network of turnpike roads. Although variations in terrain and in road maintenance activities affected the character of the region's turnpike system, its growth can be idealised in the form of a series of graphs, in which distance, direction and flow are ignored, and attention is focused on nodes and the links between them. In so doing, and with the aid of some of the simple tools of graph theory, a useful method is provided for objective description and analysis of the way in which the turnpike system expanded over space and time.

Graph theory forms a branch of mathematics known as topology,[1] and it is a concept which has been widely employed by geographers during the past 15 years.[2] There are two types of graph: planar and non-planar. A planar graph is one in which all elements (i.e. nodes and

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[1] For a useful general introduction to graph theory, see W.L. Price, Graphs and Networks - an introduction, (London, 1971). Its origins are covered in N.L. Biggs, E.K. Lloyd & R.J. Wilson, Graph Theory, 1736-1936, (Oxford, 1976)

[2] See P. Haggett & R.J. Chorley, Network Analysis in Geography, (London, 1969); A. Hay, Transport for the Space Economy, (London, 1973); E.J. Taaffe & H.L. Gauthier, Geography of Transportation, Englewood Cliffs, 1973)

links) are literally in the same plane. There can be no crossing of links except at intersections or nodes. Most networks of surface transport modes fall into the planar category. A non-planar graph is one in which all elements need not be in the same plane. Crossing of links is possible anywhere. The classic example of a non-planar graph is an airline route map. Once a network or system has been idealised as a graph, there are two courses of investigation open. The first involves the use of a specific series of indices, developed by Garrison and Marble, and Kansky, which refer to the aggregate pattern of the network or system.[1] The second involves the use of various forms of matrix analysis, which focus upon individual elements within the network or system. Since it is the aggregate pattern of the turnpike network which is of interest in the present study, the first of these two courses is the only one that requires discussion.

The commonest of the various graph-theoretic indices are those notated by the Greek letters beta (β) and alpha (α), and these are the ones used in examining regional turnpike development. The indices are based on three criteria:

i) the number of edges or links in the network or system (e)

ii) the number of vertices or nodes in the network or system (v)

iii) the number of separate (unconnected) graphs in the network or system (g)

The beta index expresses the ratio of the number of edges to the number of vertices ($\frac{e}{v}$), while the alpha index expresses the ratio of the observed number of circuits (the cyclomatic number) to the maximum possible number of circuits that could be present ($\frac{e-v+g}{2v-5}$).[1] Although these two indices represent valuable descriptive devices, they are primarily

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[1] W.L. Garrison & D.F. Marble, 'The structure of transportation networks', (unpubl. report for U.S. Army transportation research command, Northwestern Univ., 1961); K.J. Kansky, 'Structure of transport networks: relationship between network geometry and regional characteristics', Univ. of Chicago, Dept. of Geogr. Res. Pap. 84, (1963)

[2] This is the formula for planar graphs only. For non-planar graphs, it is written as

$$\frac{e-v+g}{\frac{v(v-1)}{2}-v-1}$$

measures of network connectivity. For planar graphs, the value of the beta index ranges between zero and three:[1] values of less than one differentiate between simple tree or branch networks, while values above one differentiate between more complex circuit networks. The value of the alpha index for both planar and non-planar graphs ranges between zero and one, and it is usually multiplied by 100 to give a percentage range - i.e. indicating percentage connectivity.

Before it is possible to calculate the beta and alpha indices for the Southern Hampshire turnpike system at its different stages of development, there are two important operational difficulties concerning graph idealisation which must be resolved. The first relates to the definition of vertices or nodes and the second to the definition of area. For instance, should vertices or nodes include just turnpike intersections and terminal points; similarly, should the area covered by the graphs coincide rigidly with the study area as defined in the introduction? The procedures adopted are as follows. Vertices are defined as including all towns served by turnpikes and all turnpike intersections.[2] The inclusion of towns is entirely logical since it was to link these that many turnpikes were established; moreover, a considerable number of turnpike intersections are located at towns, anyway. The area covered by the graphs is defined as the study area, together with the next adjacent towns served by turnpikes falling outside it. Extension of the graph's coverage in this way is essential if indices are to be representative of the whole of the region's turnpike system.

Graph theory is equally useful in examining the development of the Southern Hampshire stage-coach and carrier systems. As with the turnpike system, it is the aggregate patterns which form the main focus of interest and thus the course of investigation involving the use of the graph-theoretic indices is once again followed.[3] On this occasion, however, three different indices are employed: beta (β), alpha (α) and theta (θ). The beta and alpha indices were dealt with earlier:

---

[1] The value for nonplanar graphs ranges to infinity.

[2] Necessarily, of course, the region's turnpike system must be idealised as a planar graph.

[3] Necessarily, of course, the stage-coach and carrier systems must also be idealised as planar graphs.

essentially, they are measures of network connectivity. The theta index represents a modified version of the beta index. Instead of expressing the simple ratio of edges to vertices, it incorporates flow information and is written mathematically as:

$$\frac{\sum_{i=1}^{e} fi}{v}$$

In some respects, the theta index is not a graph-theoretic measure since the incorporation of flow information involves a movement away from a graph's simple topological properties. However, it offers a useful parameter for network comparison, especially when employed in conjunction with the beta and alpha indices.

Before it is possible to calculate the beta, alpha and theta indices for the region's stage-coach and carrier systems at their various dates of reconstruction, the questions of vertex definition and definition of area must again be resolved. In the former case, the procedure is dictated by the nature of the source material. Vertices must necessarily be defined as those given in the directories from which the coach and carrier service information is extracted. Not unexpectedly, this generally means the market towns of the region, and in the case of carriers, the more important village settlements as well. The area covered by the graphs is defined in almost exactly the same way as for the turnpike system.

Although graph theory offers a valuable tool for network description and analysis, it must be observed that its use within geography has brought much criticism. This has ranged from criticism of the graph-theoretic approach per se to criticism of the specific contexts in which it has been used.[1] A criticism which deserves particular mention here concerns the discriminatory powers of the various graph-theoretic indices. Werner, James, Cliff, Haggett and Ord[2] have demonstrated that the beta and alpha indices, for example, sometimes fail to discriminate

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[1] For more details, see A. Hay, op. cit.; E.J. Taaffe & H.L. Gauthier, op. cit.

[2] C. Werner, 'Research seminar in theoretical transportation geography', in F. Horton, (ed.), Geographic Studies of Urban Transportation and Network Analysis, Northwestern Univ. Stud. in Geogr. 16, (1968), 128-70; G.A. James, A.D. Cliff, P. Haggett & J.K. Ord, 'Some discrete distributions for graphs with applications to regional transport networks', Geogr. Annlr., 52B, (1970), 14-21

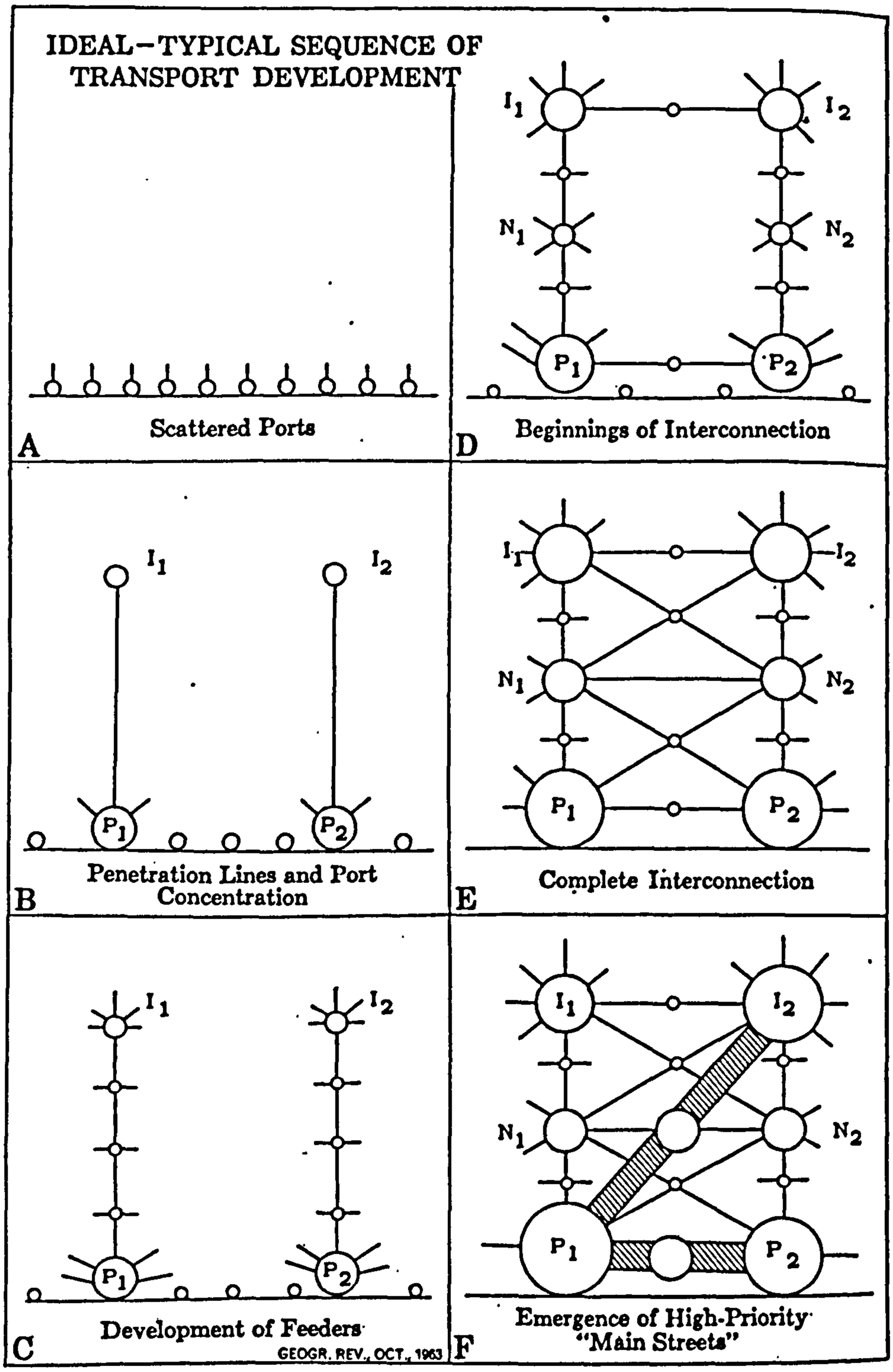

FIGURE 3.1

(Courtesy of the Geographical Review, 53, 1963)

between totally unlike graphs. This is due largely to the crudity of their calculation, being based on just three criteria. It must be stressed, however, that this criticism does not invalidate the use of such indices. They are still able to discriminate simple tree networks from more complex circuit networks, for example. In essence, therefore, the question is more one of the degree of discrimination provided, and for simple description and analysis, it is quite adequate. The time when the lack of discriminatory power would need to be taken carefully into account is if index values were to be incorporated into some further piece of analysis.

3.ii) Hypothetical sequence of turnpike development

An alternative way of examining how the Southern Hampshire turnpike system developed over space and time is to introduce a hypothetical sequence or model. Models now occupy a prominent position in geographical methodology and their use is widespread throughout the subject's various sub-disciplines. As well as providing an immensely useful framework for analysis, they frequently permit far greater understanding of geographic phenomena than is possible by more traditional and often subjective means of enquiry.

The hypothetical sequence or model employed to examine regional turnpike development represents a modified version of a sequence first developed by Taaffe, Morrill and Gould within the context of coastal situations in Ghana and Nigeria.[1] Basically, the Taaffe/Morrill/Gould sequence envisages a three-stage process of transport expansion: trunk lines, feeders, interconnectors. In operational form, however, this three-stage process is sub-divided and the result is illustrated in figure 3.1. The Taaffe/Morrill/Gould sequence has proved to have a surprisingly wide range of application in coastal situations in other developing countries,[2] but relatively few attempts have been made to

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[1] E.J. Taaffe, R.L. Morrill & P.R. Gould, 'Transport expansion in underdeveloped countries: a comparative analysis', Geog. Rev., 53, (1963), 503-29

[2] See for example, W.R. Stanley, 'Transport expansion in Liberia', Geog. Rev., 60, (1970), 529-47; M.W. Ward, 'Progress in transport geography', in R.U. Cooke & J.H. Johnson, (eds.), Trends in Geography - an introductory survey, (Oxford, 1969), 164-72

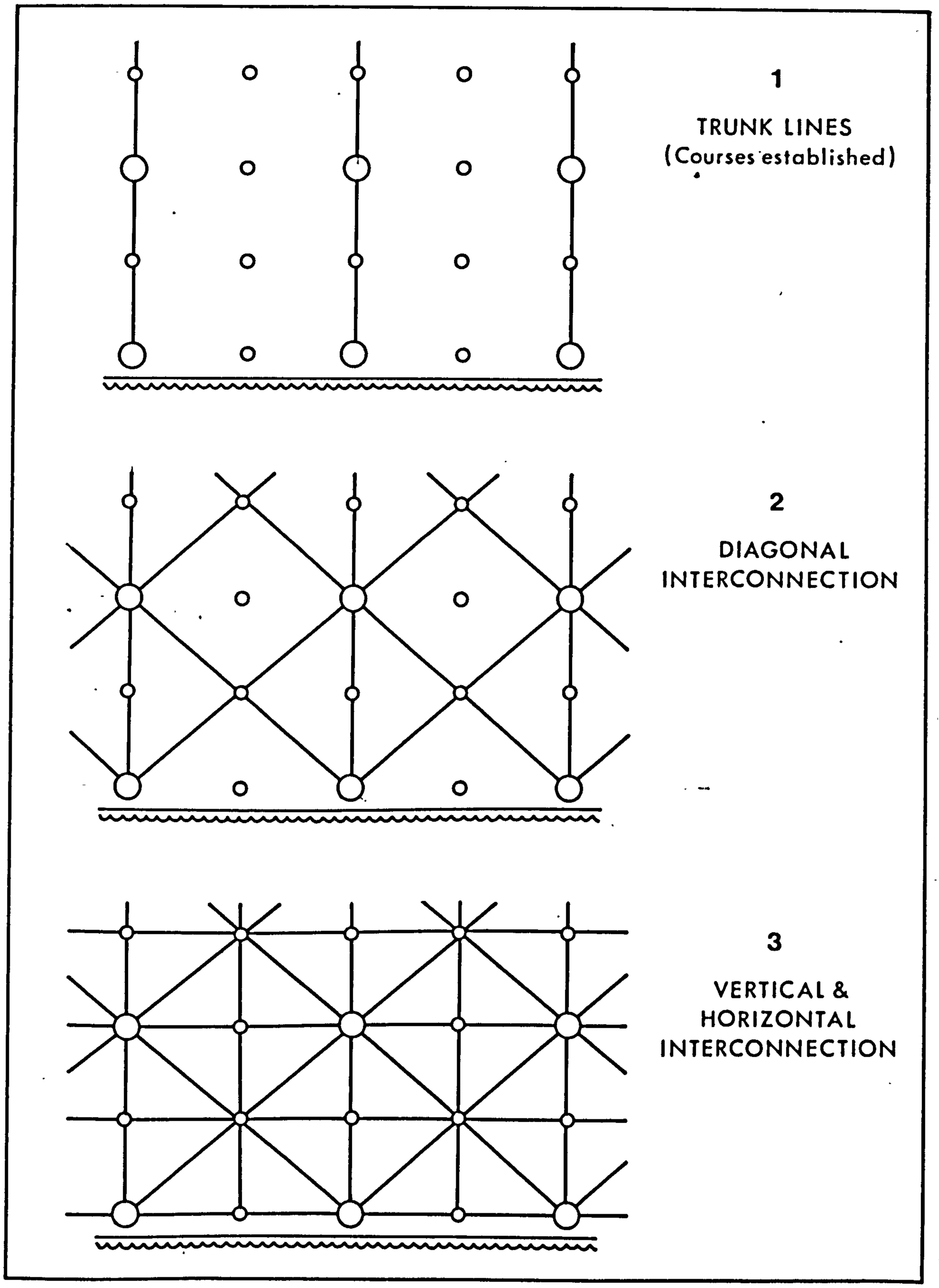
1
TRUNK LINES
(Courses established)
2
DIAGONAL
INTERCONNECTION
3
VERTICAL &
HORIZONTAL
INTERCONNECTION

FIGURE 3.2

apply it in similar situations in the developed world. There is no clear explanation for this omission, since the sequence is an entirely logical idealisation of transport expansion in a coastal context.

Figure 3.2 shows the Taaffe/Morrill/Gould sequence suitably modified for application to the development of the Southern Hampshire turnpike system. Although the modified version envisages a three-stage process of expansion, the stages themselves differ from those of the original. The new sequence consists of trunk lines, diagonal interconnectors, vertical and horizontal interconnectors. The feeder stage has been omitted because of the scale differences between the Ghanaian/Nigerian and Southern Hampshire situation; the very much smaller distances involved in the latter make justification of feeder development difficult. The division of the interconnection stage into two separate parts - diagonal interconnection, vertical and horizontal interconnection - may be justified on the following grounds. Once trunk lines were established, the next most logical development would have been the establishment of diagonal links between them. Horizontal interconnection between trunk lines is unlikely to have come first simply by virtue of its strong 'cross-grain' nature, and at the coast, of course, there would have been competition from sea transport. If vertical interconnection came first, this would have meant unwarranted early duplication of trunk routes. A further difference between the modified version and the original Taaffe/Morrill/Gould sequence concerns the development level attained immediately prior to the start of the process of transport expansion. In the original sequence, the land area was postulated as being comparatively undeveloped, with a series of scattered ports forming the only major evidence of economic activity. In the modified version, a higher level of development is understandably assumed, with major lines of movement already established and a fairly clear hierarchy of towns in existence. Together, these from an important skeletal framework for the transport expansion process.

Before the hypothetical sequence illustrated in figure 3.2 can be used to examine turnpike development in Southern Hampshire, there are certain distorting influences that need to be taken into account first. The region's irregular coastal configuration demands some slight modification of the sequence, particularly its spatial aspects. In addition, the presence of an outside attractive force (London) necessitates similar adjustment, although this influence is to some degree reflected in the pattern of the major lines of movement.

3.iii) Utility of the turnpike system

Although the use of a hypothetical sequence and of graph theory allows the development of the region's turnpike system to be described and analysed in a more rigorous manner than would have been possible by more subjective methods of investigation, they take no account of the effectiveness with which turnpike roads were maintained - i.e. their utility. Defective road maintenance, for example, could easily have negated the advantages of an otherwise comprehensive and well connected turnpike road network. One way of measuring the utility of the region's turnpike system is to examine trust road repair expenditure. Considerable importance is attached to this in chapter six and some explanation is necessary here as to how road repair expenditure is calculated.

Beginning at the most basic level, road repair expenditure is designated throughout as including all monies spent on the repair or improvement of turnpike roads per se. This means the cost of manual labour, the cost of carriage of road materials, and the cost of road materials themselves. Whilst this may seem a very straightforward definition, the nature of some trust accounts makes rigid adherence to it somewhat difficult. There is no problem after 1833, since the statistical returns dating from that year itemise these three expenditure categories specifically. Before the 1833 returns, however, difficulties sometimes arise, notably in separating out tradesmens' bills. The result is that it is not possible to place great reliance on the pre-1833 road repair expenditure data for a number of the region's trusts, although the use of mean rather than individual values acts as a partial safeguard here.

All the available data on trust road repair expenditure are summarised into one table (table 6.2), showing mean annual expenditure per km on a decadal basis over the period 1770 to 1850. Two points require comment here. Firstly, expression of expenditure on a per km basis is fundamental if comparisons between trusts are to have any true meaning. The trust with 30 kms of road and power (under its authorising Act) to levy three separate tolls from road-users, for example, would obviously have had far greater repair resources than the trust with ten kms of road and power to levy only one toll from road-users; expression of repair expenditure on a per km basis takes account of such variation. It should be noted here that there was generally a fairly close positive relationship between length of trust roads and number of tolls that could

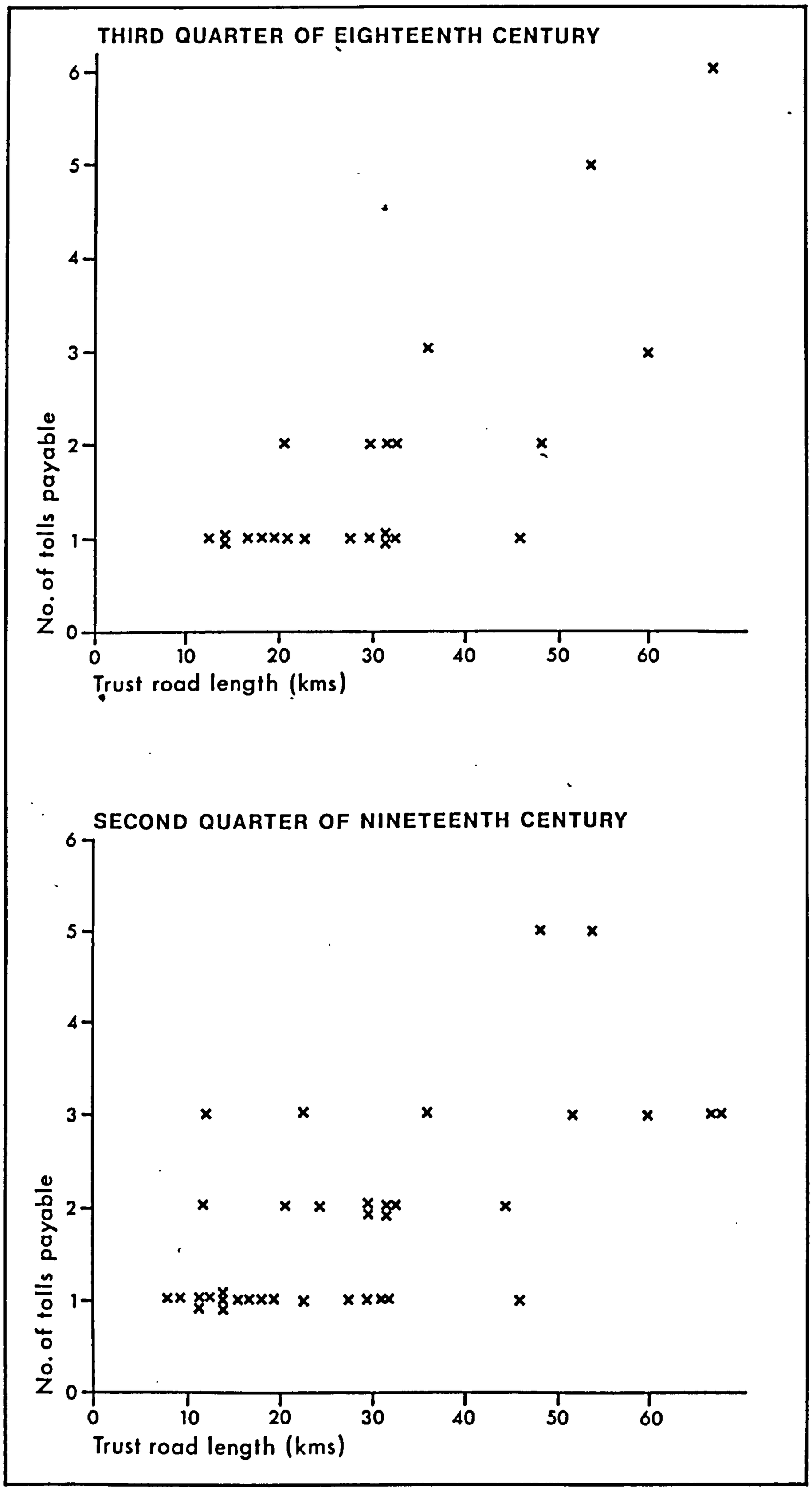
THIRD QUARTER OF EIGHTEENTH CENTURY
No. of tolls payable
Trust road length (kms)
SECOND QUARTER OF NINETEENTH CENTURY
No. of tolls payable
Trust road length (kms)

FIGURE 3.3

be levied (fig. 3.3).[1] A second point deserving comment is that the mean expenditure figures for the various decades are not necessarily based upon ten annual values. The incomplete nature of the sources means that there are often occasions when fewer than ten values are available. The minimum number of annual values required was set at three.

An objection that might be raised against using trust road repair expenditure to examine the effectiveness of trusts as road maintenance mechanisms is that the cost of labour, carriage of road materials and road materials themselves may have increased over the course of time. This might invalidate time-series comparisons. It is exceedingly difficult to establish whether there was any marked upward movement in the cost of carriage of road materials or of the materials themselves, since trust accounts seldom give details on quantities. However, information available on rates charged by common carriers in Southern Hampshire during the period suggests there was no significant advance in the cost of carriage of road materials,[2] while road materials themselves, of course, were often obtained 'free of charge' from nearby wastes and commons. This does not rule out cost increases in these two particular road repair expenditure sectors, but it renders marked advances far less likely. Information on the cost of labour is slightly more plentiful. In the third quarter of the eighteenth century, the Andover, Gosport and Southampton South trusts paid their labourers 1/- - 1/2d per day.[3] In the second quarter of the nineteenth century, in contrast, the labourers employed by the Gosport and Southampton North trusts were being paid 1/8d - 1/10d per day.[4] This suggests an advance of approximately 50 per cent, although it is difficult to say how representative such a figure

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[1] No attempt has been made to measure this relationship in more precise terms because trusts were not compelled to levy the number of tolls authorised in their respective Acts. This merely represented a maximum limit and several instances were discovered where trusts empowered to levy abnormally high numbers of tolls in relation to their road lengths found it advantageous, in terms of traffic attracted, to keep below the maximum. In reality, therefore, the relationship depicted in figure 3.3 would have been even closer.

[2] See chapter nine, p. 218-19

[3] Hants. R.O., 5M52/TR5, 36M72; Soton. R.O., D/PM 8/1/1

[4] Hants. R.O., 36M72, 4M30/3

might be of the region as a whole.[1] It is significant, however, that all the available wage data cover the most important of the region's trusts. Clearly, there would seem to be no strong grounds against the use of trust road repair expenditure data in time-series comparisons; the probable total increase in unit costs was at most 100 per cent.

A logical sequel to the examination of trust road repair expenditure is the establishment of the proportion of trust income devoted to road repair. This is best achieved by expressing road repair expenditure as a proportion of toll income, rather than total income (toll income plus loans). The reason for this is that a trust's toll income was, in essence, its sole financial resource; any loans negotiated were obtained on the security of the income from the tolls, and it was from this income that interest payments on loans were met, and ultimately, repayment of the principal as well. Large-scale borrowing by a trust at certain points in time, for specific repair or improvement schemes, will obviously have affected proportions recorded considerably, but subsequent increased interest payments would have tended to cancel this out.

In examining the proportion of toll income that Southern Hampshire trusts devoted to road repair, repair expenditure figures are taken as they stand, since variation in trust size is automatically allowed for by the toll income figures. Once again, all the available data are summarised in one table (table 6.3), showing mean annual road repair expenditure as a percentage of mean annual toll income on a decadal basis over the period 1770 to 1850. Because of the incomplete nature of sources, the mean percentages for the various decades are not necessarily based on ten values; as before, the minimum number of values required was set at three.

3.iv) Turnpike traffic

A further measure of the utility of the region's turnpike system is provided by examining growth in the volume of traffic over the turnpike roads. Where there are few surviving tollkeepers' returns, this is best achieved through the use of trusts' toll income statistics. Such a course is adopted in chapter seven as part of a broader discussion on

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[1] This ignores temporary rises in wage rates during the French Wars period due to the high price of provisions and the scarcity of general labour.

traffic over the Southern Hampshire turnpike system. All the data that are available on trust toll income are summarised in one table (table 7.1). This shows mean annual income per km for the eight decades from 1760 to 1840, and the years 1840-5 and 1847-9. As with road repair expenditure, expression of toll income on a per km basis is essential if comparisons between trusts are to have any true meaning.[1] Similarly, the mean income figures given for the ten different time-periods are not necessarily based upon a full set of annual values: the minimum number of values required is once more standardised at three.

An objection that might be raised against the use of trust toll income statistics as a traffic indicator is that, if there were spatial and temporal variations in the levels of tolls charged by trusts, areal and time-series comparisons might be rendered invalid. In many ways, this forms the counterpart argument to changes in the cost of road labour and so on. The levels of tolls charged by different Southern Hampshire trusts at particular periods in time in fact varied relatively little;[2] moreover, trusts often found it in their own interests, in terms of traffic attracted, to keep toll schedules in line with those of neighbouring trusts.[3] In contrast, there was a distinctive increase in the levels of tolls charged by the region's trusts over the course of time. However, the increases were fairly uniform,[4] so that this particular objection does not really become important unless one is examining toll income in absolute rather than relative terms.

A further objection to the use of toll income statistics as a traffic indicator concerns the question of the leasing of tolls. It might be argued that lease income does not provide as true a reflection

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[1] See this chapter, p. 49-50

[2] See Appendix 3.1

[3] As with the number of tolls levied, trusts were not compelled to adhere to the toll schedules given in their authorising Acts. This merely represented a maximum limit and trusts were free to alter tolls as they wished, though providing the consent of creditors was obtained. By way of example, in 1828, the trustees of the London and Southampton turnpike, in their concern to attract more traffic, ordered that their tolls should be reduced to fall in line with those of neighbouring trusts - Hants R.O., 5M54/111; Hampshire Advertiser, 18/10/1828

[4] See Appendix 3.1

of traffic as direct toll income. However, a person leasing tolls is unlikely to have agreed to make an annual payment far above the general level of actual toll income, since this would have been directly against his or her financial interests. Likewise, the fact that leasing agreements could be made only as a result of a formal auction procedure - i.e. in free competition - means that the annual payments are unlikely to have been far below the general level of actual toll income.

A considerably more direct measure of growing traffic volume than that provided by trusts' toll income statistics is given by the numbers of stage-coaches and carriers operating to regular schedules in the region. The development of the Southern Hampshire stage-coach and carrier systems is dealt with at length in chapters eight and nine and change in service provision is indicated by means of two series of flow maps, each series covering nine different points in time. All of these maps depict total weekly movement as opposed to total daily movement. The main reason for adopting this practice is that it overcomes the considerable cartographic difficulties presented by coaches or carriers that ran only two or three times a week, for example. It is still important to examine daily activity, however, particularly to establish whether there was any fluctuation in levels of activity from one day to the next.

In the majority of cases, the information for the reconstruction of the flow maps is drawn from national and provincial directories. As stated in chapter two, this information is usually arranged by settlement, and once the data have been transferred to record cards, one for each individual settlement, the actual reconstruction process proves comparatively straightforward. All coach and carrier service entries under any one settlement are matched against the entries under the main settlements through which the services in question passed. Where inconsistencies or discrepancies arise, the procedure is to match the entries under <u>all</u> settlements along the supposed routes; arrival and departure times and inns of origin and destination, where given, often prove useful here. If this fails to clarify the position, local directories and guides, and local newspapers are consulted. In a small number of cases, flow maps are reconstructed from information drawn from a composite series of sources - e.g. local guides and London-based coach and carrier lists.[1] The actual reconstruction process, however, is

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[1] See for example, <u>Cary's Itineraries</u>, Critchett & Woods' <u>Guides to Stage-coaches, Waggons, etc.</u>, <u>Kent's Tradesmens' Assistants</u>

generally the same as where information is drawn from national and provincial directories. One final point that deserves mention here concerns the flow maps of stage-coach and carrier service provision in 1798. The directory from which the information for these two maps is drawn - the Universal British Directory - was not published as one whole. Instead, it appeared in four separate parts at four separate dates. The first part covers London and was published in 1790. The three remaining parts cover the Provinces and were published in 1793, 1794 and 1798. The 1793 volume includes towns ABB-DUD, the 1794 volume towns EXE-MOR, and the 1798 volume towns NOR-YOX. Such variation in the dates of the directory's constituent parts obviously presents reconstruction of stage-coach and carrier services with certain difficulties. The solution is to use only the information from the 1798 volume. Fortunately, this includes close on half the region's towns, the three most important ones (Portsmouth, Southampton and Winchester) among them. Where information gaps are revealed, recourse can be made to local directories and guides, local newspapers and London-based coach and carrier lists.

A valuable way of comparing the sets of flow maps of stage-coach and carrier services, in addition to that provided by graph theory,[1] is to examine vertex connectivity. The term vertex (node) connectivity is used here to refer to the total number of inward and outward coach or carrier movements per week at any one settlement at a given date. Expressed in another way, it gives the total number of direct service connections between any one settlement and all its neighbours - hence the 'connectivity' label. Summation of the vertex connectivity values for all settlements in the region[2] for each of the nine dates of reconstruction (treating stage-coach and carrier services separately) provides a series of gross measures (gross vertex connectivity) by which the sets of flow maps of stage-coach and carrier services may be compared. In interpreting the results of summing vertex connectivity values in this way, it is important to remember that one is ignoring the possible existence of variations in expansion and contraction of service provision between individual settlements. This can be overcome

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[1] See this chapter, p. 45-46

[2] These are defined in exactly the same way as for the graph-theoretic analysis - see this chapter, p. 46

by calculating the correlation coefficients for vertex connectivity for successive stage-coach or carrier systems. The product moment correlation coefficient is used. However, no attempt is made to normalise the data as is usual procedure with parametric statistics. This is considered unnecessary since the coefficient is being used really only as an index of change, and moreover, the results are not intended to form part of any further piece of analysis.

Having provided a comprehensive review of the existing literature on the road transport developments of the Industrial Revolution period, having dealt at some length with the sources and methods used in the thesis, the path is now clear to discuss the results. Before doing this, however, it is first necessary to survey the main geographical characteristics of Southern Hampshire during the period in question. A survey of this kind is essential if the road transport developments in the region are to be fully understood.

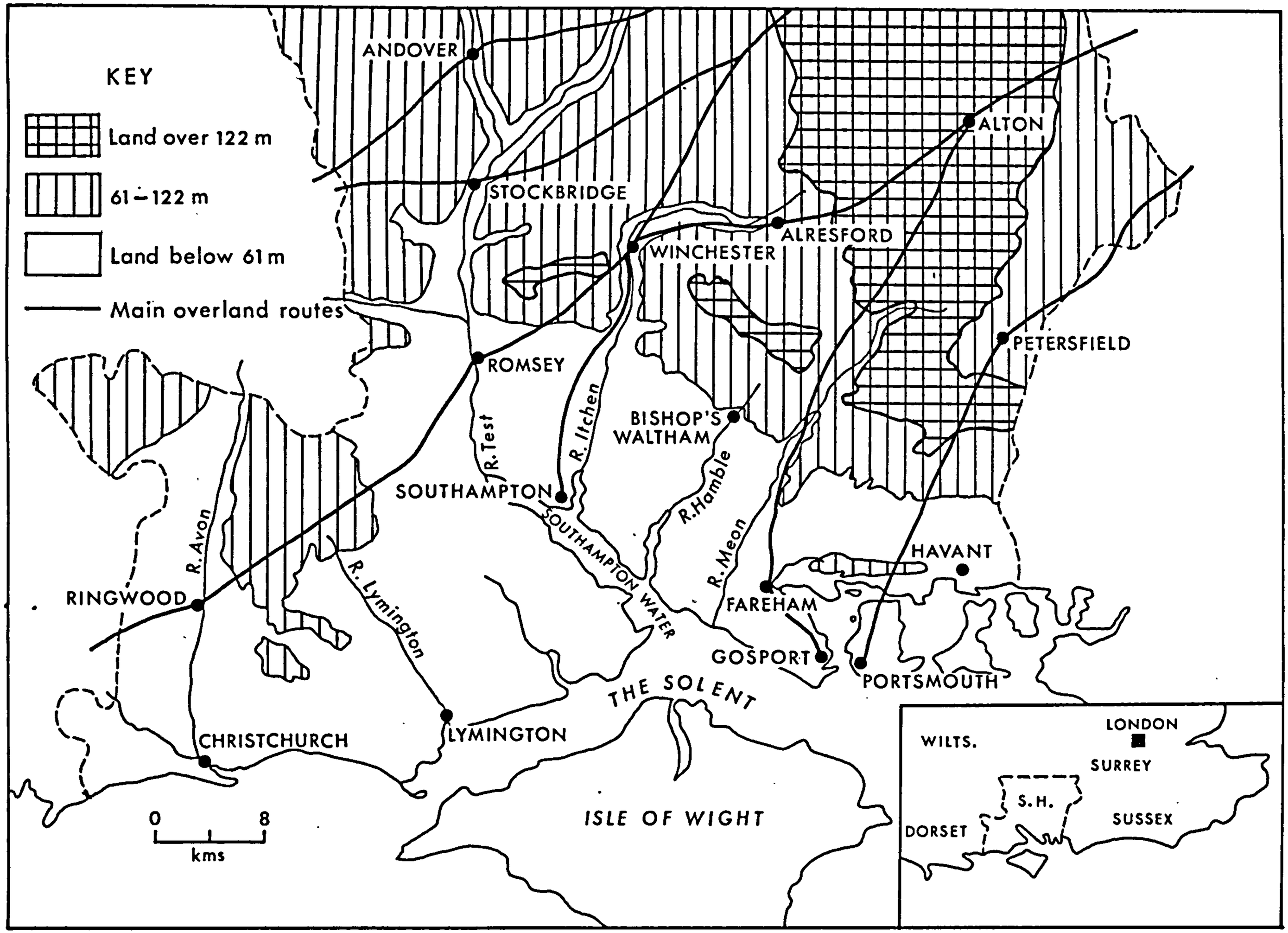
KEY
Land over 122 m
61 – 122 m
Land below 61 m
Main overland routes
ANDOVER
ALTON
STOCKBRIDGE
ALRESFORD
WINCHESTER
PETERSFIELD
ROMSEY
R. Test
R. Itchen
BISHOP'S WALTHAM
SOUTHAMPTON
R. Hamble
SOUTHAMPTON WATER
R. Meon
HAVANT
FAREHAM
R. Avon
R. Lymington
RINGWOOD
GOSPORT
PORTSMOUTH
THE SOLENT
CHRISTCHURCH
LYMINGTON
ISLE OF WIGHT
0
8
kms
LONDON
WILTS.
SURREY
S.H.
DORSET
SUSSEX

FIGURE 4.1

CHAPTER FOUR

BACKGROUND: THE HISTORICAL GEOGRAPHY OF SOUTHERN HAMPSHIRE, 1675-1850

4.i) The physical setting and its influence

Southern Hampshire is a largely coastal region of approximately 3,500 sq. kms, located in central southern England, some 90-100 kms south-west of London (fig. 4.1). Geologically, it falls into two distinct parts: the tertiary sands and clays in the south; and the cretaceous chalklands in the north. This fundamental division is reflected in the region's geomorphology, the southern tertiary deposits forming a predominantly lowland area, normally described as the Hampshire Basin, and the chalk to the north making up the rolling landscape of the Hampshire Downs, with an average height of 100-130 m. The region possesses some 150 kms of coastline, incorporating a numerous variety of estuaries and inlets, and the greater part of it sheltered from adverse wind conditions in the Channel by the Isle of Wight. The drainage pattern is generally centripetal in character, with three rivers - the Test, the Itchen and the Hamble - flowing into Southampton Water, and the remainder, excepting the Avon, flowing into the Solent.

The region's basic physical characteristics, as outlined above, understandably exercise significant influence upon the form and pattern of economic activity. The two-fold geological and geomorphological divisions mean that the region possesses some diversity of soil types, and this in turn has had direct effect on agricultural potential. During the period under examination, the deep fertile loams of the downland valley areas favoured the large-scale cultivation of grain, while the thinner rather less fertile soils of the downs themselves favoured large-scale rearing of sheep. In contrast, the poor infertile, often podzolic, soils of much of the southern lowlands offered little agricultural potential, and much of this area was wooded and generally exploited only for timber and swine-grazing. In the same way that certain aspects of the region's physical characteristics affect agricultural potential, so also do they affect industrial potential. In particular, the region's comparatively 'young' geological age has meant that it possesses few mineral deposits of commercial value, and even more important, no coal resources.

Thus, Southern Hampshire entered the age of the Industrial Revolution at a considerable disadvantage, lacking almost entirely in the resources so essential to the foundation of a sound industrial base. It is true that there was no shortage of the renewable industrial resources like timber and wool, but from the later eighteenth century, of course, the uses for timber declined as iron production grew, and textile manufacture was increasingly drawn to the water-power sites and coalfields of the north.

The influence of the region's physical characteristics extends also to the field of communications. The large tracts of clayland within the Hampshire Basin, for instance, are highly susceptible to waterlogging in wet weather, and as a result, overland transport was often extremely slow and difficult in these areas during the period under examination. In contrast, the presence of large quantities of gravel and flints in many parts would have made the provision of reasonably weather-proof roads a practical possibility at the time. The effect of geomorphology on communications is no less significant. For example, the region's long stretch of indented and sheltered coastline and several partially navigable rivers offer a highly convenient alternative to overland transport. On a slightly different note, relief characteristics have a significant effect on the form of the main overland routes. Where possible, these usually follow valley floors, but in the northern half of the region the direction of movement is predominantly 'cross-grain', with the result that many of the main overland routes in this area are of the 'undulating' form.

4.ii) Historical geography, 1675-1850 - introduction

Southern Hampshire's historical geography during this 175-year time-span displays a number of distinctive features. - Firstly, the period was one of considerable demographic expansion. The population of the mainland county increased from approximately 100,000 in 1676 to 355,000 in 1851,[1] with by far the greater part of this increase occurring after 1800. Secondly, in step with this demographic expansion there was a marked growth in urbanisation, and by direct implication, in tertiary activity. In 1676, for example, the four main towns of the region (Portsmouth, Southampton, Winchester and Gosport) accounted for only twelve per cent

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[1] See this chapter, p. 61

of the population of the mainland county; by 1851, this figure had risen to almost 40 per cent.[1] Thirdly, throughout the period agriculture formed the backbone of regional economic activity; by far the greater part of the occupied population were engaged either directly or indirectly in different kinds of agricultural activity. Fourthly, during the earlier part of the period, up to about 1750, the region's predominantly agrarian economic base was complemented by the existence of a small but thriving industrial sector. After 1750, however, this sector declined and by the middle of the nineteenth century, industrial activity had become confined to the principal towns. The inevitable result was that the region's dependence upon agriculture increased significantly over this period. The final distinctive feature of Southern Hampshire's historical geography during the period was that the primary means of transport was by road. Although water transport was available along the coast and in certain areas inland, in many parts, there was in fact no alternative to road transport. This situation remained unchanged until the later 1830s when railways began to be introduced into the region.

It's clear from this brief profile that Southern Hampshire experienced considerable change during the years between 1675 and 1850, and the road transport developments of the period must obviously be examined with this in mind. Before moving on to consider these developments, though, it is first necessary to look more closely at the main aspects of the region's contemporary historical geography. This is essential if a full understanding of such developments is to be obtained.

4.iii) Population and towns

Information on British population for the period 1675 to 1850 is in no way comprehensive. A valuable range of demographic material is contained in the results of the decennial national censuses beginning in 1801, but unfortunately, there are no really comparable sources for the later seventeenth or the eighteenth centuries, and thus British population studies for the period have had to rely upon two main categories of material: firstly, the parish registers, and secondly, a group of miscellaneous sources normally fiscal or ecclesiastical in origin.

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[1] See this chapter, p. 62

The parish registers have proved by far the greater focus of attention, notably through the abstracts compiled by John Rickman at the time of the first national census in 1801, and subsequently revised and supplemented in each succeeding census year until 1841.[1] However, the researches of Ohlin, Habakkuk, Glass and others[2] have shown that Rickman's Parish Register Abstracts (henceforward referred to as PRA) do not provide an adequate basis for the study of British historical demography in the period. As a result, attention has turned to the parish registers themselves, though this has mainly involved examining the mechanisms of population change, notably through the method of family reconstitution.[3] Attempts to chart the chronology of British population growth in the later seventeenth and eighteenth centuries on the basis of parish register material seem largely to have been abandoned.

The second category of material, sources of fiscal or ecclesiastical origin, has been explored less fully, though the value and availability of such sources was highlighted by Thirsk as long ago as 1959.[4] The most common of these is probably the ecclesiastical census. During the later seventeenth, eighteenth and early nineteenth centuries, it was quite usual for a newly appointed Bishop to send a circular letter to all the incumbents within his diocese requesting information about a variety of matters, including the numbers of communicants (or sometimes inhabitants), papists and non-conformists in the parish. Where several censuses of this kind survive for a particular diocese, there is clearly some considerable scope for charting the chronology of regional population growth, especially in the absence of any other suitable source.

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[1] Census, 1801, 1811, 1821, 1831, 1841 - Parish Register Abstracts

[2] P.G. Ohlin, 'The Positive and the Preventive Check: a study of the rate of growth of Pre-industrial Populations', (unpubl. Ph.D thesis, Harvard Univ., 1955); H.J. Habakkuk, 'The Economic History of Modern Britain', J. Econ. Hist., 18, (1958), 486-501; D.V. Glass, 'Introduction', in D.V. Glass & D.E.C. Eversley, (eds.), Population in History: Essays in Historical Demography, (London 1965), 1-22; D.V. Glass, 'Population and Population movements in England and Wales, 1700 to 1850', in D.V. Glass & D.E.C. Eversley, (eds.), op. cit., 221-46

[3] See for example, E.A. Wrigley, ' Family limitation in pre-industrial England', Econ. Hist. Rev., 19, (1966), 82-109

[4] J. Thirsk, Sources of Information on Population, 1500-1760, (Canterbury, 1965) - first appeared as articles in Amateur Historian, 4, (1959), 129-33, 182-4

In this respect, Hampshire is in a relatively favourable position, with ecclesiastical censuses extant for 1676, 1725 and 1788. The 1676 census, usually known as the Compton Census,[1] is a return of the numbers of conformists, papists and dissenters for the whole of the province of Canterbury.[2] The section of this census which covers Hampshire is exceptionally complete, with returns available for 97 per cent of parishes. To use this source to estimate total populations, however, it is necessary to introduce a suitable multiplier, as the census covered persons over the age of sixteen only. Hoskins, in his study of Wigston Magna,[3] used a multiplier of 1.5. This figure has since become generally accepted by demographers working on the period,[4] and it is the one used in the present examination. The censuses of 1725 and 1788[5] are returns of the actual numbers of souls in the diocese of Winchester. These censuses were carried out on the direction of the Bishops of Winchester and constituted but one part of visitation enquiries embracing a much broader range of subjects. The 1725 return covers some 87 per cent of Hampshire parishes, while that of 1788 covers about 35 per cent. These three ecclesiastical censuses, together with the five national censuses of 1801-51, provide the demographic raw material upon which the following examination of the population of Hampshire[6] between 1675 and 1850 is based.[7]

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[1] For the historical background to the Compton Census, see T. Richards, The Religious Census of 1676: An Inquiry into its historical value, mainly in reference to Wales, (Bangor, 1927)

[2] The original return for the Winchester diocese survives in Lambeth Palace, Lambeth MS. 639. There is also an eighteenth century copy in the William Salt Library, Salt MS. 33. The diocese of Winchester included Hampshire, the Isle of Wight and parts of adjacent counties

[3] W.G. Hoskins, The Population of an English Village, 1086-1801- a study of Wigston Magna, (Leicester, 1957)

[4] For example, Chalklin uses a multiplier of 1.66 - C.W. Chalklin, 'The Compton Census of 1676: the Dioceses of Canterbury and Rochester', Kent Records, 7, (1960), 153-74

[5] Hants. R.O., Replies to Visitation Enquiries, 1725, B/2/A; Replies to Visitation Enquiries, 1788, B/2/A - 2

[6] Since the study area of the thesis (as defined in the introduction) covers 75-80 per cent of the area of the mainland county of Hampshire, it was considered justifiable to use the mainland county as the basis for this examination.

[7] The reliability of these different sources, particularly those covering the period before 1801, is discussed in Appendix 4.1

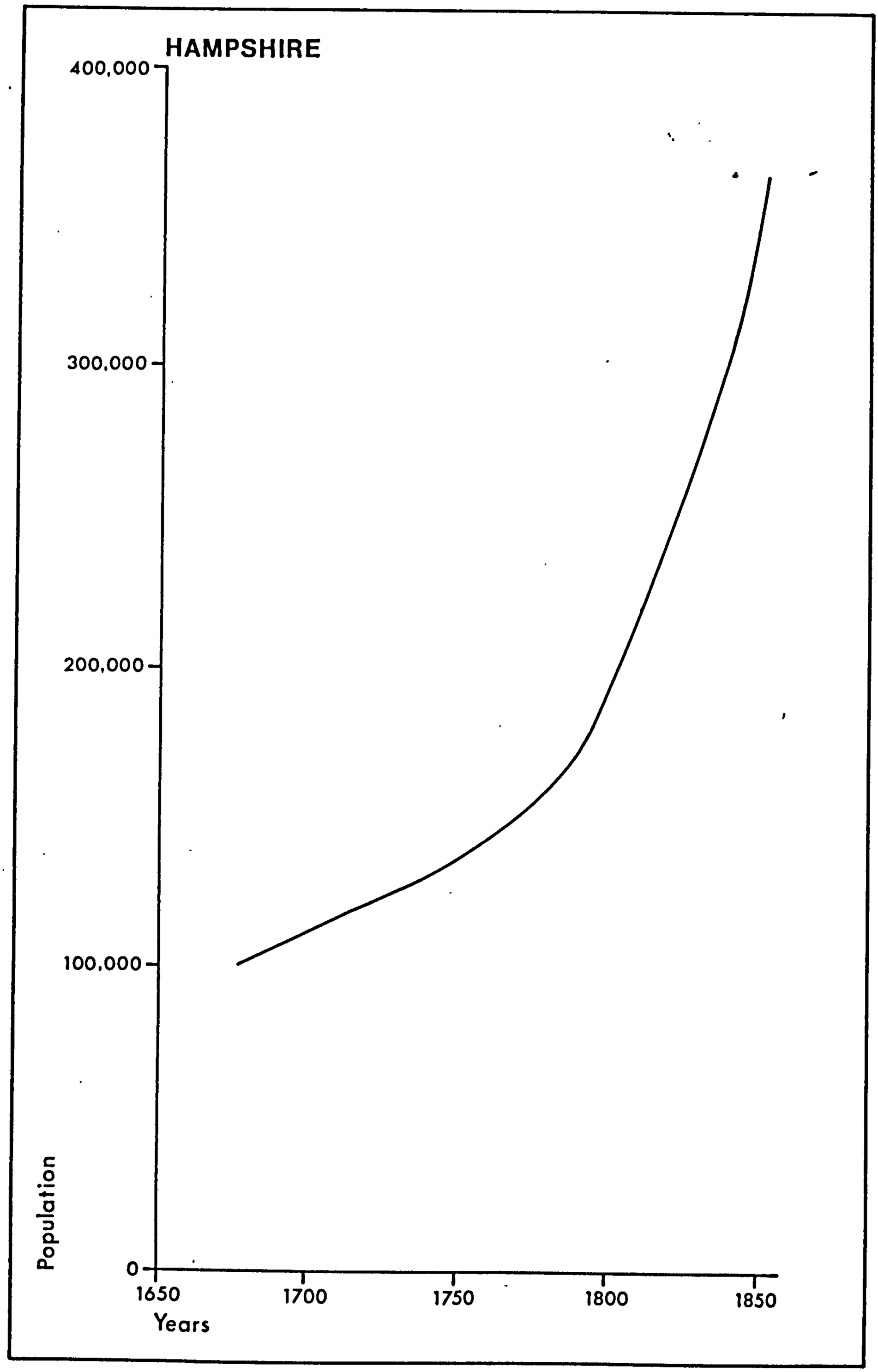
HAMPSHIRE
400,000
300,000
200,000
100,000
0
Population
1650
1700
1750
1800
1850
Years

FIGURE 4.2

The chronology of population growth for Hampshire (excluding the Isle of Wight) during the period is illustrated in figure 4.2. The Compton Census gives the mainland county about 67,000 inhabitants over the age of 16,[1] suggesting a total population of around 100,000. The diocesan census of 1725 indicates a total population of about 115,000,[2] but as pointed out earlier, this figure covers only 87 per cent of the parishes. Of the 13 per cent remaining, ten per cent contained an estimated population of about 9,000 in 1676. It would be reasonable to assume, therefore, a minimum total population of approximately 124,000 for Hampshire in 1725. The 1788 diocesan census, in contrast, cannot be used so easily, as returns survive for only 35 per cent of parishes. Fortunately, though, these are fairly randomly distributed over the county, and by calculating the mean percentage change against the 1725 parish figures, a fair estimate of the total number of inhabitants can be obtained. On this basis, Hampshire possessed a population of approximately 178,000 in 1788.[3] By 1801, the date of the first national census, this total had increased to 197,000.[4] Thereafter, figures are available at decennial intervals and by 1851 the population of the county had risen to approximately 355,000.[5] Over the 175 years from 1675 to 1851, Hampshire's population thus increased more than three-fold, the major growth occurring between 1801 and 1851. The main characteristics of this change are evident in figure 4.2. Between 1676 and 1725, the rate of growth averaged 0.5 per cent per annum. This increased to an average of 0.7 per cent per annum between 1725 and 1788, and an average of 0.8 per cent per annum between 1788 and 1801. Then, during each succeeding decade up to 1851, the rate of growth never fell below an average of 1.1 per cent per annum, and in the years 1811-21 and 1841-51, it reached 1.4 per cent. From the evidence of the graph, it is clear that a major turning point occurred at some stage between 1725 and 1788, though in the absence of further suitable demographic evidence for the mid-eighteenth century, it is exceedingly difficult to date that turning

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1 William Salt Library, Salt MS., op. cit.

2 Hants. R.O., Replies to Visitation ..., op. cit.

3 Hants. R.O., Replies to Visitation ..., op. cit.

4 Census, 1801 - Population Abstract

5 Census, 1851 - Population Abstract

Hampshire (exclud. I.O.W.)		England & Wales	
	Percentage increase		Percentage increase
1676-1725	24%	1676-1725	20%
1725-1801	58%	1725-1801	55%
1801-1851	81%	1801-1851	93%

TABLE 4.1

point with any degree of precision.[1] The approximate extent to which this pattern of regional growth fits in with the national picture is demonstrated in table 4.1[2] Between 1676 and 1725, and between 1725 and 1801, Hampshire's rate of population growth fell roughly in line with that of England and Wales as a whole, and may possibly have exceeded the national rate slightly. Between 1801 and 1851, however, the county's rate of population growth fell some ten per cent below the national figure.

While the population of Hampshire may have increased more than three-fold between 1676 and 1851, with the greater part of this increase taking place after 1750, growth was by no means uniform throughout the county. Detailed examination of the available demographic data reveals that certain areas experienced much faster rates of growth than others, while some recorded population declines. With only few exceptions, the areas of more rapid population expansion were those in which the region's main towns were located. Indeed, the growth of the urban population is perhaps one of the most striking features in the demographic history of the county at this time. In 1676, for example, the combined populations of Portsmouth, Southampton, Winchester and Gosport[3] accounted for only twelve per cent of the county total.[4] This figure increased to 17 per cent in 1725,[5] 30 per cent in 1801,[6] and by 1851 had reached 39 per cent.[7]

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[1] Deane & Cole have produced a series of eighteenth century population estimates for the counties of England and Wales, but as these are derived from the now suspect PRA, it is difficult to justify using such estimates in the present examination. The extent to which Deane & Cole's estimates compare with the totals given here is discussed in Appendix 4.2 - P. Deane & W.A. Cole, British Economic Growth, 1688-1959 - trends and structure, (Cambridge, 1962), 103

[2] It should be stressed that the percentage increases for the periods 1676-1725 and 1725-1801 cannot be considered to be any more than approximations. This is especially true of the figures given for England and Wales, which may well err as much as five per cent either way.

[3] Portsmouth includes Portsea, Winchester includes the Soke, and Gosport is in fact Alverstoke.

[4] William Salt Library, Salt MS., op. cit.

[5] Hants. R.O., Replies to Visitation ..., op. cit.

[6] Census, 1801, op. cit.

[7] Census, 1851, op. cit.

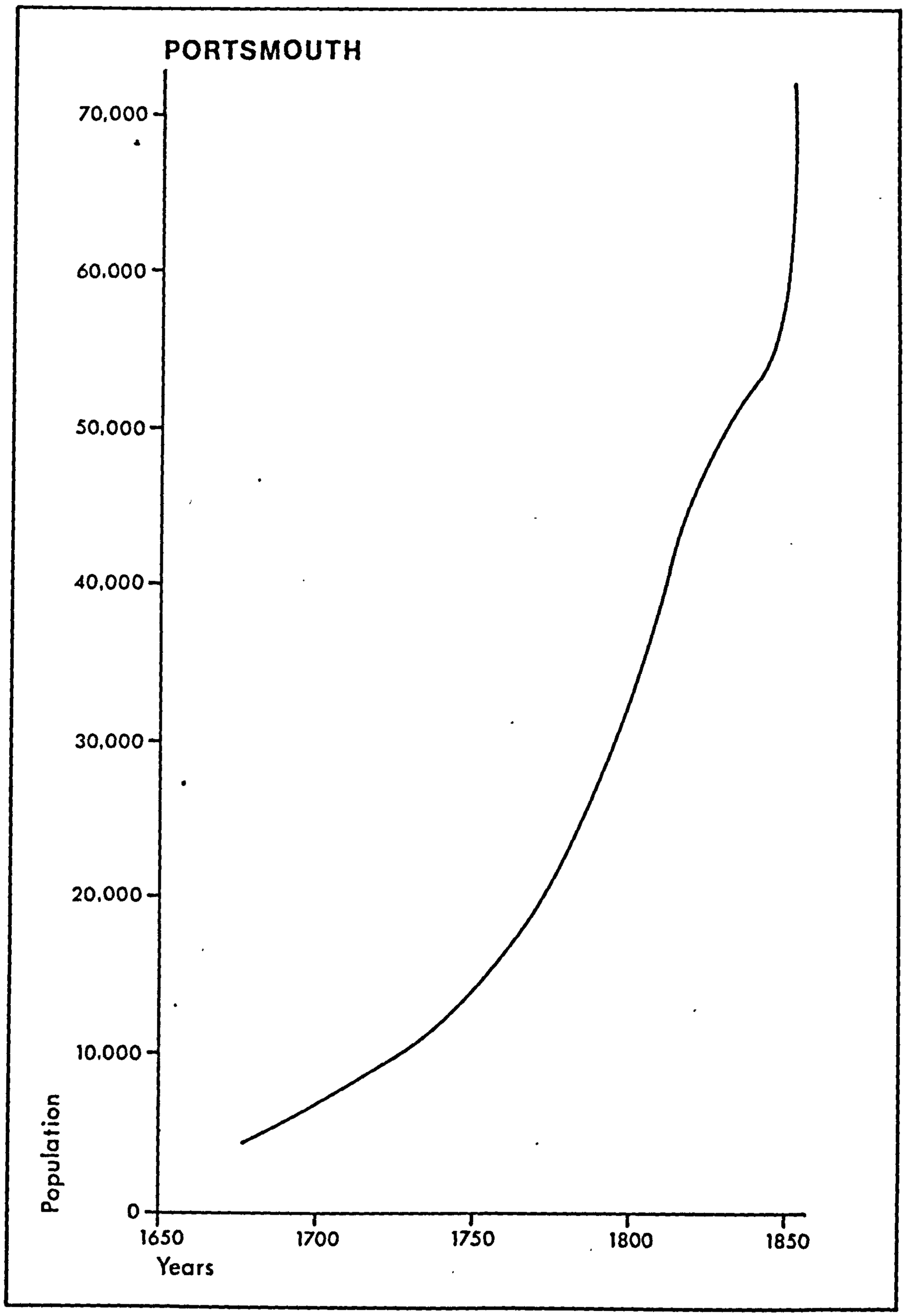
PORTSMOUTH
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Population
1650
1700
1750
1800
1850
Years

FIGURE 4.3

The region's main towns undoubtedly experienced some remarkable changes during the period, and since these formed pivotal elements in the road transport developments this thesis seeks to examine, it is necessary to consider the changes they underwent more closely.

Portsmouth

The development of Portsmouth in the later seventeenth, eighteenth and early nineteenth centuries must be seen against the background of the nation's advancing naval and military strength during the period. The growth of the town was intimately connected with the expansion of its naval and military functions, and perhaps moreso in the eighteenth century than at any other time in its history. The demographic growth of the town is illustrated in figure 4.3. In 1676, the town, i.e. Portsmouth and Portsea[1] - contained a population of approximately 4,000.[2] By 1725, after two prolonged wars with France (1689-97, 1702-13), this figure had risen to almost 10,000,[3] an average annual increase of 2.7 per cent. In the early 1690s, Gibson noted how Portsmouth had altered since the Restoration ... 'through the growth of naval action in England',[4] and the vicar of St. Thomas's, in his reply to the Bishop's visitation enquiry of 1725, provided ample evidence of the stimulating effect of foreign wars on the town's population expansion.[5] This pattern was to form a continuing one, for with the exception of the Walpole period, there were few times in the eighteenth century when England was not engaged in war, and Portsmouth's development during the period reflects this situation closely. Between 1725 and 1801, the town's population

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[1] Portsea was a suburb which developed from about the mid-seventeenth century. It was situated adjacent to the Dockyard, well outside the walled town of Portsmouth itself.

[2] William Salt Library, Salt MS., op. cit.

[3] Hants. R.O., Replies to Visitation ..., op. cit. This contrasts with Chalklin's estimate, based on knowledge of building history, that the 10,000 mark was not reached until the 1740s - C.W. Chalklin, The Provincial Towns of Georgian England: A study of the building processes, 1740-1820, (London, 1974), 24

[4] E. Gibson, (ed.), Britannia, (London, 1695), 133

[5] Baptisms during the seven years from 1701-13 averaged 214 per annum, while during the ensuing eleven years from 1714-24 they averaged only 157 per annum - Hants. R.O., Replies to Visitation ..., op. cit.

more than trebled, from just under 10,000 to over 33,000,[1] an average annual growth rate of 3.2 per cent. The Dockyard expanded remarkably during these years, and there was also a significant increase in the size of the garrison. The result was that the town became as busy in peacetime as in wartime. The suburb of Portsea had long since outgrown the old walled town in size and importance, and in the words of a contemporary visitor, Portsmouth as a whole had assumed 'the size and significance of a modern city'.[2] During the nineteenth century, however, there was a decisive slackening in the town's expansion. This was especially evident after the cessation of hostilities with France in 1815. The mean annual rate of population increase fell to 1.3 per cent between 1811 and 1821, 1.0 per cent between 1821 and 1831, and 0.5 per cent between 1831 and 1841.[3] Only in the decade from 1841 to 1851, probably as a result of the impetus of the railway, did the rate of population growth rise to the levels attained in the second half of the eighteenth century. Although, Portsmouth's commercial fortunes clearly suffered as a result of the extended peace of the first half of the nineteenth century, the gravity of this change was to a large extent offset by the development of a new suburb at Southsea, firstly as a place of residence for naval officers and their families, and later as a holiday resort.

Gosport

The development of the town of Gosport during the period closely paralleled that of Portsmouth. As the preceding discussion has shown, the expansion of Portsmouth during the later seventeenth, eighteenth and early nineteenth centuries was inextricably linked to its growth as a naval and military centre, and this was perhaps even more true of Gosport. Located on the south-western shore of Portsmouth Harbour, immediately opposite the town of Portsmouth itself, Gosport quickly developed as a supply centre for both the army and the navy, and as a place of residence for sailors and their families. The chronology of

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[1] Census, 1801, op. cit.

[2] S. Shaw, A Tour to the West of England in 1788, (London, 1789), 514

[3] Census, 1811, 1821, 1831 and 1841, op. cit.

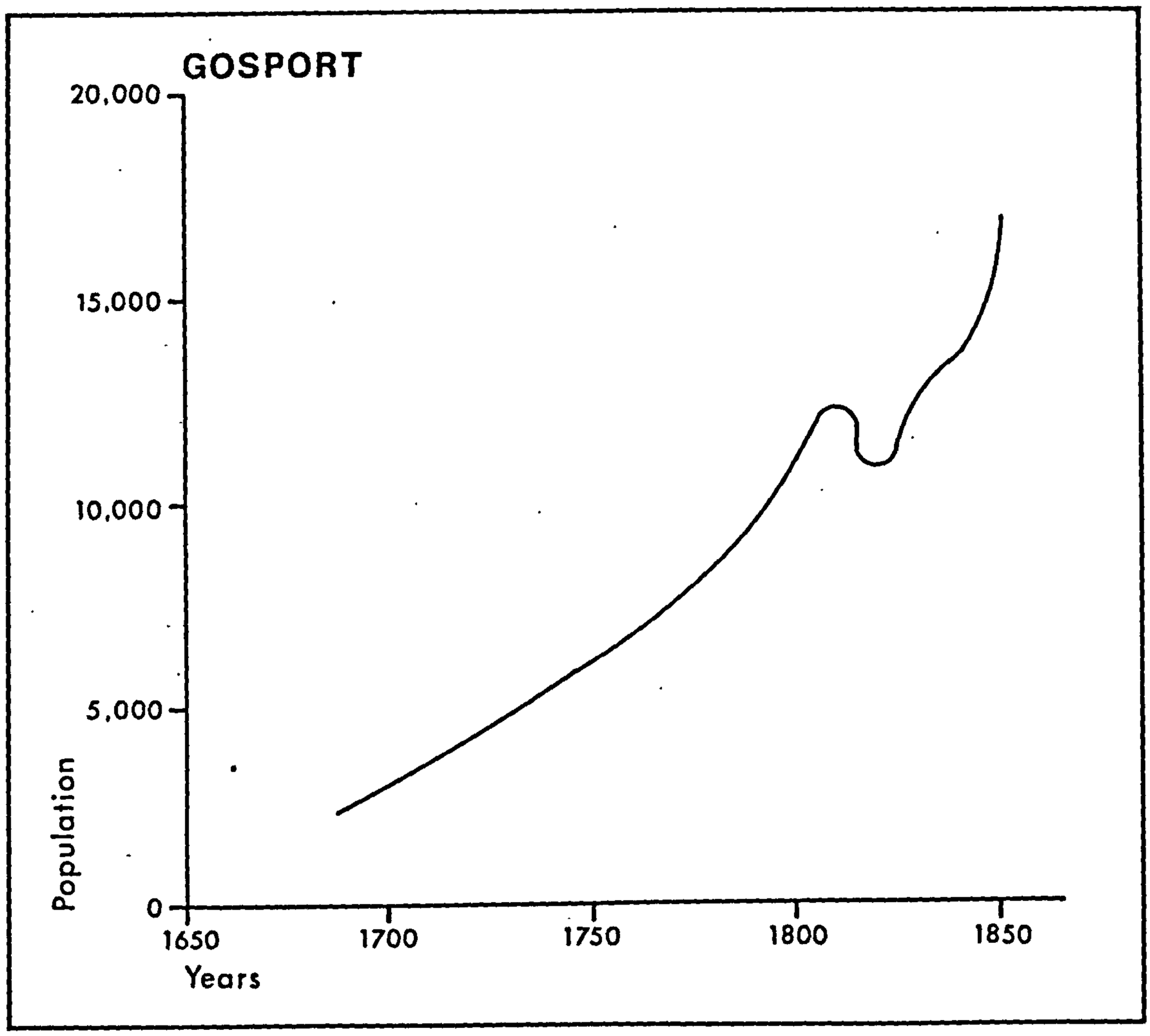
GOSPORT
20,000
15,000
10,000
5,000
0
Population
1650
1700
1750
1800
1850
Years

FIGURE 4.4

population growth at Gosport[1] is illustrated in figure 4.4. In 1676, Gosport contained an estimated 2,250 people.[2] By 1725, this total had increased to some 4,500,[3] a rate of expansion of the order of 2.0 per cent per annum, and well in line with that of Portsmouth over the same period. Stukeley, who visited Gosport in the early eighteenth century, described it as 'a very considerable town',[4] and Stephen Martin-Leake, on a visit to Portsmouth in 1728, referred to it as 'a good town dependant upon the town and harbour of Portsmouth, and therefore may be esteemed to be part of it, as in common speech it is taken to be'.[5] The rate of population expansion experienced by Gosport between 1676 and 1725 was sustained throughout the remainder of the eighteenth century, and by 1801 it contained over 11,000 people.[6] Like Portsmouth, the town benefited greatly from the numerous foreign wars of the period, and this was especially true in the years from 1793 to 1815. With the onset of a period of lasting peace, however, and in common with Portsmouth, its fortunes declined. The population decreased by more than 1,000 between 1811 and 1821,[7] and the town lost much of its trade, a change which was noted in a contemporary directory as being 'fully demonstrated by its dilapidated and untenanted houses'.[8] The opening of a branch railway line to the town in 1842 marked the beginning of a period of recovery, and by 1851 the population had risen to almost 17,000.[9]

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[1] For the majority of the period under examination, it is impossible to distinguish the population of the town of Gosport from that of the parish of Alverstoke, of which it formed part. The population totals given for Gosport are therefore those for the parish of Alverstoke as a whole.

[2] William Salt Library, Salt MS., op. cit.

[3] Hants. R.O., Replies to Visitation ..., op. cit.

[4] W. Stukeley, Itinerarium Curiosum, (London, 1724), 187

[5] C.R. Markham, (ed.), Life of Captain Stephen Martin, 1666-1740, (London, 1895), Appendix D (Letters of Stephen Martin-Leake), 210-11

[6] Census, 1801, op. cit.

[7] Census, 1811, 1821, op. cit.

[8] J. Pigot & Co., London and Provincial New Commercial Directory, (London, 1823), 324

[9] Census, 1851, op. cit.

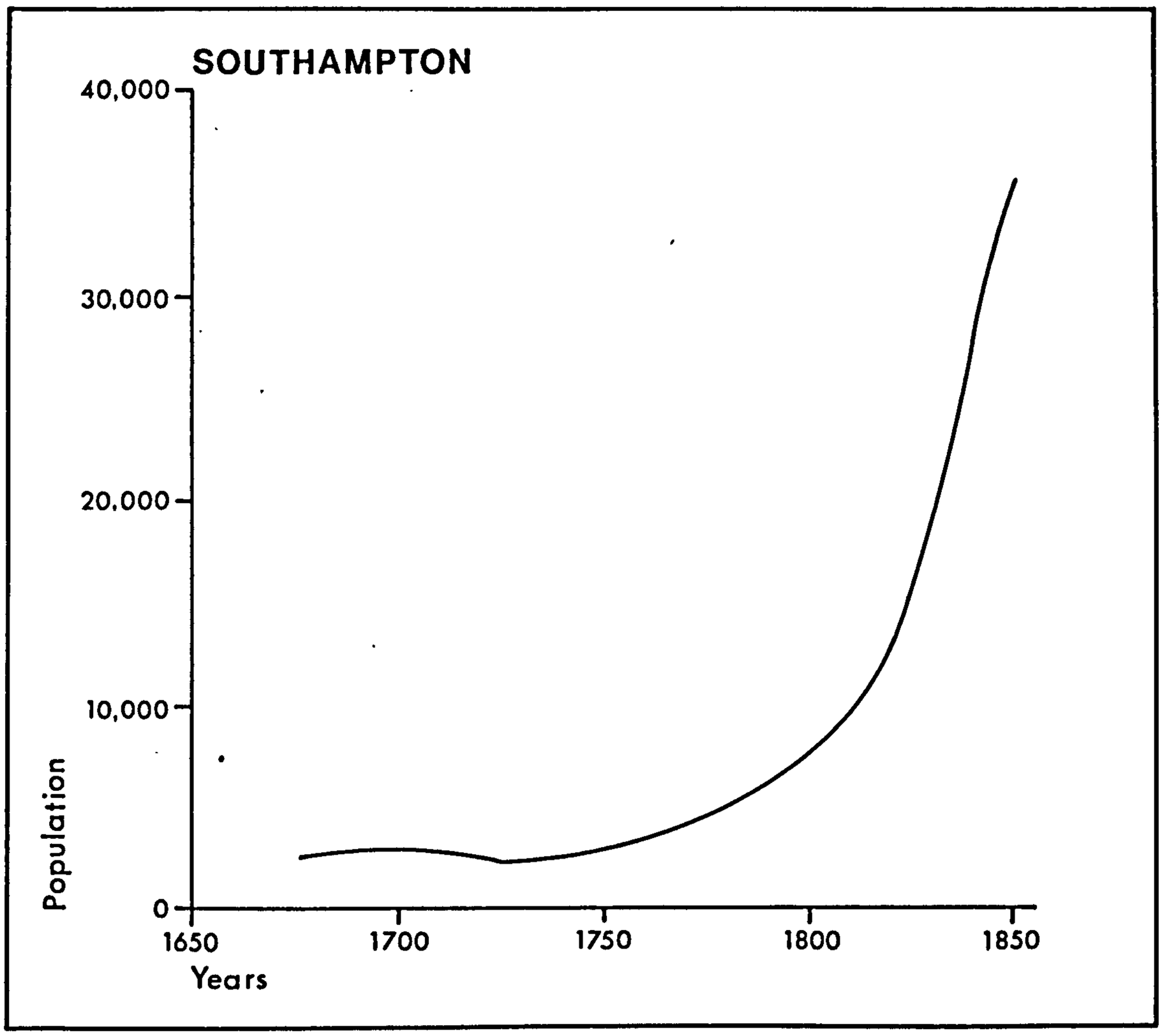
SOUTHAMPTON
40,000
30,000
20,000
10,000
0
Population
1650
1700
1750
1800
1850
Years

FIGURE 4.5

Southampton

Although Southampton shared many of the natural port advantages with which Portsmouth was favoured, its development during the later seventeenth, eighteenth and early nineteenth centuries followed a very different course. The chronology of population change at Southampton during the period is shown in figure 4.5. In 1676, the town contained some 2,900 people,[1] and this figure remained comparatively unchanged until well into the first half of the eighteenth century.[2] This demographic stagnation was undoubtedly due to the depressed state of the town's trade at the time,[3] a feature that few contemporary visitors to the town failed to notice. Celia Fiennes, for example, on a visit in the mid-1690s, recorded how trade had failed, describing the town as 'almost forsooke and neglected'.[4] At about the same date, Gibson noted 'The town is not in the same flourishing condition as formerly; for having lost its trade, it has lost most of its inhabitants too ...'.[5] Several decades later, travellers such as Defoe, Macky and Stukeley[6] were still commenting on the decay of the town's trade, although it is clearly difficult to establish the precise truth of some of their remarks.[7] The first clear signs of recovery came in the 1750s, with the beginnings of the development of Southampton as a watering place. The discovery of a chalybeate spring and the benefit of royal patronage added significantly

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[1] William Salt Library, Salt MS., op. cit.

[2] In 1696, the population was 2,939 - E.S. Welch, (ed.), Southampton Maps from Elizabethan times, (Southampton, 1964), 24-5; in 1725, the population was approximately 2,750 - Hants. R.O., Replies to Visitation ..., op. cit.

[3] The reasons for the depressed state of the town's trade are discussed in some detail in A. Temple Patterson, A History of Southampton, 1700-1914, I, (Southampton, 1966)

[4] C. Morris, (ed.), The Journeys of Celia Fiennes, (London, 1947), 54

[5] E. Gibson, op. cit., 132

[6] D. Defoe, A Tour through the Whole Island of Great Britain, (London, 1724-6), Penguin edition, 1971, 154; J. Macky, A Journey through England in familiar letters from a gentleman here to his friend abroad, II, (London, 1722), 31-3; W. Stukeley, op. cit., 185

[7] For instance, Willan has shown that Southampton's coasting trade increased between 1687 and 1717 - T.S. Willan, The English Coasting Trade, 1600-1750, (Oxford, 1938), 152

to the town's popularity, and by 1757, a local census credited it with some 3,300 inhabitants.[1] Thereafter, expansion proceeded rapidly, and by 1788 the population had risen to approximately 6,200,[2] an average annual increase over the 1757 total of 2.9 per cent. Charles Dibdin, who had spent much of his childhood in Southampton in the mid-eighteenth century, re-visited the town in the 1790s, and was particularly struck by the way it had grown during the intervening decades, attributing this change to the 'prodigious concourse of visitors in different bathing seasons ..... and the large numbers of genteel families who have made it a regular residence'.[3] During the French Wars (1793-1815), however, the pace of Southampton's expansion slackened somewhat. Between 1788 and 1801, the average annual rate of population increase fell to 2.3 per cent, and between 1801 and 1811 to 2.2 per cent. Intermittent blockade conditions in the Channel and fears of French seizure of English shipping hindered the revival of the town's maritime trade which had begun in the 1780s, but perhaps more important, was that as a watering place and a residence for the 'genteel', Southampton now had too many rivals, and often with advantages it did not possess. After the Peace of 1815, the town's maritime trade expanded considerably, and there was also a significant increase in the number of passenger vessels using the port. At about the same time, Southampton's fortunes as a watering place experienced a revival. This dual expansion resulted in a dramatic acceleration in the town's rate of population growth. The average annual increase rose to 3.9 per cent between 1811 and 1821, and 4.5 per cent between 1821 and 1831, so that by 1831, Southampton possessed close on 20,000 inhabitants.[4] In 1840, the development of the town took another sharp change in course with the opening of the London to Southampton Railway. The numbers of ships using the port almost doubled between 1840 and 1841,[5] and the construction of new docks was set in progress to

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[1] Southampton Herald, 18/6/1825

[2] Hants. R.O., Replies to Visitation ..., op. cit.

[3] C. Dibdin, Observations on a Tour through almost the whole of England, and a considerable part of Scotland, in a series of letters, addressed to a large number of intelligent and respectable friends, II, (London, 1801-2), 368

[4] Census, 1831, op. cit.

[5] D.J. Rowe, 'Southampton and the Railway Mania, 1844-7', Transport Hist., 2, (1969), 227 - the total number of ships using the port increased from 883 in 1840 to 1,398 in 1841

accommodate the increased traffic. Within the space of ten years, Southampton was transformed from a comparatively unimportant port and watering place into a thriving commercial centre of growing national status. By 1851, the population had risen to more than 35,000,[1] a four-fold increase over the 1801 total.

Winchester and the lesser towns

Of the remaining Southern Hampshire towns, the most important was Winchester. As well as acting as the region's administrative and ecclesiastical capital, the city was also a major communications centre, with roads radiating in all directions. During the later seventeenth and eighteenth centuries, the city's population increased fairly slowly, from an estimated 3,300 in 1676,[2] to about 4,100 in 1725,[3] and 6,200 in 1801.[4] Thereafter, though for reasons which are unclear, growth was rather more rapid and by 1851 it possessed some 13,300 inhabitants.[5] In marked contrast to Portsmouth, Gosport and Southampton, the development of Winchester during the period displays a noticeable degree of stability. The city's inland situation clearly insulated it from the various influences which proved to be so important in the development of the coastal centres.

Below Winchester in the urban hierarchy were the more important market towns of the region, which often possessed rather more than the basic 'market' function. Andover, for example, was not only a local marketing centre, but also an important staging post on the busy high road from London to the West of England. In 1801, the town possessed a population of some 3,300,[6] and this increased to 5,200 in 1851.[7]

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[1] Census, 1851, op. cit.

[2] William Salt Library, Salt MS., op. cit.; all population totals for Winchester refer to the City and the Soke

[3] Hants. R.O., Replies to Visitation ..., op. cit.

[4] Census, 1801, op. cit.

[5] Census, 1851, op. cit.

[6] Census, 1801, op. cit.; there are no population figures for Andover Borough before 1801

[7] Census, 1851, op. cit.

Lymington, Fareham and Christchurch all fall in a similar category, in that as well as being local marketing centres, they were also small ports. At one time, Lymington had a reputation as a watering place, though on a much lesser scale than Southampton. In 1725, its population was approximately 1,500,[1] and this total increased to some 2,400 in 1801 and 4,200 in 1851.[2]

After these more important market towns, were those which depended on the 'market' function for their existence almost entirely. Bishop's Waltham, Alton, Ringwood and Romsey are examples of centres which fall within this category. The majority of these towns recorded only marginal population increases during the period. Indeed, some experienced a slight decline in population, particularly during the middle decades of the nineteenth century as the forces of market concentration began to gather momentum.

The considerable demographic expansion which Hampshire experienced between 1675 and 1851, coupled with the marked growth in urbanisation, suggests the existence of an expanding agricultural sector, and it is to agricultural activity that attention must now turn.

4.iv) Agriculture

All contemporary writers agree that throughout the period from 1675 to 1850, the primary form of economic activity in Southern Hampshire was agriculture.[3] Although the region was by no means rich in agricultural potential, it supported the production of large quantities of grain, wheat and barley particularly, and also extensive rearing of sheep. Thus, Southern Hampshire has often been described as 'arable-sheep' or 'sheep-and-corn' country. However, whilst such a description may hold true in

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[1] Hants. R.O., Replies to Visitation ..., op. cit.

[2] Census, 1801, 1851, op. cit.

[3] See for example, D. Defoe, op. cit.; A. Young, A Six Weeks Tour through the Southern Counties of England and Wales, (London, 1768); C. Vancouver, General View of the Agriculture of Hampshire, including the Isle of Wight, (London, 1810). It would clearly be helpful to demonstrate this in statistical terms. However, there is no statistical information on occupations for the eighteenth century, and the occupations material contained in the decennial national censuses of the first half of the nineteenth century is so varied in form as to render it virtually useless for time-series comparisons.

general terms, it ignores the fact that significant changes occurred in the structure and fortunes of this dual economy during the period under examination. These changes were closely linked to national trends and events, but their precise nature was largely determined by the region's physical, economic and social characteristics.

Agriculture in the region during the later seventeenth and first half of the eighteenth centuries could be regarded as progressive.[1] Turnip husbandry had probably been established since at least 1700, while the growing of clovers, ryegrass and sainfoin dated back to the 1660s.[2] These 'new crops' increased the supply of animal fodder substantially, thereby permitting the stocking of far greater numbers of sheep than had previously been possible, and often on a reduced area of pasture. The increase in the numbers of sheep, coupled with the extension of the practice of folding them on arable lands, promoted higher crop yields, which in turn permitted the permanent cultivation of some of the thin downland soils, hitherto used only for sheep pasture. This expansion of the arable frontier was well under way by the early eighteenth century, for Defoe remarked upon it in some detail in his observations of the district between Winchester and Salisbury:

> '... the vast flocks of sheep, which one every where sees upon these downs ... is a sight truly worth observation. But 'tis more remarkable still; how a great part of these downs comes by a new method of husbandry, to be not only made arable ... but to bear excellent wheat, and great crops too, though otherwise poor barren land, and never known to our ancestors to be capable of any such thing ... for by only folding the sheep upon the ploughed lands, those lands, which otherwise are barren ... are made fruitful ...'[3]

The process of agricultural improvement continued and possibly even accelerated during the second half of the eighteenth century. Arthur Young, who visited several parts of the county in 1767, was favourably impressed. He found the country between Salisbury and Romsey, Romsey and

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[1] G.E. Fussell, 'Four Centuries of Farming Systems in Hampshire, 1500-1900', Proc. Hants Field Club, 17, (1952), 271

[2] G.E. Fussell, op. cit.; E.L. Jones 'Eighteenth Century Changes in Hampshire Chalkland farming', Agric. Hist. Rev., 8, (1960), 5-19

[3] D. Defoe, op. cit., 192-3

Winchester, and Alresford and Alton well cultivated, often enclosed, and with crop rotations firmly established.[1] The conversion of sheep pasture to arable was given added stimulus by the beginnings of the Parliamentary enclosure movement, while the region's expanding population ensured a ready market for the extra crops. By the 1760s, Southern Hampshire had established a reputation as a producer of large quantities of fine quality grain and wool, along with considerable amounts of hops, bacon, malt and honey. Agriculture was generally prosperous and many smallholders and 'peasant' farmers supplemented their incomes by engaging in home industries such as spinning and weaving.

During the last two decades of the eighteenth century, however, the situation began to change. Home industries declined in the face of competition from the large manufacturing centres of the north, landholdings were consolidated as the pace of the private and Parliamentary enclosure movements accelerated, and machinery began to replace manual labour. In consequence, large numbers of smallholders and 'peasant' farmers were forced to move from the land and seek employment elsewhere. Some found it in the expanding coastal towns, particularly Portsmouth, but many became vagrants.[2] The larger-scale farmers, of course, gained considerably from these various changes, but there were yet further benefits to come. Between 1793 and 1851, England was at war with France, and the needs of war, coupled with a rapidly expanding population, meant an increasing demand for all types of grain, which in turn provided a strong incentive for farmers to extend the area under the plough. This process was given added stimulus by the amazingly high prices of the period.[3] As early as 1796, a local newspaper recorded that 'there is a far greater quantity of land sown with wheat than ever before happened'.[4] Large areas of

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[1] A. Young, op. cit., 167-79

[2] Some indication of the increasing incidence of vagrancy is given by the rapid rise in charges for vagrants in the county in the later part of the eighteenth century - W. Page, (ed.) Victoria County History of Hampshire and the Isle of Wight, V, (London, 1912), 430

[3] See J.D. Chambers & G.E. Mingay, The Agricultural Revolution, 1750-1880, (London, 1966), 106-47

[4] Hampshire Chronicle, 21/5/1796; see also R.A. Pelham, 'The Agricultural Revolution in Hampshire, with special reference to the Acreage Returns of 1801', Proc. Hants Field Club, 18, (1954), 139-53

maiden downland came under tillage for the first time, some of which were cropped almost continuously during the period of high prices. The concentration on arable farming resulted initially in a reduction in the size of sheep flocks, but in the later years of the French Wars, this change was halted, if not reversed, with the introduction of the superior Southdown sheep, mainly in response to a growing demand for mutton. The war years also witnessed a further reduction in the size of the agricultural labour force, due both to the needs of the armed forces and to the availability of war work at good rates of pay, particularly at Portsmouth and Gosport. In fact, agricultural labour became scarce and Hampshire farmers were encouraged, and in some cases almost forced, to invest in more machinery, so reinforcing a trend which had begun 20 years before.[1]

The high prosperity of the war years, however, was to be short-lived. With the signing of peace in 1815, agricultural prices collapsed and the importing of food, which had been very much hindered during the wars, was resumed on a large scale. The Hampshire Chronicle for the early post-war years contains numerous references to the falling prices of all kinds of farm products in the region, and while this brought much relief to the townsfolk, the farming community suffered considerably. Bankruptcies were frequent and signs of unrest appeared in many districts. The cultivation of 'marginal lands' rapidly became uneconomic and agriculture in the region seems to have entered a period of depression, which lasted well into the middle of the century. The nature and extent of this depression are uncertain. Some parts of the region undoubtedly suffered more than others and the depression was by no means a continuous one. The downland areas that had been converted to tillage during the war years were almost certainly among the first to suffer. In the early 1820s, Cobbett noticed between Winchester and Andover 'some hundreds of acres of ground, that was formerly most beautiful down, which was broken up in dear-corn times, and which is now a district of thistles and other weeds'.[2] Some lowland regions, too, were quite seriously affected by the depression. The districts around Lymington and Milford, for instance, are recorded as having been understocked and insufficiently tilled for

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[1] For a detailed survey of agriculture in the region at the beginning of the nineteenth century, see C. Vancouver, op. cit.

[2] W. Cobbett, Rural Rides, (London, 1830), Penguin edition, 1967, 56

proper farming.[1] The failure of a number of country banks served to exacerbate the situation of many farmers, and the picture was complicated further by the problem of increasing unemployment. Post-war demobilisation and the reduction of the labour force at Portsmouth Dockyard[2] resulted in a dramatic increase in the size of the region's agricultural labour force. Those who had left the fields at the start of the wars either to enlist in the services or to work in the prospering coastal towns wished to return to their former occupations. However, the whole basis of Hampshire agriculture had changed during the wars. The introduction of machinery had made it far less labour-intensive and fewer hands were needed. The result was growing unrest amongst the labouring community, culminating in a series of violent agricultural riots in 1830 and 1831.[3] Despite the deteriorating farms, the bankruptcies and the unemployment, though, the population of the region continued to expand, in turn giving rise to a growing demand for food. Thus, towards the middle years of the century, there was a renewed move to cultivate wastelands, new fertilisers and new farm implements were introduced, and dairying began to develop in the districts around the growing coastal towns. While the depression was by no means over by 1850, few parts of the region had failed to record agricultural advances of some kind.

4.v) Industry

In contrast to agriculture, industry was very much the less significant form of economic activity in Southern Hampshire during the period from 1675 to 1850,[4] although like agriculture, industrial activity in the region experienced some far reaching changes during these years. The main explanation for the relative insignificance of industrial

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[1] G.E. Fussell, op. cit., 280

[2] In 1822, for example, it was reported that 8-900 men were about to be discharged from the Dockyard - Hampshire Chronicle, 9/9/1822

[3] For details, see for example, Hampshire Chronicle, 22/11/1830, 29/11/1830

[4] For reasons already discussed (see this chapter, p. 69), it is virtually impossible to illustrate this fact in statistical terms

activity was the region's chronic deficiency of industrial resources. Ironstone and copperas stone were present in small quantities in some areas, but in very few instances were these deposits of sufficient size or of suitable quality to warrant the setting up of smelting works.[1] Where such works were established in the region, the raw materials were almost invariably brought in from outside.[2] Southern Hampshire did, nevertheless, possess abundant quantities of chalk, which could be burnt into lime and used for a number of purposes. In addition, a considerable variety of potters' clay was to be found in different parts of the region, and provided the raw material for the manufacture of bricks and coarse earthenware, although this industry does not seem to have assumed any real significance until the early nineteenth century. Chalk and potters' clay apart, Southern Hampshire clearly possessed none of the non-renewable industrial resources which formed such a major element in the British Industrial Revolution.

The region was in a rather more favourable position in the realm of renewable industrial resources. The most significant of these was probably timber. Southern Hampshire had been noted for its extensive oak woods since the Middle Ages, but it was not until the mid-seventeenth century that they were exploited on any scale. It was then that the region began to develop as a major area of wooden ship-building and ship-repairing, and over the next 150 years this industry expanded remarkably, eventually to become perhaps the most important single industrial activity in the region during the period.[3] A second renewable industrial resource was wool. The region had long been an established wool-producer, and this had fostered the development of textile manufacturing in many of the towns. The making of textile goods was also an important cottage industry and, as noted earlier, offered valuable supplementary income for the

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[1] An iron-smelting works, which used locally-obtained ironstone, was in operation at Sowley (near Beaulieu) in the mid-eighteenth century - J.J. Cartwright, (ed.), The Travels through England of Dr. Richard Pococke, II, (London, 1888-9), 129

[2] The Waterloo iron works at Andover and Henry Cort's iron works at Funtley (nr. Fareham) and Gosport, for example. See L.T.C. Rolt, Waterloo Ironworks, (Newton Abbot, 1969); R.A. Pelham, 'The Industrial Revolution in Hampshire', Wessex Geogr., 6, (1965), 29-38; L.F.W. White, The Story of Gosport, (Portsmouth, 1964)

[3] See A.J. Holland, Ships of British Oak - the Rise and Decline of Wooden Shipbuilding in Hampshire, (Newton Abbot, 1971)

many smallholders and 'peasant' farmers. In a similar way, Southern Hampshire's agricultural pursuits also provided the raw materials for such industries as brewing, tanning and malting, while the existence of fast-flowing, pure-water streams had proved particularly attractive to paper-makers, and by the second half of the eighteenth century, the industry was fairly well represented throughout Southern Hampshire.[1] By virtue of the region's coastal situation, and more especially the indented and low-lying character of its shores, the sea also constituted a significant renewable industrial resource. Sea fishing, for example, was important in a number of parts, but the most significant sea-orientated industry was undoubtedly salt-making, with salt-pans and salt works in operation in several coastal districts, the Lymington and Hayling areas, in particular.[2] Although it is clear that at no time during the period 1675 to 1850 could Southern Hampshire be described as an industrial area, the region nevertheless possessed a fair variety of industrial activity and this provided a valuable complement to its predominantly agriculturally-based economy. It is true that many of the industries present were themselves agriculturally-based, but they still represented an important diversifying force and they also offered significant additional employment opportunity.

As with agriculture in the region during the period, industry in Southern Hampshire experienced marked change in the 175 years between 1675 and 1850. For many areas of Britain, this was a time of substantial industrial as well as economic advance as the technological and organisational changes of the Industrial Revolution ran their course. For Southern Hampshire, and indeed for much of Southern England, however, this was a time of industrial decline. The process was by no means uniform over either time or space, for certain industries began contracting long before others and marked spatial variations in the rate of contraction were frequently evident. Nevertheless, the basic fact emerges that between the middle of the eighteenth and the middle of the nineteenth centuries, Southern Hampshire was transformed from a

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[1] A.H. Shorter, 'Paper Mills in Hampshire', Proc. Hants Field Club, 18, (1953), 1-11

[2] For salt-making in the Lymington area, see A.T. Lloyd, 'The Salterns of the Lymington area', Proc. Hants Field Club, 24, (1967), 86-102; D.A.E. Cross, 'The Salt Industry of Lymington', Indus. Arch., 2, (1965), 86-9

region possessing a fair variety of industrial activity, into one in which industry was to a large extent absent altogether.[1]

Industry in the region was almost certainly in its most prosperous state in the first half of the eighteenth century. The textile industry was in a thriving condition at the time, both in the towns and in the countryside,[2] while the coastal salt industry probably experienced its period of greatest prosperity in the middle decades of the century.[3] The wooden ship-building industry, though perhaps not yet at its zenith, was showing distinctive signs of expansion, and especially in wartime when the navy's demand for new vessels gave it added stimulus.[4] Paper manufacturing was likewise in a favourable state,[5] as were the widespread agriculturally-based industries like brewing, tanning and malting. The generally slow and expensive nature of inland transport facilities ensured that the markets for most of these industries remained small, and in consequence, they were well represented throughout the region.

From the mid-eighteenth century onwards, the whole basis of this industrial prosperity began to be undermined, largely as a result of competition from the developing industrial areas of the Midlands and the North. Among the first of Southern Hampshire's industrial activities to suffer was the textile industry, and particularly the domestic or cottage sector. The development of large-scale mechanised production in the North after 1750, coupled with the gradual diffusion of the factory system, rendered the home spinning and weaving industry unprofitable within a very short time, thereby depriving the families of many smallholders and 'peasant' farmers of useful additional income. Textile manufacturing in the towns, however, seems to have survived for a rather longer period, for even as late as the early nineteenth century, places

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[1] The towns of Portsmouth and Southampton were perhaps the two main exceptions.

[2] W. Page, op. cit., 430; J. Hanway, A Journal of Eight Days Journey from Portsmouth to Kingston-upon-Thames thro' Southampton, Wiltshire etc., (London, 1756); J.J. Cartwright, op. cit.; W. Stukeley, op. cit.

[3] This was almost certainly true of the salt industry of the Lymington district, which was by far the largest on the Southern Hampshire coast - A.T. Lloyd, op. cit.

[4] A.J. Holland, op. cit.

[5] A.H. Shorter, op. cit.

like Christchurch, Ringwood and Andover were still engaged in the production of textile goods on a limited scale.[1]

The second of Southern Hampshire's industrial activities to experience decline was the salt industry, although in comparison with textiles, the rate of contraction was slow. Following unprecedented prosperity in the middle decades of the eighteenth century, the industry entered a period of prolonged contraction, a phase which was not completed until over 100 years later. There were three main reasons for the change. The most important was the rising cost of the immense quantities of coal which were so necessary to the evaporation process. Related to this, of course, all of this coal had to be imported, and the cost of the long sea-haul from the northern coalfields was also rising. A second factor in the industry's contraction was the increasing burden of taxation to which it was subjected. This came in two main forms. First, there was the coal duty, which in 1817 was £30 on each ton of coal,[2] and merely added to the already high fuel costs. The second form was the salt duty. This had first been introduced in 1694, at the rate of 1/8d per bushel of salt manufactured,[3] but by the early nineteenth century it had reached 15/- per bushel,[4] a level that constituted a severe burden to the region's salt producers. The third reason for the decline of salt manufacture was the rise of the rock-salt industry both in Britain and in Europe. This industry could fairly easily be located in proximity to coal reserves, and in consequence, it was able to undercut the sea-salt producers' prices substantially, thereby capturing the greater part of the home and overseas market.

In contrast to the textile and salt industries, Southern Hampshire's wooden ship-building industry continued expanding right up until the first decade of the nineteenth century. The explanation for this apparent anomaly was two-fold. Firstly, for almost half the period from 1750 to 1815, Britain was at war, and the industry benefited considerably from the large numbers of naval building contracts which came its way. Secondly,

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[1] C. Vancouver, op. cit.; see also contemporary directories covering the region.

[2] A.T. Lloyd, op. cit., 92

[3] Ibid., 89

[4] Ibid., 92

the technological advances which were eventually to bring about its decline did not occur until fairly late in the Industrial Revolution. The industry probably experienced its most prosperous years during the French Wars (1793-1815). Between 1803 and 1814, for instance, some 70 men-of-war were launched from the region's merchant shipyards,[1] in addition to merchant vessels. After 1815, though, the position altered dramatically. The supply of naval contracts ceased and the industry was forced to fall back on its merchant building and repair activities. In addition, of course, ship-building technology was beginning to change by this time. Wood was slowly being replaced by iron as the main construction material, and sail was giving way to steam as the principal means of propulsion. The result was that ship-building increasingly became attracted to those areas that were best able to meet the requirements of the new technology - the estuaries of the industrial North, in particular. The age of wooden ship-building was effectively over, and by 1850, with the exception of a scattering of small-scale enterprises, the industry had virtually disappeared from Southern Hampshire.

The final group of the region's industrial activities to enter into decline were paper-making and the agriculturally-based industries like brewing and tanning. Their decline was by no means peculiar to Southern Hampshire, for the middle decades of the nineteenth century witnessed a general contraction of these industries throughout the country. The main explanation on this occasion lay in the improvements in inland transport effected during the period. These greatly extended the market areas for such industrial activities, thus setting in motion a process of concentration. Emphasis shifted to the large production unit, located in the area of optimal resource advantage. By 1850, therefore, many of Southern Hampshire's paper mills, breweries and tanneries had ceased operation.[2] The industries had either disappeared from the region altogether, or else had become concentrated in the larger towns.

Industrial decline on this scale, in all the region's main industries, could not fail to have serious consequences. Country areas suffered most, for it was here, rather than in the towns, that the greater proportion of the region's industrial activity had been located. As a result, unemployment and underemployment had become a permanent feature of

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[1] A.J. Holland, op. cit., 143

[2] For closure dates of some of the region's paper mills, see A.H. Shorter, op. cit.

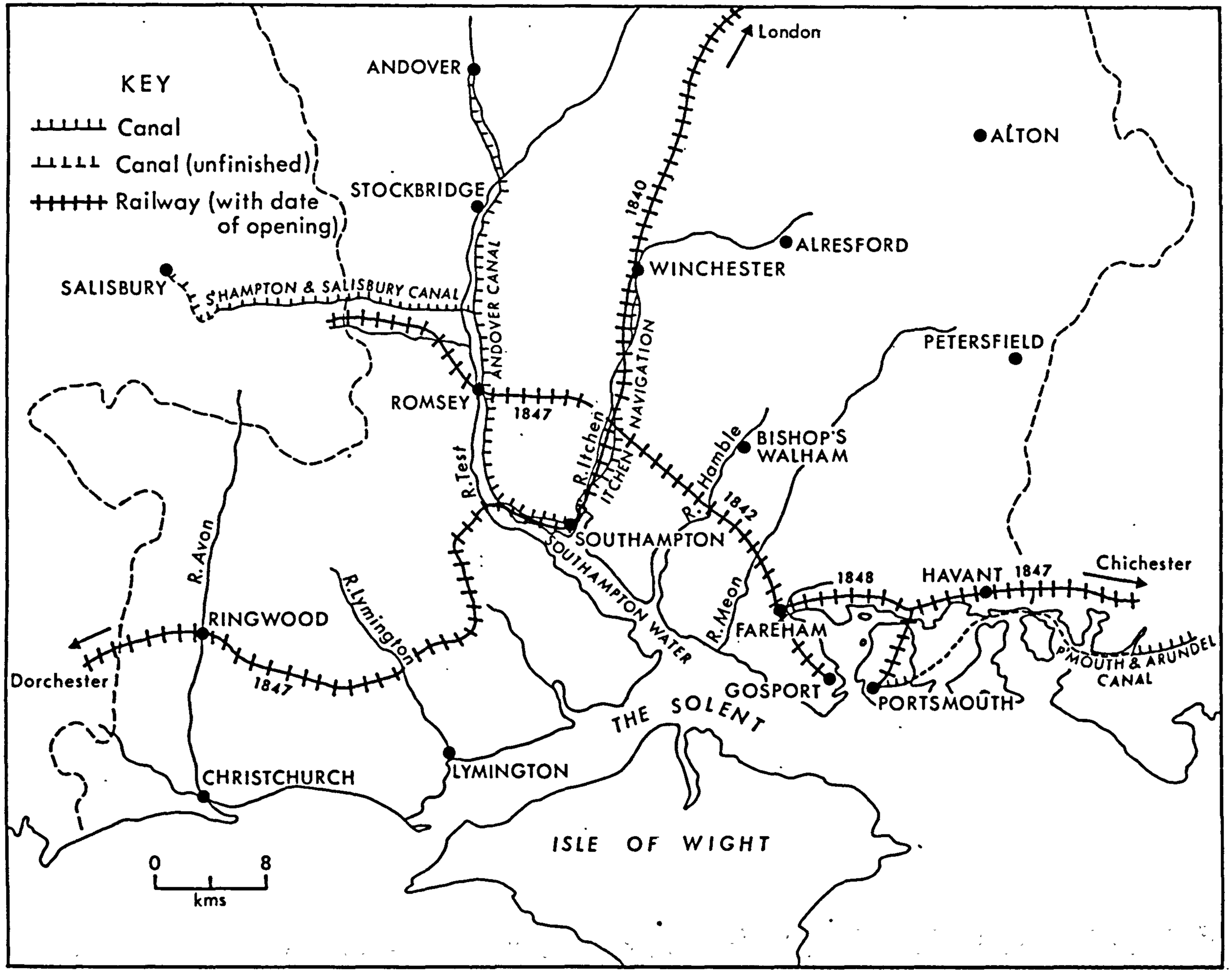
KEY
Canal
Canal (unfinished)
Railway (with date of opening)
London
ANDOVER
ALTON
STOCKBRIDGE
1840
ALRESFORD
WINCHESTER
SALISBURY
SHAMPTON & SALISBURY CANAL
ANDOVER CANAL
PETERSFIELD
ROMSEY
1847
R. Itchen
ITCHEN NAVIGATION
R. Hamble
BISHOP'S WALHAM
R. Test
1842
SOUTHAMPTON
SOUTHAMPTON WATER
R. Meon
1848
HAVANT
1847
Chichester
R. Avon
R. Lymington
RINGWOOD
FAREHAM
Dorchester
1847
GOSPORT
PORTSMOUTH
MOUTH & ARUNDEL CANAL
THE SOLENT
CHRISTCHURCH
LYMINGTON
ISLE OF WIGHT
0
8
kms

FIGURE 4.6

the rural scene by the later eighteenth century, and apart from a temporary arrest during the French Wars, continued so through to 1850. While the size of Southern Hampshire's industrial sector was never great, it nevertheless acted as an important balancing force in the regional economy. The slow erosion of that force from 1750 increased the region's dependence upon agriculture, and this was to prove particularly disadvantageous in time of national agricultural recession. The only areas to show signs of continuing or expanding industrial activity were the major towns of Portsmouth and Southampton.

4.vi) Transport

Many of the demographic and economic changes experienced by Southern Hampshire during the years from 1675 to 1850 were made possible only as a result of improvements in inland transport. The marked growth in urbanisation, the expanding agricultural production and the decline of certain industries were all closely tied up with transport developments. The primary means of transport in the region at this time was by road and the developments in road transport of the period, of course, will be examined in detail in the succeeding chapters. The only alternative means of transport was by water, and this was available along the coast and in certain limited areas inland.

Southern Hampshire's irregular coastline, with its many sheltered estuaries and inlets, had been used as a communications artery since the Middle Ages (fig. 4.6). During the eighteenth and early nineteenth centuries, as the region's population expanded, the importance of this artery increased considerably, and particularly for the transport of heavy and bulky commodities like coal, which could not be carried very far overland economically.[1] Goods imported into the region by sea from other parts of the country and from abroad were landed at the major ports - Portsmouth and Southampton, for example,- and thence redistributed coastwise to the lesser ports in the vicinity. Similarly, products of the region were transported to the coast and thence redistributed coastwise to neighbouring centres, or if intended for export, to the major ports for bulk shipment. Although the transport of goods was by

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[1] The coasting trade of the region during the first half of the eighteenth century is dealt with in some detail in T.S. Willan, op. cit., 150-5

far the most prominent element in the region's coasting traffic during the period, a number of passenger vessels also plied between the more important centres, and with the introduction of steam-driven vessels after 1820, this traffic increased significantly. By the 1830s, for example, there were daily passenger steamer services between Southampton and Portsmouth,[1] and during the summer months, facilities of this kind were increased further by the considerable steamer excursion traffic which developed in the region.[2]

A natural extension to the sea coast as a communications artery was provided by the canals and river navigations and the unimproved but navigable rivers (fig. 4.6). There were four canals and river navigations in Southern Hampshire. The first established, the Itchen Navigation, linked Southampton with the inland city of Winchester.[3] Although the River Itchen had been improved by means of artificial cuts as early as the Middle Ages,[4] the Act authorising the making of the navigation was not obtained until 1665,[5] and the main works took some 50 years to complete.[6] A number of bridges and certain other impediments prevented most sea-going vessels from using the waterway, and goods therefore had to be unloaded into barges at Northam before they could be transported inland to Winchester. Coal was the most important item carried, and traffic was always far greater in the upstream direction. The second inland waterway to be constructed in Southern Hampshire was the Andover Canal, which linked the town of Andover with the small port of Redbridge at the westernmost end of Southampton Water.[7] Although the canal followed the valleys of the Rivers Test and Anton, it consisted of an

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[1] Hampshire Advertiser - numerous adverts

[2] Hampshire Advertiser, op. cit.

[3] See E. Course, 'The Itchen Navigation', Proc. Hants Field Club, 24, (1967), 113-26.

[4] E. Course, op. cit., 116

[5] 16 & 17 Car. II c. 12

[6] E. Course, op. cit., 115

[7] See E.L. Jones, 'An Agricultural Canal', Hampshire Farmer, 14, (1959), 2-3; J.E.H. Spaul, 'The Andover Canal', Andover Documents No. 1, (1968)

entirely artificial cut. It was authorised in 1789[1] and completed within about seven years.[2] Coal and agricultural produce were the main items carried. However, if the observations of contemporary observers are correct, traffic on the canal was never very great.[3] The third inland waterway established in the region was the Southampton and Salisbury Canal, authorised in 1795.[4] It formed two branches to the Andover Canal, one of which ran from Redbridge to Southampton, and the other from Kimbridge (near Romsey) to Salisbury via the valleys of the Rivers Dun and Avon. As a commercial waterway, however, the canal had a very limited existence: the Salisbury branch was never completed, and the Company foundered in 1808.[5] The final waterway to be made in Southern Hampshire was the Portsmouth and Arundel Canal, authorised in 1817.[6] It was opened in 1822[7] and formed one section of the 187-km London-Portsmouth Canal. Like the Southampton and Salisbury Canal, its commercial life was limited. The through journey from London to Portsmouth proved difficult and circuitous, going by way of six different navigations, and by about 1840 all traffic on the Portsmouth-Arundel section had ceased.[8] Of Southern Hampshire's unimproved rivers, few were navigable far beyond the limits of their estuaries. The two main exceptions were the Avon, which could be navigated by small vessels to within about four kms of Salisbury (Wiltshire), and the Hamble, which was navigable as far as Botley.

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[1] 29 Geo. III c. 72

[2] C. Hadfield, The Canals of Southern England, (London, 1955), 84

[3] See for example, R. Mudie, Hampshire, I, (Winchester, 1838), 228; C. Vancouver, op. cit., 394

[4] 35 Geo. III c. 51

[5] For the detailed history of this canal, see E. Welch, 'The Bankrupt Canal: Southampton and Salisbury, 1795-1808', Southampton Papers No. 5, (1966)

[6] 57 Geo. III c. lxiii - To describe this waterway as a canal is something of a mis-nomer, for much of it consisted merely of dredged sections of Langstone and Chichester Harbours.

[7] P.A.L. Vine, London's Lost Route to the Sea, (Newton Abbot, 1965), 82

[8] P.A.L. Vine, op. cit., 144-5

Although it was stated earlier that water transport was the only alternative to transport by road, from the late 1830s, an entirely new means of transport was in fact introduced into Southern Hampshire in the form of the railway (fig. 4.6). The first railway line was opened in 1838 between Southampton and Winchester, and constituted one section of a scheme linking Southampton with London.[1] In 1840, the Winchester-Basingstoke portion of this line, the last remaining link, was opened, and Southampton henceforward possessed a direct rail link with the metropolis. The following decade witnessed the opening of branch lines to Fareham and Gosport (1842), and to Romsey and Salisbury (1847). In addition, two new trunk lines were completed: the first from Southampton to Dorchester (Dorset) via Ringwood (1847), and the second, the line from Chichester to Havant and Portsmouth (1847), which provided Portsmouth with a through rail link to the metropolis via Brighton. Finally, in 1848, an interconnecting line was opened between Fareham and Portsmouth, offering the latter town an alternative railway route to London via Winchester and Basingstoke. By 1850, Southern Hampshire possessed some 160 kms of railway line, and although rail transport was by no means available throughout the region, it had nevertheless become a firmly established alternative to transport by road or by water, especially on the main routeways.

The railway developments of the late 1830s and 1840s apart, it is very clear that whilst water transport certainly constituted an alternative to transport by road in the years from 1675 to 1850, it was considerably restricted in its availability. Away from the coast, there were large tracts of land where road transport was completely unchallenged. It is to the region's road transport system, therefore, that attention is now directed.

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[1] For a detailed study of the railway developments in the region, see H.P. White, A Regional History of the Railways of Great Britain - Volume 2 - Southern England, (Dawlish, 1961)

CHAPTER FIVE

ROADS AND ROAD TRAFFIC IN SOUTHERN HAMPSHIRE, 1675-1750

The aim of this chapter is to provide a detailed background against which to view the road transport developments in the region during the period of the Industrial Revolution. Thus section one is concerned with an examination of the form of the major road system - the pre-turnpike road network. This is followed by a discussion of the mechanisms in existence for road maintenance and the state of the major roads as seen by contemporary observers. The third section examines traffic over the major road system. The fourth and final section focuses on the stage-coach and carrier facilities available in the region at the time.

5.i) The major road system

Reconstruction of the major road system of Southern Hampshire during the century preceding the 'Turnpike Age'[1] is by no means straightforward. The two main sources available for this task are road-books and maps. However, with perhaps only one principal exception, the majority of road-books published in the period lack the requisite detail, accuracy and originality that is necessary for the reconstruction of past major road patterns.[2] The principal exception is the work of John Ogilby,[3] in the form of his Britannia, first published in 1675.[4] Although the Britannia may quite legitimately be described as a road-book, in that it contains some 200 pages of text giving full details of the courses of the major

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[1] The period from about 1750 to 1840

[2] For a catalogue of the road-books produced in the period, see H.G. Fordham, The Road-books and Itineraries of Great Britain, 1570-1850, (Cambridge, 1924)

[3] For a short biographical note, see J.E. Holehouse, 'John Ogilby's strip road maps - 1675', Hampshire Magazine, 14, (1974), 45-8; a more detailed account is given in the Dictionary of National Biography

[4] J. Ogilby, Britannia, Volume the First: or, an Illustration of the Kingdom of England and Dominion of Wales ... etc., (London, 1675); a second version of the same date was entitled Itinirarium Angliae

roads of the Kingdom, it also incorporates an accompanying series of 100 detailed strip road maps. The inclusion of maps in a road-book was an entirely new venture. Indeed, the mapping of major roads at this scale was new, for none of the county maps published up to this time had shown roads at all. More important than this, though, Ogilby's Britannia was based upon a completely new survey, undertaken during the years 1671-5, and using the Statute Mile of 1,760 yards instead of the old British Mile, of 2,428 yards. The significance of Ogilby's survey is demonstrated by the way it formed the basis of British road-book literature for over a century.[1] It was only with the publication of John Cary's New Itinerary in 1798,[2] based on a completely new survey again, that Ogilby's work was definitely displaced. The Britannia clearly constitutes an especially valuable source for the reconstruction of the major road pattern of the later seventeenth century, and in some respects makes up for the deficiencies of the remaining road-book literature.

In contrast, the number of maps available for the reconstruction of past road patterns is rather greater. The earliest map of Hampshire to include roads is that by Robert Morden, first published in Edmund Gibson's edition of Camden's Britannia of 1695.[3] Morden used Ogilby's survey as the basis for his map, and made amendments where more up-to-date information was available. The next map of Hampshire to include roads is that by Hermann Moll, which appeared in his atlas, A Description of England and Wales, of 1724.[4] Like Morden, Moll almost certainly used Ogilby's survey as the basis for his maps, making amendments and additions where needed. The last maps of Hampshire produced before 1750,

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[1] See H.G. Fordham, John Ogilby (1600-76), his Britannia and the British Itineraries of the Eighteenth Century, (Oxford, 1925)

[2] J. Cary, Cary's New Itinerary ... etc., (London, 1798)

[3] E. Gibson, (ed.), Britannia, (London, 1695); an earlier version of this map appeared in 1676 on a playing card, one of a pack forming a rather unusual miniature atlas of England and Wales. However, it is too small and indistinct to be of any practical value. A number of later editions of the 1695 map were also produced, though incorporating few changes. For a discussion of Morden's Hampshire maps, see J.E. Holehouse, 'Robert Morden, 1676 and 1695', Hampshire Magazine, 15, (1974), 45-6

[4] As with Morden's map, there are a number of later editions of this map, though incorporating few changes.

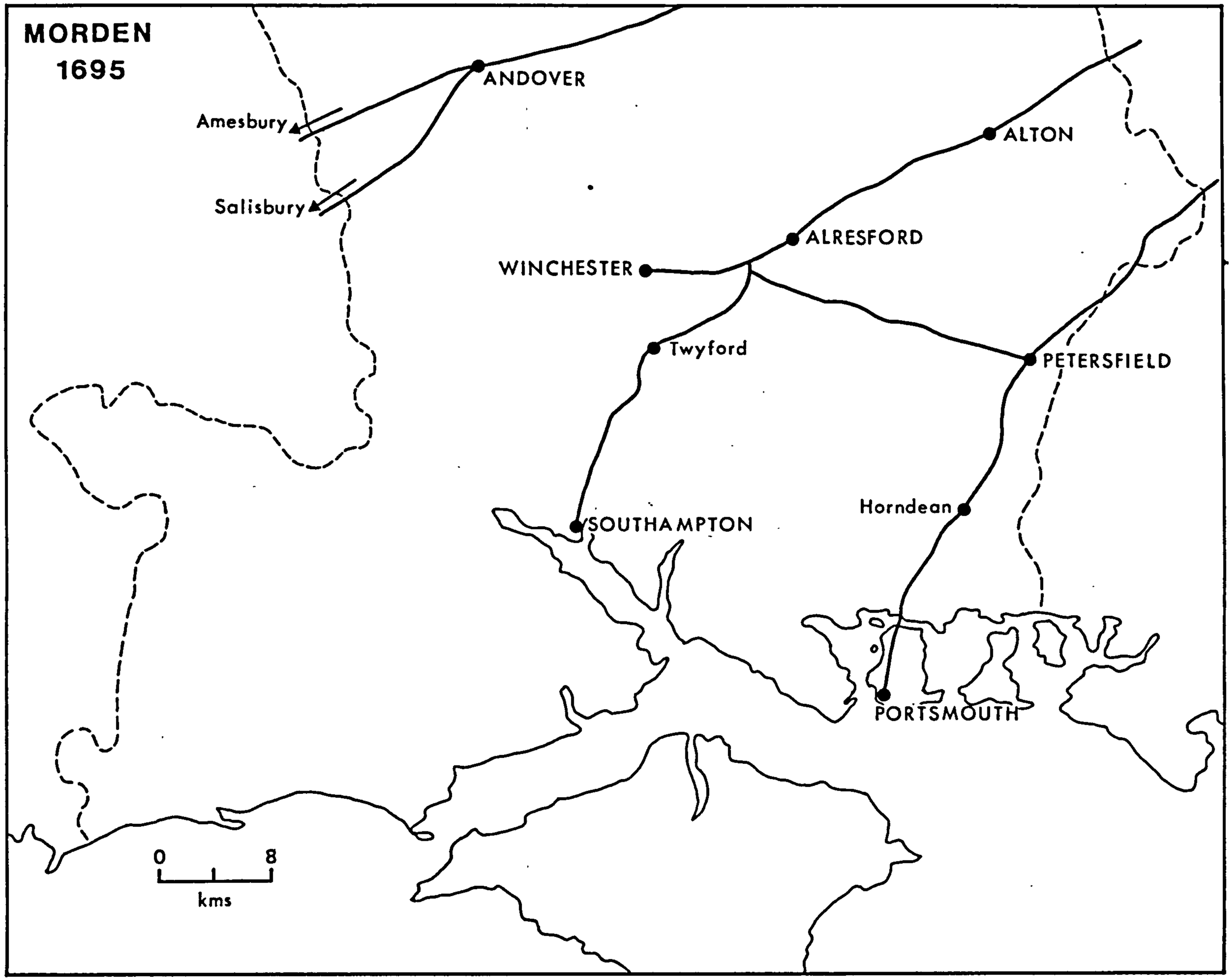
MORDEN
1695
ANDOVER
Amesbury
Salisbury
ALTON
ALRESFORD
WINCHESTER
Twyford
PETERSFIELD
SOUTHAMPTON
Horndean
PORTSMOUTH
0
8
kms

FIGURE 5.2

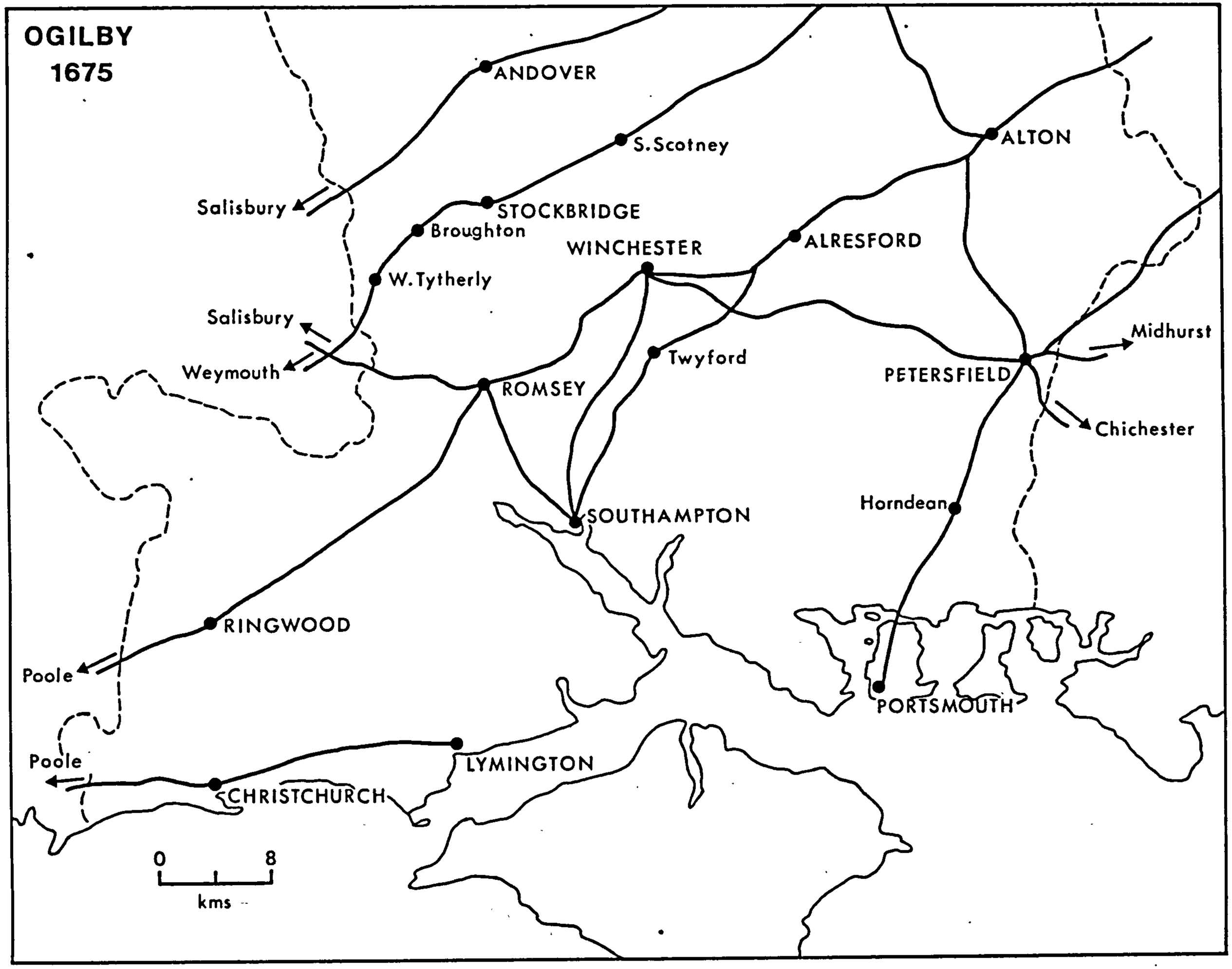
OGILBY
1675
ANDOVER
S.Scotney
ALTON
Salisbury
STOCKBRIDGE
Broughton
WINCHESTER
ALRESFORD
W.Tytherly
Salisbury
Midhurst
Twyford
Weymouth
ROMSEY
PETERSFIELD
Chichester
SOUTHAMPTON
Horndean
RINGWOOD
Poole
PORTSMOUTH
Poole
LYMINGTON
CHRISTCHURCH
0
8
kms

FIGURE 5.1

which include roads, are those by John Rocque and Thomas Kitchin, published in 1746 and 1748 respectively.[1] It is not at all clear whether Rocque or Kitchin used Ogilby's survey, although it is certain that Kitchin's map was not based on a new survey of his own, for the title states: 'Drawn from the best Surveys and Maps corrected from Astron. observations'.

In summary, five main sources are available for the reconstruction of the major road system of Southern Hampshire in the period 1675 to 1750: John Ogilby's Britannia, and the county maps of Morden, Moll, Rocque and Kitchin. Before examining the evidence presented by these sources, however, it is important to add a note of caution. The information given about major roads in road-books and maps of this kind cannot be regarded as prima facie evidence that such roads existed in reality. Firstly, the major road systems delineated in road-books and depicted in maps are merely the major roads as perceived by the road-book compilers or map-makers themselves; different road-book compilers and map-makers undoubtedly had differing views as to what constituted a major road. Secondly, of course, there is the question of the extent of direct plagiarism on the part of road-book compilers and map-makers. Some would argue that where one is dealing with road-book compilers and map-makers of the calibre of Ogilby, these problems are of little or no significance, and that such persons' perceptions of major roads, for example, are unlikely to have been based upon widely varying criteria. Whichever view one takes, it is clearly important to keep these considerations in mind.

The major road system of Southern Hampshire in 1675, as indicated by Ogilby, is shown in figure 5.1. There are five London roads: London to Land's End, London to Portsmouth, London to Southampton, London to Weymouth, and London to Poole. In addition to these five roads, there are five branch roads: Midhurst to Petersfield and Winchester, Southampton to Salisbury, Southampton to Winchester, Poole to Lymington, and Chichester to Petersfield, Alton and Basingstoke)(part of the Oxford-Chichester road). By contrast, Morden's map, though produced some 20 years later, shows remarkably few roads (fig. 5.2). Only three London roads are shown and only two branch roads. With the exception of

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[1] Rocque's map appeared in The English Traveller, (London, 1746), and Kitchin's map in The Large English Atlas, (London, 1748); again, there are several later editions of these maps, though containing relatively few amendments.

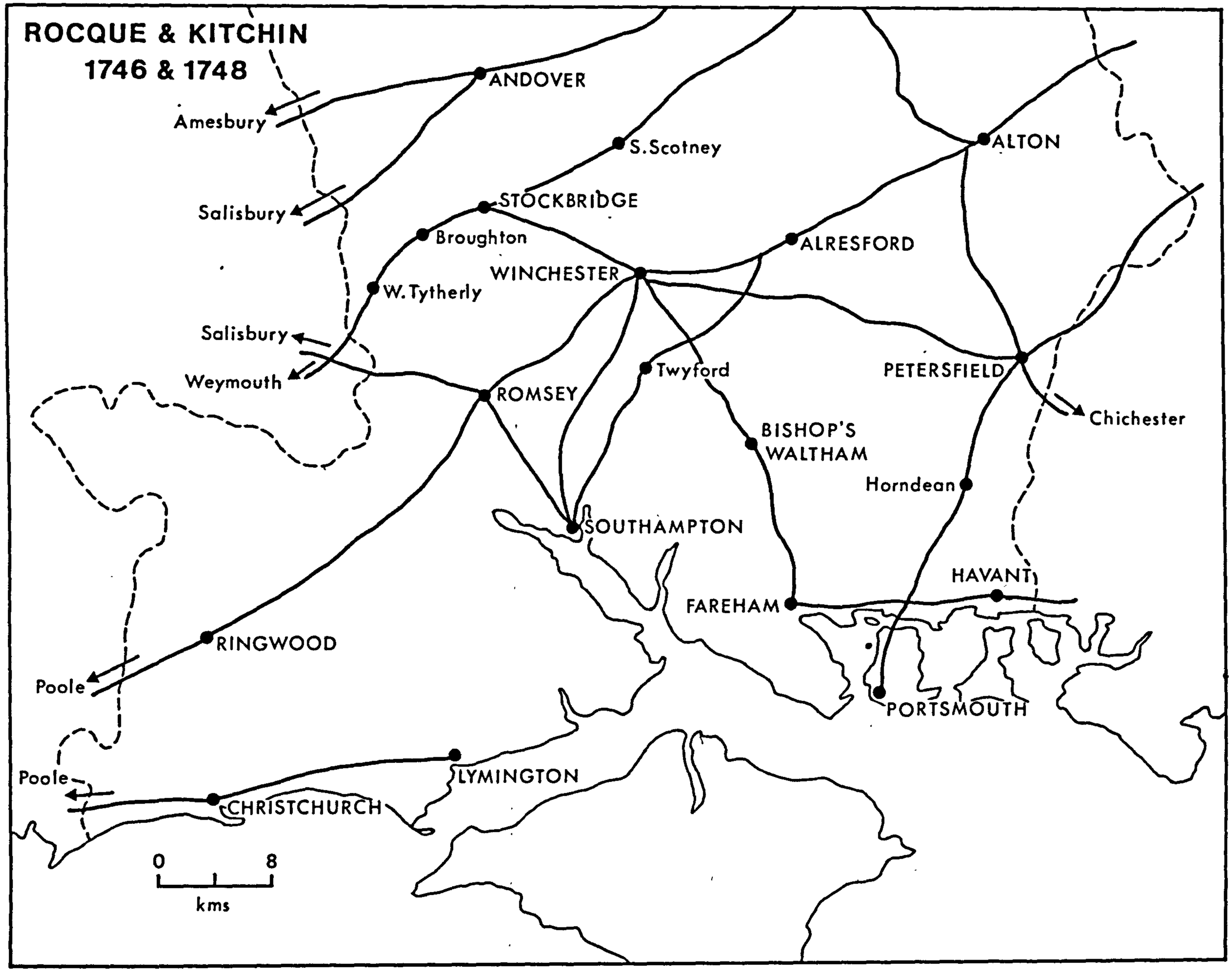
ROCQUE & KITCHIN
1746 & 1748
ANDOVER
Amesbury
S.Scotney
ALTON
Salisbury
STOCKBRIDGE
Broughton
ALRESFORD
WINCHESTER
W.Tytherly
Salisbury
Weymouth
Twyford
PETERSFIELD
ROMSEY
Chichester
BISHOP'S
WALTHAM
Horndean
SOUTHAMPTON
HAVANT
FAREHAM
RINGWOOD
Poole
PORTSMOUTH
LYMINGTON
Poole
CHRISTCHURCH
0
8
kms

FIGURE 5.4

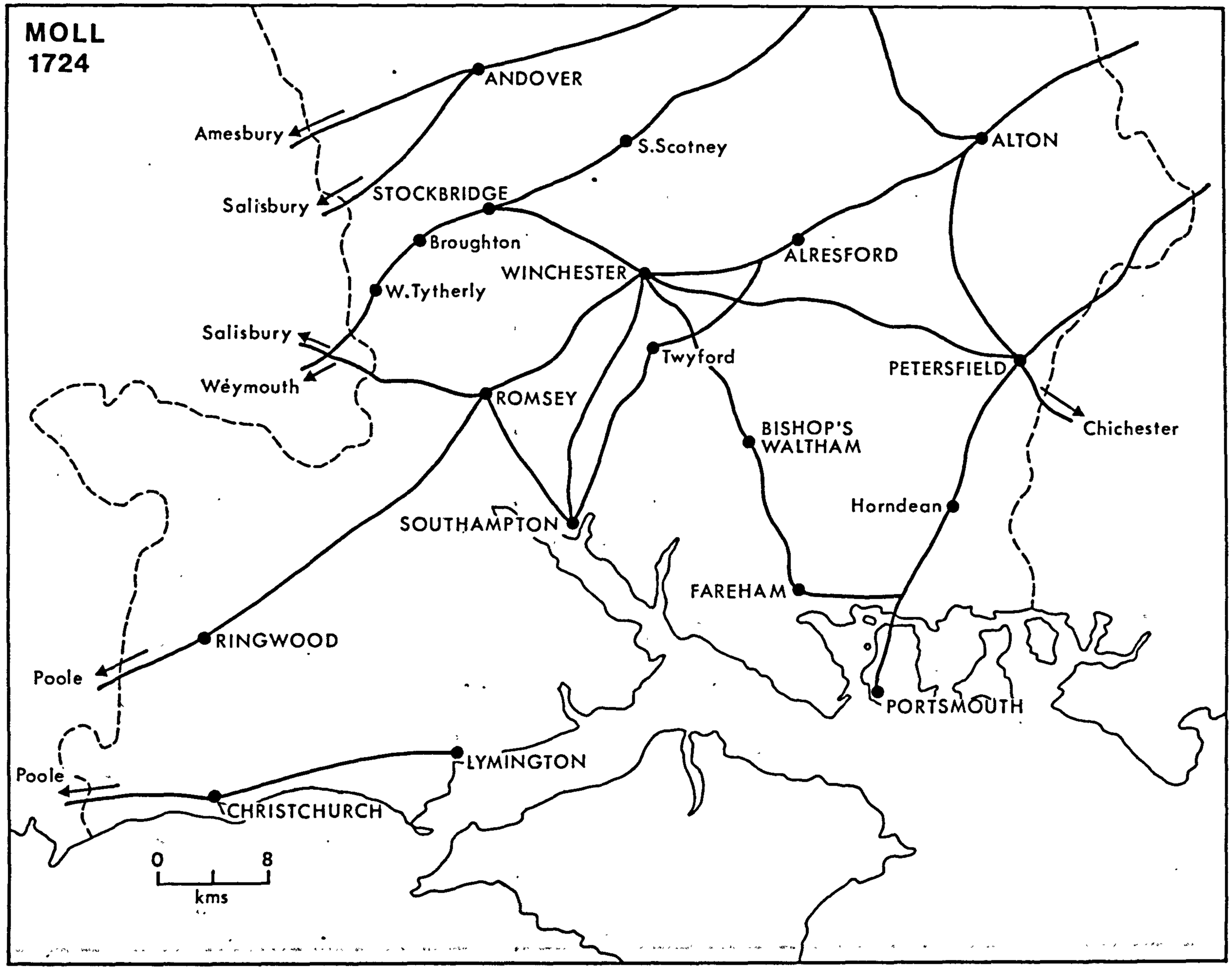
MOLL
1724
ANDOVER
Amesbury
S.Scotney
ALTON
Salisbury
STOCKBRIDGE
Broughton
ALRESFORD
WINCHESTER
W.Tytherly
Salisbury
Twyford
PETERSFIELD
Weymouth
ROMSEY
Chichester
BISHOP'S
WALTHAM
Horndean
SOUTHAMPTON
FAREHAM
RINGWOOD
Poole
PORTSMOUTH
LYMINGTON
Poole
CHRISTCHURCH
0
8
kms

FIGURE 5.3

the Andover-Amesbury branch, all were included by Ogilby. The region's major road system as given by Moll's map of 1724 is shown in figure 5.3. With but three additions, it is virtually identical to that recognised by Ogilby some 50 years earlier. The three additions are the branch roads from Cosham to Winchester via Bishop's Waltham, from Winchester to Stockbridge, and from Andover to Amesbury. The last mentioned road is the same as the one given in Morden's 1695 map. Finally, figure 5.4 shows the major road system given by the maps of Rocque (1746) and Kitchen (1748) - both show identical road patterns. With one exception - a road from Cosham to Chichester, this exhibits practically no variation from the system shown by Moll in 1724.

If the evidence of Morden's map is ignored, Southern Hampshire's major road system showed fairly clear signs of expansion in the years between 1675 and 1750. This expansion was almost exclusively in the realm of branch or cross routes, for all the main London roads were established by 1675 and remained comparatively unchanged throughout the period. The question that arises from the evidence of Morden's map is an interesting one. If it is accepted at face value, one can only conclude that between 1675 and 1695 some of the region's roads fell into disuse either because of a decline in traffic or because periodic maintenance was neglected. On the other hand, the evidence of Morden's map may be inaccurate, but this could be said to apply equally to Ogilby's survey, too. However, in view of what is known about John Ogilby and his survey and in view of what little is known about Morden and his county map, one is probably justified in concluding that the evidence of the Britannia is by far the more reliable and that the evidence of Morden's map is not a true representation of reality.

5.ii) Mechanisms for road maintenance and the state of the major roads as seen by contemporaries

Mechanisms for road maintenance

While the exact form of the major road system of the region before 1750 may not be entirely clear, there were clear mechanisms for maintaining it. The principal one was that commonly described as the 'Statute System'. This was first established under an Act of 1555,[1] and involved

[1] 2 & 3 Philip & Mary c. 8

making parishes responsible for repairing the roads. Under this Act, which remained in force for seven years, parishioners were obliged by law to spend four days each year mending the roads under the supervision of two surveyors appointed by the churchwardens and constables of the parish. In 1563, the Act was continued for a further 20 years[1] and amended in certain particulars. The number of days was increased from four to six and the powers of the surveyors were extended; in addition, local Justices were empowered to indict and present parishes that failed to keep their roads in proper repair. Further amendments were made in 1575,[2] and the system was made perpetual under an Act of 1586.[3] In 1662, under a completely new Act, the 'Statute System' was substantially modified and extended.[4] One of the most significant provisions of this particular Act was that surveyors were directed to levy a highway rate not exceeding sixpence in the pound in any one year, supplementary to the six days of statute labour. The rate was to be levied in all parishes for three consecutive years unless it could be proved that the extra money was not needed. Another important provision of the Act was that, where roads were not at least eight yards wide, surveyors were directed (by order of the Quarter Sessions) to take in adjoining lands to make them this width. Power to levy a highway rate, though this time on a discretionary basis, was given again in an Act of 1670,[5] but as before for three years only. Finally, in 1691 the power to levy highway rates, on a discretionary basis, was made permanent,[6] so that from this date the upkeep of the roads no longer had to depend on the 'Statute System' entirely.

During the period 1675-1750, therefore, clear mechanisms existed for maintaining the roads. However, as with much machinery of this kind, the

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[1] 5 Eliz. c. 13

[2] 18 Eliz. c. 10

[3] 29 Eliz. c. 5

[4] 14 Car. II c. 6 - N.B. Under the 'Commonwealth', an Ordinance was passed abolishing statute labour and replacing it by a system of parish rates. However, it is unlikely that this Ordinance was ever carried into effect - W.T. Jackman, The Development of Transportation in Modern England, (2nd edition, London, 1962), 52-3

[5] 22 Car. II c. 12

[6] 3 Wm. & Mary c. 12

mechanisms did not necessarily operate well in practice, and in many respects, they were quite inadequate for the task. The key figure in the 'Statute System' was the surveyor, and the fact that he was unpaid and often forced into the job under duress, caused difficulties from the start. In addition, few surveyors possessed any experience of road maintenance, and as they seldom served for more than a year, this situation did not improve. Thus, it was not uncommon for surveyors to fail to fulfil their obligations to put the roads of their parishes in a proper state of repair. Where a surveyor did take his job seriously, he was nevertheless faced with the difficult task of persuading his fellow parishioners to perform their statute labour. Disputes often developed as to how much labour certain people were supposed to do.[1] Furthermore, disagreements sometimes arose between parishes or between a town and a parish as to the roads each was liable to repair. The whole system was clearly fraught with difficulty at almost every level, and in some ways, it is surprising that it worked at all. Indeed, in areas where local Justices were lax in their enforcement of law, the system probably never functioned at all. Some of the deficiencies of the 'Statute System' were overcome with the introduction of the system of highway rates on a permanent basis in 1691. However, the levying of highway rates also met with difficulty. Parishioners might refuse to pay the rate, or in some instances be unable to pay it. In addition, the money that was collected was easily mis-spent: the problem of the chronic inexperience of the majority of surveyors still remained. Furthermore, the onus to apply for a highway rate normally lay with the surveyor, and if the surveyor failed to take his job seriously, the rate system was seldom utilised. The role of the surveyor was clearly critical once again.

While it is therefore fair to say that neither the 'Statute System' nor the 'Highway Rate System' really operated effectively, in many respects, both were quite inadequate for the task they were intended to perform. This became increasingly true towards the end of the seventeenth century and during the first half of the eighteenth century as traffic on the roads, wheeled traffic especially, increased. Six days statute labour per year and the income from a highway rate, which could not exceed sixpence in the pound per year, were seldom sufficient to place the roads of a parish in a reasonable state of repair. This was particularly true

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[1] Details of the scale of statute labour imposed on parishioners are given in the relevant Acts of Parliament, op. cit.

where a section of a major High Road passed through a parish, and also where a parish was only thinly populated, and in consequence possessed limited statute labour and highway rate resources. If both these conditions coincided, the problem became especially acute, and it was under just such circumstances that a new mechanism for road maintenance, supplementary to the 'Statute' and 'Highway Rate' systems, first came to be introduced, in the form of the turnpike. The first turnpike authority was established by an Act of 1663,[1] and covered a section of the New Great North Road between Wadesmill in Hertfordshire and Stilton in Huntingdonshire. The Act was obtained as a result of a petition from the local inhabitants, who were finding it increasingly difficult to keep the road properly maintained. The essential feature of the turnpike concept was the partial transfer of the responsibility for the maintenance of a particular road from the parishioners to the road-users. This was achieved by charging all road users a toll, the income from which was expended on repairing the road. The task of running the turnpike was given to the local Justices.[2] Although the passing of this Act was probably seen by contemporaries, and by Parliament, as an exceptional measure only, in the light of what happened in the ensuing 150-200 years, it marked a fairly decisive turning-point in the evolution of English road maintenance legislation. Further turnpike authorities were established in the 1690s on sections of road in the counties of Essex, Norfolk, Sussex, Surrey and Gloucestershire, and this number increased markedly during the succeeding half-century, until by 1750 some 150 were in existence in England.[3] By this date, therefore, it would be fair to say that the turnpike had become a relatively firmly established mechanism for road maintenance, although it was still far from widespread. However, whilst there was clearly a significant extension of the turnpike concept during the period, the majority of the turnpikes established after 1710 were in one respect quite different from their predecessors. Whereas the running of the earlier turnpikes was vested in the local Justices, the running of virtually all the turnpikes established after 1710 was placed in the hands

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[1] 15 Car. II c. 1

[2] Exact details of the administrative machinery involved are given in W.T. Jackman, op. cit., 62-3

[3] W. Albert, The Turnpike Road System in England, 1663-1840, (Cambridge, 1972), 202-5

of groups of trustees, hence giving rise to the term 'Turnpike Trust'. The most likely reason for this change was that as the numbers of turnpikes increased, local Justices found it increasingly difficult to administer them properly, and the turnpike trust offered a very useful means of delegating responsibility. The result was that a growing proportion of the country's main road system was placed in the hands of large numbers of quite separate semi-autonomous bodies.

Having outlined the mechanisms in existence for maintaining the country's roads during the period 1675-1750, it is important to examine the position in Southern Hampshire. The only road in the region to be turnpiked in the period was the section of the London to Portsmouth road between Sheet Bridge and Portsmouth, authorised under an Act of 1710.[1] On account of Portsmouth's naval and military importance, this stretch of road was probably the busiest in Southern Hampshire and it is not surprising that it was the first to be turnpiked. The most troublesome portion was three to four kms south of Petersfield at Butser Hill, and it was through the efforts of the parishioners of this particular locality that the necessary Act was obtained.[2] One of the first tasks to be undertaken by the Portsmouth-Sheet Bridge trust was to appoint surveyors to view the roads under its jurisdiction in order to establish the best means of putting them in a proper state of repair and the estimated cost that this would involve.[3] The surveyors reported that some £8,800 was necessary to achieve this purpose,[4] a considerable sum in view of the fact that the trust's toll income averaged only about £350 per annum during the first few decades of its life;[5] furthermore, it is probable that only about half this income went towards road repairs, for the trust had numerous other expenses to meet, and particularly so during the first few years of its existence.[6] Trusts could overcome a

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[1] 9 Anne c. 33

[2] W. Albert & P.D.A. Harvey, (eds.), 'Portsmouth and Sheet Turnpike Commissioners' Minute Book, 1711-54', Portsmouth Record Series, No. 2, (1973), xvii-xix; original ms. - Ports. R.O., 10A

[3] W. Albert & P.D.A. Harvey, op. cit., 1

[4] Ibid., 2

[5] Ibid., 180

[6] Parliamentary expenses, the cost of erecting toll-houses and gates, for example.

cash shortage, however, by borrowing money (at interest) on the security of the tolls. The Portsmouth-Sheet Bridge trust was quick to take advantage of this provision, and in 1711 ordered that a sum not exceeding £1,000 should be borrowed for the purpose of making substantial road repairs.[1] Unfortunately, this money was not forthcoming and in the following year the trustees reduced the figure to £500, but even then only £100 was raised.[2] No further attempts were made to borrow money until after the passing of the renewal Act of 1726,[3] when the trust at last successfully borrowed £1,000.[4] The greater part of this sum was used to make extensive improvements on the section of the road running through the Forest of Bere, which had been specifically cited in the renewal petition as being in a particularly execrable condition.[5] This major improvement scheme was the only one undertaken by the trust during the period under discussion, for over the remaining 25 years between 1726 and 1750, it does not seem to have raised any more than £500 for the purpose of making extensive road repairs.[6] For much of the period from 1710 to 1750, therefore, the Portsmouth-Sheet Bridge trust was mainly concerned with straightforward road maintenance. The sections of road that gained most attention in this respect were from Portsbridge to Portsmouth, and from Gravel Hill (near Clanfield) to Sheet Bridge. The former was almost certainly the most heavily used stretch of road under the care of the trust, while the latter was undoubtedly the most difficult on account of both the hilly nature of the terrain over which it passed and also the character of the underlying gault and upper greensand. It was this last stretch of road, of course, that had given rise to the establishment of the turnpike in the first place.

The road from Portsmouth to Sheet Bridge apart, the remainder of Southern Hampshire's roads, both major and minor, were the responsibility

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[1] W. Albert & P.D.A. Harvey, op. cit., 2

[2] Ibid., 9, 18

[3] 12 Geo. I c. 19

[4] W. Albert & P.D.A. Harvey, op. cit., 66, 73

[5] Commons Journals, XX, 605 - Richard Lee, the driver of the Portsmouth-Petersfield stage-coach, stated that this section of road (approx. five kms in length) consisted of a deep and stiff clay and that his coach had sometimes been stuck so fast that it had to be lifted out with levers.

[6] W. Albert & P.D.A. Harvey, op. cit., 77, 101, 154

of the parishes. In other words, they came mainly under the 'Statute System'. Unfortunately, there are few surviving records relating to the operation of this system. Moreover, even where such documents as parish surveyors' account books are available, rarely do they offer any detailed insight into road repair activities. Parishes could be presented at the local Quarter Sessions for failing to keep their roads in a proper state of repair, but searches of the County Sessions records for the period indicated that this did not happen often.[1] Clearly, it is exceedingly difficult to establish how well the 'Statute System' worked in the region, but as pointed out earlier, the system was in itself fraught with difficulties at all levels, and there is no reason to believe that any of these difficulties were not present in Southern Hampshire. In other words, few of the region's parochially maintained roads could have been in a good state of repair at this time. After 1691, of course, highway surveyors could apply to the local Quarter Sessions for a highway rate to be levied, to allow further maintenance to be carried out. The Hampshire Justices were quick to make use of the provisions of the 1691 Act in respect of a section of the London to Portsmouth road at Butser,[2] but on the whole they ordered the levying of highway rates on comparatively few occasions during the period from 1691 to 1750.[3] In Southern Hampshire, therefore, this means of supplementing the 'Statute System' was clearly not widely used. In some respects, this is not at all surprising, for the levying of highway rates could hardly have been welcomed by parishioners already burdened with poor rates. In addition, of course, the amount that could be levied was seldom very great.

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[1] For example, between Easter 1691 and Michaelmas 1698, there were but three presentments recorded - Hants. R.O., Q07, 158, 274, 279-81; likewise, between Easter 1731 and Epiphany 1738/9, just four presentments were recorded - Hants. R.O., Q012, 83, 89, 122, 190

[2] Hants R.O., Q07, 70-1

[3] For example, between Easter 1691 and Michaelmas 1698, highway rates were ordered to be levied on only nine occasions, and no less than five of these related to the section of the London to Portsmouth road at Butser - Hants. R.O., Q07, 70, 71, 76, 106, 107, 112, 213, 221, 238; similarly, between Easter 1731 and Epiphany 1738/9, rates were levied on only seven occasions - Hants. R.O., Q012, 70, 71, 86, 125, 190, 200, 201

The state of the major roads as seen by contemporaries

The surviving documentation relating to mechanisms of road maintenance in Southern Hampshire for the period 1675-1750 clearly offers little information about the state of roads. However, a more fruitful source of information on the subject is provided by the writings of contemporary travellers. A certain degree of caution is desirable when using evidence of this kind, for different people undoubtedly had different ideas as to what constituted a good or a bad road. But, if due attention is paid to the character and mode of writing of the individuals concerned, such material can prove illuminating, particularly in the absence of further information.

The first contemporary traveller to make reference to the state of roads in the region was Celia Fiennes, who toured England on horseback between about 1685 and 1703, recording her experiences in a diary, which was first published in 1888.[1] The particular advantage of Celia Fiennes's account is that it is a day-to-day record of her travels, and therefore almost certainly refers only to what she saw herself. In addition, Celia Fiennes was, in many respects, quite unfeminine in her observations; as Margaret Willy has pointed out, she was much more interested in the practical rather than the picturesque elements of the contemporary scene.[2] It would therefore seem reasonable to accept her remarks about roads as having a fair degree of validity. The first observation that Miss Fiennes makes about the state of the roads in the region was on a visit to a relation's house at Nursted (near Petersfield) in about 1690-1,[3] when she noted that '... the roades all about this country are very stony, narrow and steep hills, or else very dirty as is most of Sussex ...'.[4] These remarks fit in well with the Quarter

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[1] Through England on a Side Saddle in the time of William and Mary, (London, 1888); the work was re-published some sixty years later: C. Morris, (ed.), The Journeys of Celia Fiennes, (London, 1947)

[2] M. Willy, 'Three Women Diarists: Celia Fiennes, Dorothy Wordsworth, Katherine Mansfield', in G. Bullough, (ed.), Writers and their Work, 173, (London, 1964); see also E. Moir, The Discovery of Britain: the English Tourists, 1540-1840, (London, 1964), 35-46

[3] Celia Fiennes's home at this time was at Newton Toney on the Hants/Wilts border

[4] C. Morris, op. cit., 27

Sessions evidence about the condition of the roads in the area at the time, the London to Portsmouth road especially.[1] However, Celia Fiennes's observations are of further interest in the way she draws a clear distinction between the roads on the chalk downs and those on the lower-lying Wealden gault and greensand, the former 'very stony, narrow and steep hills', and the latter 'very dirty'. The nature of the surface geology was obviously an important factor here, although it should be stressed that Miss Fiennes implies that roads on neither surface were good. The second time that Celia Fiennes makes reference to the state of roads in the region was when passing along the road from Alton to Alresford and Winchester in about 1696, which she describes as 'a good chaulky way'.[2] Nevertheless, it is clear that it required only a few showers of rain to make such a road treacherous in places, for on a later journey on the same road though in the opposite direction, Miss Fiennes records how 'little rains' had made the road slippery, and that near Alresford her horse was forced out of the 'hollow way', causing her to be thrown off.[3] The reference to the 'hollow way' is interesting for it offers a useful indication of the form of a major road at this time.

A second contemporary traveller to refer to the state of roads in Southern Hampshire was the antiquarian, William Stukeley, who made a tour of Britain on horseback in the early 1720s, and published his observations in 1724 as a series of itineraries.[4] Unlike Celia Fiennes, therefore, Stukeley does not provide a day-to-day account of his journeys, and for this reason, it should not be assumed that he necessarily saw everything about which he wrote. Nevertheless, it is certain that his account is based on a far greater amount of first-hand and recent observation than is true, for example, of Defoe's Tour,[5] published about the same time. The principal reference Stukeley makes to the state of roads in the region was while on a journey from Winchester to Farnham through Alresford and

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[1] See this chapter, p.92

[2] C. Morris, op. cit., 46

[3] Ibid., 273-4

[4] W. Stukeley, Itinerarium Curiosum, (London, 1724)

[5] D. Defoe, A Tour through the Whole Island of Great Britain, (London, 1724-6), Penguin edition, 1971

Alton one summer in the early 1720s. He found the road '... horribly out of repair, and even in the midst of summer very bad, notwithstanding such plenty of materials every where to mend it. This has oblig'd coaches and horsemen frequently to make excursions for their care and safety'.[1] This is the same road described by Celia Fiennes some 25 years earlier as 'a good chaulky way', and one might conclude, therefore, that it had deteriorated markedly during the intervening period. This could have been the result of either an increase in traffic along the route, or neglectful maintenance on the part of the parishioners, or a combination of both. However, it should be remembered that Stukeley was an antiquarian. He had a passion for antiquities, Roman antiquities in particular, and between Winchester and Farnham he claims to have found traces of a Roman road.[2] Thus, it might conceivably be argued that Stukeley may have exaggerated the state of disrepair of this particular road merely to reinforce the far superior nature of roads built by the Romans. Even so, it would still be fair to assume that the road was far from being in a good condition.

Additional light is cast on the state of the same road, albeit somewhat indirectly, by another contemporary traveller, John Macky, who journeyed through England at some time during the years between about 1710 and 1722, and recorded his experiences in a series of letters, first published over the period 1714 to 1723.[3] Macky's Journey has often been compared with Defoe's Tour,[4] in that both works are essentially syntheses of observations made over a number of years, and in some instances not based on first-hand knowledge. However, both these accounts have become well-established as sources of contemporary economic and social history, and moreover, neither suffers from the strong personal biases often evident in much of the writing of later travellers like Young and Cobbett.[5]

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[1] W. Stukeley, op. cit., 196

[2] Ibid.

[3] J. Macky, A Journey through England in familiar letters from a gentleman here to his friend abroad, I, (London, 1714), II, (London, 1722), III, (London, 1723)

[4] See for example, J.H. Andrews, 'Defoe's Tour and Macky's Journey', Notes and Queries, 205, (1960), 290-2

[5] A. Young, A Six Weeks Tours through the Southern Counties of England and Wales, (London, 1768); W. Cobbett, Rural Rides, (London, 1830), Penguin edition, 1967

In making his travels, Macky used stage-coaches on quite a number of occasions, and it was by this mode of conveyance that he passed over the Winchester-Farnham road. He travelled by the Winchester stage-coach from London, and the journey seems to have taken about a day and a half, including an overnight stop at Farnham.[1] If the Winchester-Farnham road had been in as bad a state of repair at this time as Stukeley suggests, it is hardly likely that the coach could have completed the 96 km journey in a day and a half, with an overnight stop.[2] Thus, the conclusion that this particular road was far from being in a good condition, though not in as bad a state as Stukeley makes out, seems a justified one.

The last contemporary traveller to make reference to the state of roads in the region was Stephen Martin-Leake, at one time a clerk in the Navy Pay Office in London, but later Garter King of Arms.[3] Martin-Leake's experiences are recorded in a series of letters to an unknown correspondent, which remained unpublished until the very end of the nineteenth century.[4] In some respects, Martin-Leake's letters may be compared to the diary of Celia Fiennes in that they represent a detailed, almost day-to-day account, although it should be stressed that Martin-Leake writes in a more mature style, and possessed considerably greater powers of observation. In view of his position, therefore, and also the form of his letters, it would be fair to assume that his remarks are reliable and free from bias. The main observation that Martin-Leake makes about the state of roads in the region was while on his way from London to Portsmouth by stage-coach in September 1728. Mid-way between Petersfield and the coast, the road (in this instance a turnpike) passed through the Forest of Bere, and Martin-Leake noted it is being 'formerly almost impassable, but now there is a turnpike, and the road is well mended with chalk and flint stones, which bind exceeding hard,

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[1] J. Macky, op. cit., II, 10-11

[2] The average distance travelled by stage-coaches in a day at this time was 64 kms - W.T. Jackman, op. cit., 136-8

[3] C.R. Markham, (ed.), Life of Captain Stephen Martin, 1666-1740, (London, 1895), x-xi

[4] C.R. Markham, op. cit., Appendix D (Letters of Stephen Martin-Leake), 197-213

and are hereabouts in great plenty'.[1] As mentioned earlier, this section of road was specifically cited in the 1726 renewal petition for the Portsmouth-Sheet Bridge turnpike as being in an exceptionally bad state of repair, and as soon as the Act was passed, the trustees embarked upon a substantial improvement scheme for this portion of the turnpike, and by mid-1728 some £1,000 had been expended for the purpose. Although Martin-Leake had not travelled over the London-Portsmouth road before, he would probably have learnt of the former condition of the stretch through the Forest of Bere from his conversations with the coachman, who seems to have been his only companion.[2] On this account, his remarks about its condition after completion of the improvement scheme are of particular value, and provide strong evidence of the trust's ability to undertake major road repairs successfully. Later on the same journey, Martin-Leake makes another reference to the state of this turnpike when he noted that the portion between Portsbridge and Portsmouth was 'a very good road, all upon a flat'.[3] Once again, however, he was passing over a newly repaired stretch of road. If he had passed over it the previous spring, his comments would undoubtedly have been very different, for at a meeting of the turnpike trustees on 17th April, 1728, it was ordered that a substantial part of this road should be repaired with all haste, as it had become 'very ruinous'.[4] The fact that by the following October it could be described as 'a very good road' indicates that no time was lost in getting repairs under way, and this further reinforces the trust's abilities in the realm of road maintenance, and in addition, its effectiveness as an administrative mechanism.

While the fore-going evidence in no way provides a comprehensive survey of the state of roads in Southern Hampshire during the period, it is nevertheless instructive on two counts. Firstly, it offers tentative confirmation of the conclusion drawn earlier that in few cases were the 'Statute' and 'Highway Rate' systems sufficient for proper road maintenance. Secondly, it provides a fairly clear indication of the superiority of the turnpike trust in being able to maintain a road in good repair, and also to improve it.

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[1] Ibid., 203

[2] Writing of his journey, Martin-Leake noted: '... the lone situation I was in was most apt for observation. I never broke silence but now and then in a little chat with the coachman' - Ibid., 202

[3] Ibid., 204

[4] W. Albert & P.D.A. Harvey, op. cit., 70

500
400
300
200
100
0
£s
1710
1720
1730
1740
1750
Years
Total toll income for both gates
Toll income for Portsbridge gate
Toll income for Sheet Bridge gate

FIGURE 5.5

5.iii) Traffic over the major road system

Travellers like Celia Fiennes, Stukeley and Macky formed but one small element of the traffic passing over the region's major roads during the period. Regrettably, however, little can be established as to what constituted the remainder. Amongst the surviving administrative documentation relating to roads in the region at the time,[1] the only item to offer any reference to traffic, and then only indirectly, is the minute book of the Portsmouth-Sheet Bridge turnpike trust,[2] in the form of a series of annual toll income figures for the two gates,[3] and one breakdown of toll receipts on a weekly basis for Sheet Bridge gate from October 1732 to October 1733.[4] The annual toll income statistics are graphed in figure 5.5. For the greater part of the period covered by the minute book - i.e. from 1712 to 1754 - total annual toll income averaged around £350.[5] The main exceptions were the periods 1712-13 and 1743-54, when totals were substantially higher. Both these periods coincided with times when the country was at war, and the exigencies of war (remembering Portsmouth's naval and military functions) almost certainly explain the upward trends. The separate annual toll income totals for the Portsbridge and Sheet Bridge gates broadly reflect these characteristics also. However, the totals for the Portsbridge gate were, on average, some one and a half times greater than those for the Sheet Bridge gate. A number of possible explanations may be put forward to account for this difference. The first is that there was a substantial amount of traffic to and from Portsmouth which joined or left the turnpike somewhere between Petersfield and Portsbridge, and hence was liable to payment of toll at Portsbridge gate only. But, there were comparatively few settlement centres in the area between Portsbridge and Petersfield, and it seems unlikely, therefore, that the higher income of the Portsbridge gate can be accounted for in this way. A second, and

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[1] This mainly consists of records of parish highway authorities, and the records of the Portsmouth-Sheet Bridge turnpike trust, the only one then in existence in the region.

[2] W. Albert & P.D.A. Harvey, op. cit.

[3] Ibid., 180

[4] Ibid., 91

[5] There was no increase in the level of tolls over the period

Portsbridge gate: Toll income of £250 per annum
= approx. average of 14/- per day - equivalent to a total of 28 waggons/carts up and down per day (assuming all vehicles drawn by four or less horses[1]).

Sheet Bridge gate: Toll income of £100 per annum
= approx. average of 5/- per day - equivalent to a total of 10 waggons/carts up and down per day (assuming all vehicles drawn by four or less horses)

TABLE 5.1

[1] Throughout the period 1712-54, the toll for a waggon/cart drawn by four or less horses was 6d

much more likely explanation, is that there was a substantial amount of traffic between Portsmouth and adjacent coastal centres. Such traffic would had to have passed through the Portsbridge gate, thereby accounting for the higher level of toll income received there.[1]

Although the Portsmouth-Sheet Bridge turnpike trust minute book clearly contains no direct information about traffic over the turnpike, it is possible to obtain a rough indication of traffic volumes on the basis of the annual toll income figures themselves. Table 5.1 shows the approximate average toll income per day for each of the two gates for the period 1712 to 1754, and the traffic equivalents that these figures could have represented. The approximate average daily toll income for the Portsbridge gate was 14 shillings. The toll for a waggon or cart drawn by four horses or less (probably the most common item of traffic over the turnpike at the time) was sixpence, so that an income of 14 shillings would represent the movement of a total of 28 such vehicles up and down per day.[2] In addition, there would have been a number of vehicles passing through the gate which were exempt from paying tolls, on account of their having paid already at Sheet Bridge gate. This could probably have raised the total to about 35. The approximate average daily toll income for the Sheet Bridge gate was five shillings, and would represent the movement of ten waggons or carts (drawn by four horses or less) per day. As before, there would also have been a number of vehicles exempt from payment, having paid at the Portsbridge gate already, and this could have brought the total to about 15.

The second item of interest in the minute book is the breakdown of toll receipts on a weekly basis for Sheet Bridge gate for 1732-3, details

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[1] It might be argued that the higher toll income at the Portsbridge gate was due to a traffic imbalance on the London-Portsmouth route, traffic from Portsmouth to London being greater than that from London to Portsmouth - under the local turnpike Acts, payment at Portsbridge gate freed the Sheet Bridge gate (and vice-versa) - so working to the advantage of the Portsbridge gate. However, it is hard to see how this could have continued on any scale, purely because of the severe practical difficulties that would have been created, and especially in the case of wheeled vehicles.

[2] Under the Acts of 1710 and 1726, a toll could be levied each time of passing through one of the gates, even if this meant paying twice the same day. The only exceptions were where a vehicle returned unladen and with the same horses, or where a toll had already been paid at another gate.

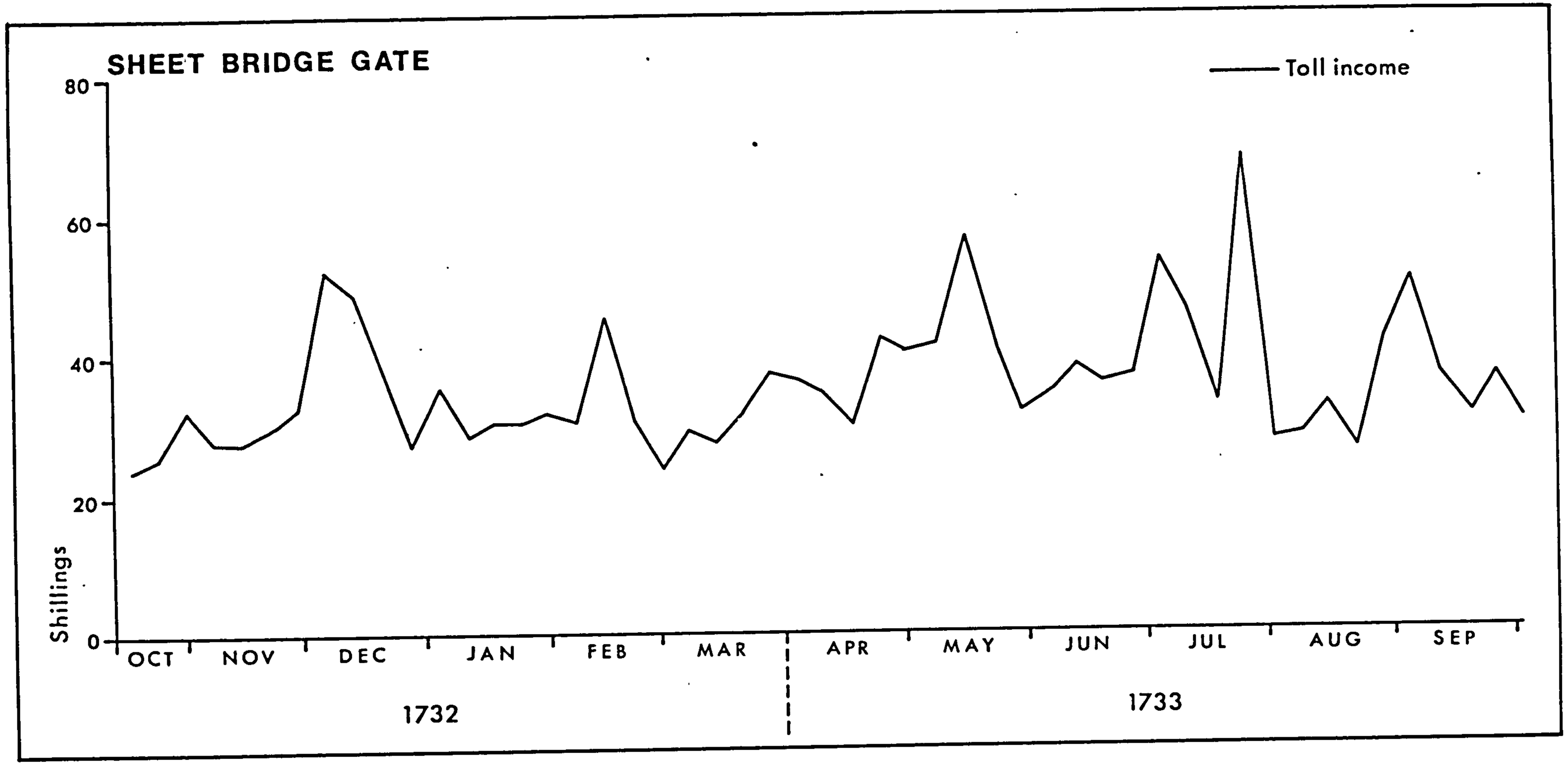
SHEET BRIDGE GATE
Toll income
80
60
40
20
0
Shillings
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
1732
1733

FIGURE 5.6

of which are graphed in figure 5.6. Although there was quite a marked fluctuation in receipts from one week to another, no clear seasonal fluctuation is apparent, as would have been expected at the time. This lack of any seasonal fluctuation in toll receipts, and by implication in traffic, perhaps provides further evidence of the trust's success in keeping the road from Portsmouth to Sheet Bridge in a passable condition throughout the year.

The surviving administrative documentation apart, virtually no further evidence is available about traffic over the major road system during the period. However, it is nevertheless possible to make a number of general points. Firstly, it is clear that the volume of traffic passing over Southern Hampshire's major roads, wheeled traffic especially, was on the increase.[1] Secondly, it is certain that the roads from London to Portsmouth and from London to the West of England (via Basingstoke, Andover and Salisbury) were almost certainly the busiest. The London-Portsmouth road formed an important link between the Admiralty, War and Ordnance Offices in the capital and the growing naval dockyard and garrison at Portsmouth, while the London-West of England road (the 'Western Road') formed an equally important link between London and the expanding naval dockyard at Devonport. In addition, the 'Western Road' was, as its name indicates, an important traffic artery in its own right: it served a considerable area of country, and it was also one of the principal 'posting' roads. A third general point is that in the realm of wheeled transport, goods or general merchandise traffic was almost certainly more important than passenger traffic. The poor condition of many roads, as demonstrated previously, meant that the progress of wheeled vehicles was extremely slow, probably no more than four or five kms per hour, and whilst this was all right for the transport of goods, it was far too slow for passengers, who would have preferred to travel on horseback. A final general point is that there was almost certainly a marked seasonal fluctuation in traffic, wheeled traffic in particular, on the majority of routes, being always greater in summer than in winter. The main reason for this was the appalling state of many roads during the winter season. The cycle began with the onset of the autumn rains in October and November, and by about early December most roads on chalk downlands and in clay vales were impassable to wheeled traffic. Winter frosts, while

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[1] See for example, W. Page, (ed.) Victoria County History of Hampshire and the Isle of Wight, V, (London, 1912), 430-1

serving to harden the sodden ground, merely broke up any surface that roads still possessed, and then in January this was often followed by snow,[1] a major impediment to movement in its own right. With the ensuing thaw, most roads reverted to their former sodden condition and it was late spring before they became passable to wheeled traffic again. However, it should be stressed that this does not mean that during the winter months wheeled traffic ceased completely, only that it was reduced in comparison with the summer. Some roads undoubtedly remained in a better state than others and the situation changed from one year to another - the critical factors were the nature of the surface strata, the amount of traffic that a road had to support, and the type of weather conditions prevailing in any particular year. As indicated earlier, the repair activities of parishioners probably had little effect.

5.iv) Stage-coach and carrier facilities

While there may be little evidence surviving about traffic, as a whole, passing over the region's major roads at the time, some evidence is available about stage-coach and carrier facilities. The principal sources of information are the London-based coach and carrier guides, which were published at increasingly frequent intervals over the course of the period from 1675 to 1750.[2] Some appeared as guides in their own right, while others formed parts of tradesmens' companions or surveys of London. The majority, however, give alphabetical lists of the stage-coaches and carriers running between London and the Provinces, noting the inns from which they operated and also the days of their departure and arrival. Further information about the stage-coach and carrier facilities available at the time is sometimes to be found amongst the writings of contemporary travellers, although such references are usually few and far between. Nevertheless, where accounts of this kind are to be found, they can often provide useful evidence about fares and journey times, aspects not usually touched upon in the guides.

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[1] It should be remembered that winters at this time were much more severe than those experienced today.

[2] For a list of some of these guides, see A.L. Humphreys, 'Stage-coach and Waggon Lists, 1637-1840', Notes and Queries, 178, (1940), 39-41, 57-60

Stage-coaches

Route	No. of services per week
London-Portsmouth (via Petersfield)	2
London-Southampton (via Winch., Alton)	3
London-Salisbury (via Andover?)	3
London-Dorchester (via Stockbridge?)	2
London-Exeter (via Andover)[1]	4

Carriers

Route	No. of services per week
London-Portsmouth (via Petersfield)	2
London-Petersfield	1
London-Southampton (via Winch., Alton)	3
London-Winchester (via Alton)	2
London-Andover	1
London-Poole (via Winch., Alton?)	1
London-Salisbury (via Andover?)	2
London-Exeter (via Andover)	3

TABLE 5.2

[1] There is some difficulty over the interpretation of De Laune's entry for coaches between London and Exeter; this figure was considered to be most likely

a) The last quarter of the seventeenth century

The first coach and carrier guide available for the period is that contained in De Laune's Survey of London, first published in 1681.[1] The coach and carrier facilities serving Southern Hampshire are shown in table 5.2. In comparison with the position some 150 years later, the facilities available at this time were limited,[2] and in the winter months they were probably even more limited still, for it is certain that quite a number of the services listed by De Laune, the coach services particularly, ceased running during the winter season. For example, when the Mayor of Lyme in Dorset went to London to surrender the Charter at the beginning of October 1684, he travelled on horseback to Salisbury and then from Salisbury to London by stage-coach.[3] If there had been a London-Exeter or a London-Dorchester coach still in operation at this time of year, he would surely have used it in preference to travelling the first part of the journey on horseback.[4] On the return journey sometime in mid-December, the Mayor travelled by hired coach all the way back to Lyme.[5] This time, it seems, there was not even a coach operating between London and Salisbury, for if there had been, he would certainly have made use of it, as the return trip by hired coach was three times the cost of that from Lyme to London. The explanation for the reduction of public transport facilities in the winter season was undoubtedly the appalling state of many roads at this time of year.

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[1] T. De Laune, The Present State of London ... etc., (London, 1681), 385-435; it should be noted that this list may not be complete, for De Laune states (p. 478) that innkeepers were sometimes reluctant to give the necessary information on account of either ignorance, discourtesy or suspicion.

[2] It might perhaps be argued that in relying on a London-based coach and carrier list for reconstructing these facilities, one is ignoring the possible existence of inter-regional (independent of London) and intra-regional services. However, virtually no evidence has been found that any services of this kind were in operation during the period 1675-1750

[3] G. Roberts, The Social History of the People of the Southern Counties of England in past centuries, (London, 1856), 490-1

[4] The London-Exeter coach route passed within six or seven kms of Lyme, and Dorchester was only some 30 kms to the east.

[5] G. Roberts, op. cit., 490-1

Very little information is available about the cost of coach travelling about the time of De Laune's survey, or about the cost of sending goods by carrier waggon. A coaching advertisement of 1658, which includes details of a service from London to Exeter, gives the fare to Salisbury as 20/-, and to Dorchester as 30/-,[1] and judging from the fares given in the same advertisement for services to other parts of England, this seems to have been a fairly standard rate.[2] In other words, the London-Portsmouth and London-Southampton fares would probably have been 18-19/-. The cost of sending goods by carrier waggon was not nearly as consistent. In the later part of the seventeenth century, there is evidence that carriers quite often combined among themselves to raise charges, and this undoubtedly served to widen the disparities that already existed in the rates charged in different parts of the country. In 1692, Parliament attempted to overcome the problem by passing an Act that directed that at every Easter Quarter Sessions, local Justices were to assess and set the maximum rates to be charged by carriers for goods brought into their areas.[3] The Hampshire Justices made their first assessment in 1693, at the rate of 14d per ton/mile.[4] This was reduced to 12d in 1695, and then increased to 13d in 1699.[5] On this basis, the maximum charge for sending a ton of goods from London to Southampton in the mid-1690s would have been approximately 70/-. However, the almost complete lack of evidence about rates charged by carriers at the time makes it impossible to say whether any attention was paid to the Justices' assessments or not. Furthermore, it is equally difficult to establish whether Justices attempted to enforce the provisions of the Act.

As with the cost of coach and carrier transport, very little information is available about coach and carrier journey times around

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[1] Mercurius Politicus, 1/4/1658 - transcribed in the Quarterly Review, XCVII, (1855), 189

[2] The evidence assembled by Jackman on the cost of coach travel at the time supports this conclusion - W.T. Jackman, op. cit., 138-9

[3] 3 Wm.& Mary c. 12

[4] Hants. R.O., Q07, 101 - It should be noted that the Hampshire Justices' assessments did not apply to the London-Portsmouth route. The rates for this route were set by the Portsmouth Justices. Unfortunately, however, the Portsmouth Sessions Records are incomplete and the earliest surviving assessments are for 1702 and 1703, when the rates were 14d per ton/mile in summer and 17d in winter - Ports. R.O., 11A/16/131, 132

[5] Hants. R.O., Q07, 176; Q08, 15

Stage-coaches

Route	No. of services per week
London-Portsmouth (via Petersfield)	2
London-Southampton (via Winch., Alton)	3
London-Winchester (via Alton)	3
London-Salisbury (via Andover)	3
London-Blandford (via Stockbridge?)	1
London-Exeter (via Andover)	3
London-Taunton (via Andover)	1

Carriers

Route	No. of services per week
London-Portsmouth (via Petersfield)	5
London-Southampton (via Winch., Alton)	Less than one
London-Gosport (via Alton)	1
London-Christchurch (via Winch., Alton)	1
London-Andover	1
London-Amesbury (via Andover)	1
London-Salisbury (via Andover)	3
London-Weymouth (via Stockbridge?)	1
London-Exeter (via Andover)	2
London-Taunton (via Andover)	1

TABLE 5.3

the time of De Laune's survey. The coaching advertisement in the Mercurius Politicus for 1658 gives the London-Salisbury coach journey as taking two days[1] - i.e. approximately 65 kms per day - and this would seem to be fairly representative of travelling rates in other parts of the country.[2] Thus, the coach journey from London to Portsmouth and from London to Southampton at this time would probably have taken two days. However, in spring and autumn when the roads may not have been in as good a condition as in the summer, these times might well have extended to two and a half to three days. The travelling rates for carriers were undoubtedly considerably less than those of coaches. Moreover, there was most certainly a far greater variation in carriers' rates of travel from one route to the next, and from one part of the country to another.[3]

b) The second quarter of the eighteenth century

One of the last coach and carrier guides available for the period 1675-1750 is that contained in The Traveller's Pocket Companion of 1743.[4] The coach and carrier facilities serving Southern Hampshire are indicated in table 5.3. Comparing these facilities with those given by De Laune some 60 years earlier, it is clear that remarkably little expansion occurred over the period. The main difference was probably that by far the greater majority of the services given in the 1743 guide operated all the year round.

As was the case with the later seventeenth century, surprisingly little information survives about the cost of stage-coach travel at this time, or about the cost of sending goods by carrier. Jackman

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[1] Mercurius Politicus, op. cit.

[2] See W.T. Jackman, op. cit., 134-6; Crofts gives the average travelling rates of coaches at this time as 48 kms per day, although he adds that by using six horses and arranging for fresh horses to be available along the route, and also by making a very early start, it was sometimes possible to cover 80 or 96 kms - J. Crofts, Packhorse, Waggon and Post: Land Carriage and Communications under the Tudors and Stuarts, (London, 1967), 126-7

[3] This might explain why Jackman offers no information at all about carriers' travelling rates at the time - W.T. Jackman, op. cit.

[4] The Traveller's Pocket Companion, (London, 1743), 159-178

considers that the cost of travelling by coach at this time had altered little since the later seventeenth century and that the standard rate was still about three-pence per mile.[1] Unfortunately, however, it proved impossible to find any evidence about the cost of coach travel in the region during the period to confirm this conclusion. The cost of sending goods by carrier waggon is equally obscure. As before, evidence about actual rates charged by carriers is completely lacking. In addition, there is no information on assessed carriage rates, for throughout the period in question, the Hampshire Justices apparently failed to make assessments.[2] The evidence assembled by Jackman on assessed carriage rates over the country as a whole indicates that they generally averaged between 10d and 15d per ton/mile during this period,[3] and there is no reason to believe that the rates for Hampshire would have been very different had the local Justices made assessments. Nevertheless, as previously, it is impossible to say whether the rates charged by carriers bore any relation to the probable assessed rates.

In contrast, information about coach and carrier journey times in the region around the second quarter of the eighteenth century is slightly more plentiful. In his Magna Britannia of 1720, for example, Cox records that between London and Southampton 'there has been a stage-coach for some years that has run thro' in a day all the summer'.[4] This represents a remarkable improvement over the probable two-day journey of the later seventeenth century, although it must be stressed that the phrase 'thro' in a day' should probably be interpreted in its most literal sense, i.e. a journey of about 24 hours. At about the same time, John Macky records travelling from London to Winchester by stage-coach, the journey taking some one and a half days to complete.[5] This

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[1] W.T. Jackman, op. cit., 138

[2] Amongst the incomplete Portsmouth Sessions Records, there are assessments for the London-Portsmouth route for the years 1728-9 and 1731-50. In every case, the rates were 16d per ton/mile in summer and 20d per ton/mile in winter, an increase of 2d and 4d per ton/mile respectively since 1703 - Ports. R.O., S3/89-131; 11A/16/476, 491, 650

[3] W.T. Jackman, op. cit., 139-141

[4] T. Cox, Magna Britannia, II, (London, 1720), 851

[5] See this chapter, p. 95-96

particular coach was clearly travelling at a rather slower rate than the one mentioned by Cox as running between London and Southampton, although it was nevertheless running well in line with the average rate for the time.[1] Finally, several years later, in September 1728, Stephen Martin-Leake travelled from London to Portsmouth by stage-coach and left an exceptionally full account of his journey, sections of which were referred to earlier in this chapter.[2] The coach left London at two o'clock in the morning on September 30th, and took two days to complete the journey, stopping overnight at Godalming (near Guildford).[3] This represents an average rate of travel of some 56 kms per day and is considerably slower than that of the London-Southampton coach mentioned by Cox, even though the distances involved were almost identical. In this light, the journey time of the London-Southampton coach was clearly exceptional, the more so when it is remembered that, unlike the London-Portsmouth route, none of the roads between London and Southampton were turnpiked. It is unlikely that a rate of travel of this order could have been achieved other than in the middle of summer, and even then it must have involved considerable exertion on the part of horses and coachman. In overall terms, therefore, it would seem that there was little or no improvement in coach journey times in the region between the last quarter of the seventeenth and the second quarter of the eighteenth centuries. In the realm of carrier activity, the picture is likewise little different from that of the later seventeenth century. The travelling rates of carriers remained considerably less than those of coaches, although as before, there were marked variationssin rates of travel from one route to the next.

5.v) Conclusion

The clearest fact to emerge from the preceding discussion, and one that needs constant re-emphasis, is undoubtedly the poor state of many of the region's major roads and the total inadequacy of the mechanisms in existence for maintaining them. While the evidence of contemporary

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[1] See this chapter, p. 96

[2] See this chapter, p. 96-97

[3] C.R. Markham, op, cit., 200

travellers about the condition of the roads is insufficient to be conclusive, it is readily apparent from the rates of travel of stagecoaches and carriers, for example, that few of them could have been in a good state of repair. The poor condition of the roads, in winter especially, placed a severe restriction on all forms of traffic movement, both within the region and to places outside it, and this in turn acted as a bottleneck to economic expansion. Any increase in the volume of traffic merely caused the roads to deteriorate still further, so that in many respects, the situation was self-perpetuating. The solution lay with the widespread adoption of the turnpike concept in the region from about 1750, which was to transform the region's road system. It is to this development that attention is now turned.

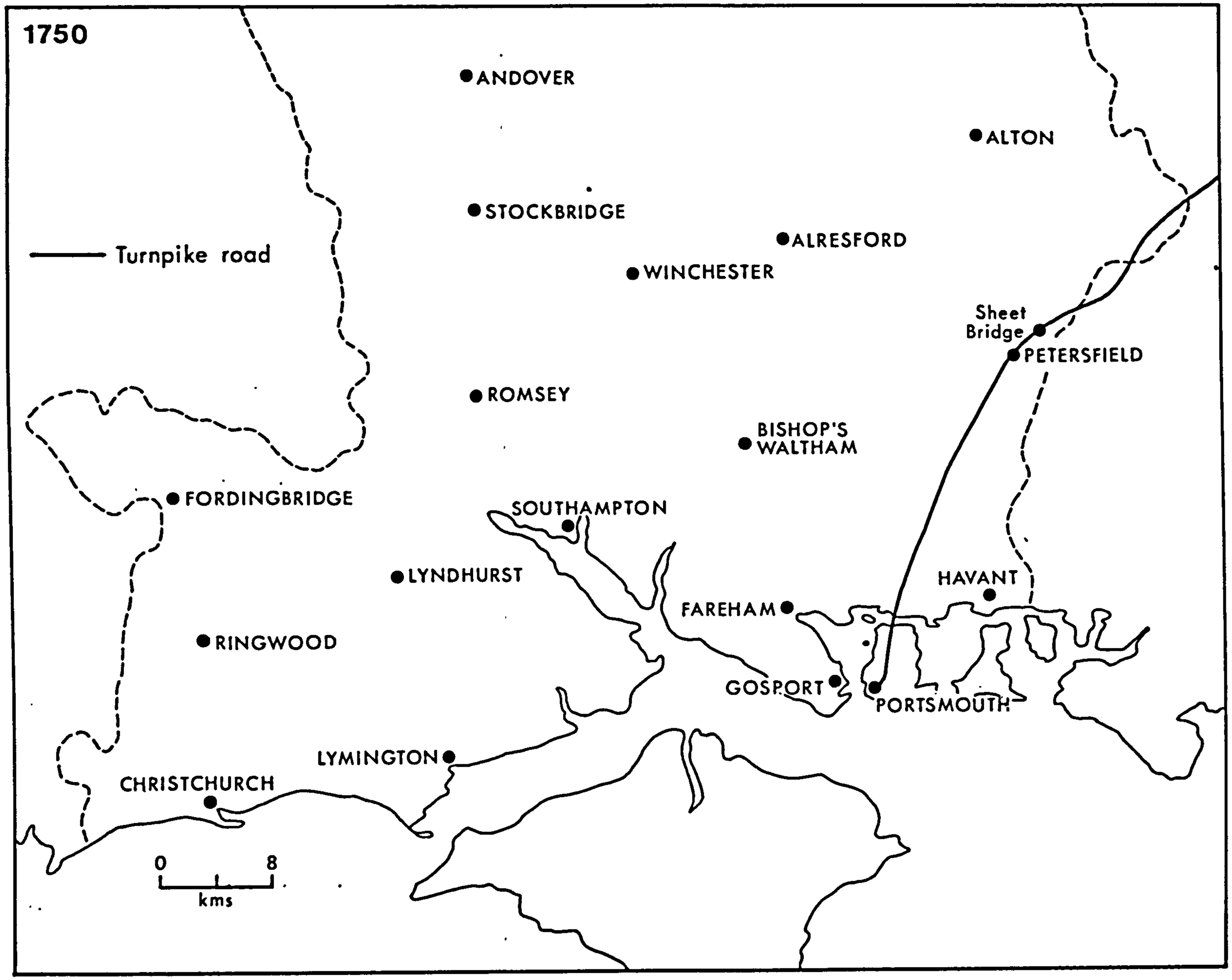
1750
ANDOVER
ALTON
STOCKBRIDGE
ALRESFORD
Turnpike road
WINCHESTER
Sheet Bridge
PETERSFIELD
ROMSEY
BISHOP'S WALTHAM
FORDINGBRIDGE
SOUTHAMPTON
LYNDHURST
HAVANT
FAREHAM
RINGWOOD
GOSPORT
PORTSMOUTH
LYMINGTON
CHRISTCHURCH
0
8
kms

FIGURE 6.1

CHAPTER SIX

THE TURNPIKE SYSTEM OF SOUTHERN HAMPSHIRE, 1750-1850

The aim of this chapter is to examine in detail the development of the region's turnpike road system. It is divided into two distinct parts. The first focuses on the basic spatial and chronological pattern of turnpiking, and includes a comparison with the region's former major road system and a short discussion of the motives behind the setting up of turnpikes. The second part is concerned with the region's turnpike trusts as mechanisms for road maintenance. This includes an examination of administrative effectiveness, road repair expenditure, and the nature and scope of road repair activities; in addition, a section is also incorporated on the turnpike roads as seen by contemporaries.

6.i) The development of the system

a) General spatial and chronological development

The development of the Southern Hampshire turnpike system is illustrated in figures 6.1 - 6.4. In 1750 (fig. 6.1), there were only two turnpike trusts in existence in the region and both were on the main London-Portsmouth road. The first, the Portsmouth-Sheet Bridge trust, was established in 1710[1] and covered the final section of this major Post Road; the second covered an intermediate portion from Kingston-upon-Thames to Sheet Bridge and was established in 1749.[2] Within a short time, however, this situation was to change dramatically. The middle decades of the century witnessed a phenomenal extension of the turnpike system in the region (fig. 6.2) and by the early 1770s the majority of the

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[1] 9 Anne c. 33 - The background to the setting up of this trust and details of its early activities were discussed in chapter five.

[2] 22 Geo. III c. 35 - From its inception, this trust was divided into two separate districts: the upper district covered the section from Kingston to Godalming, the lower district that from Godalming to Sheet Bridge.

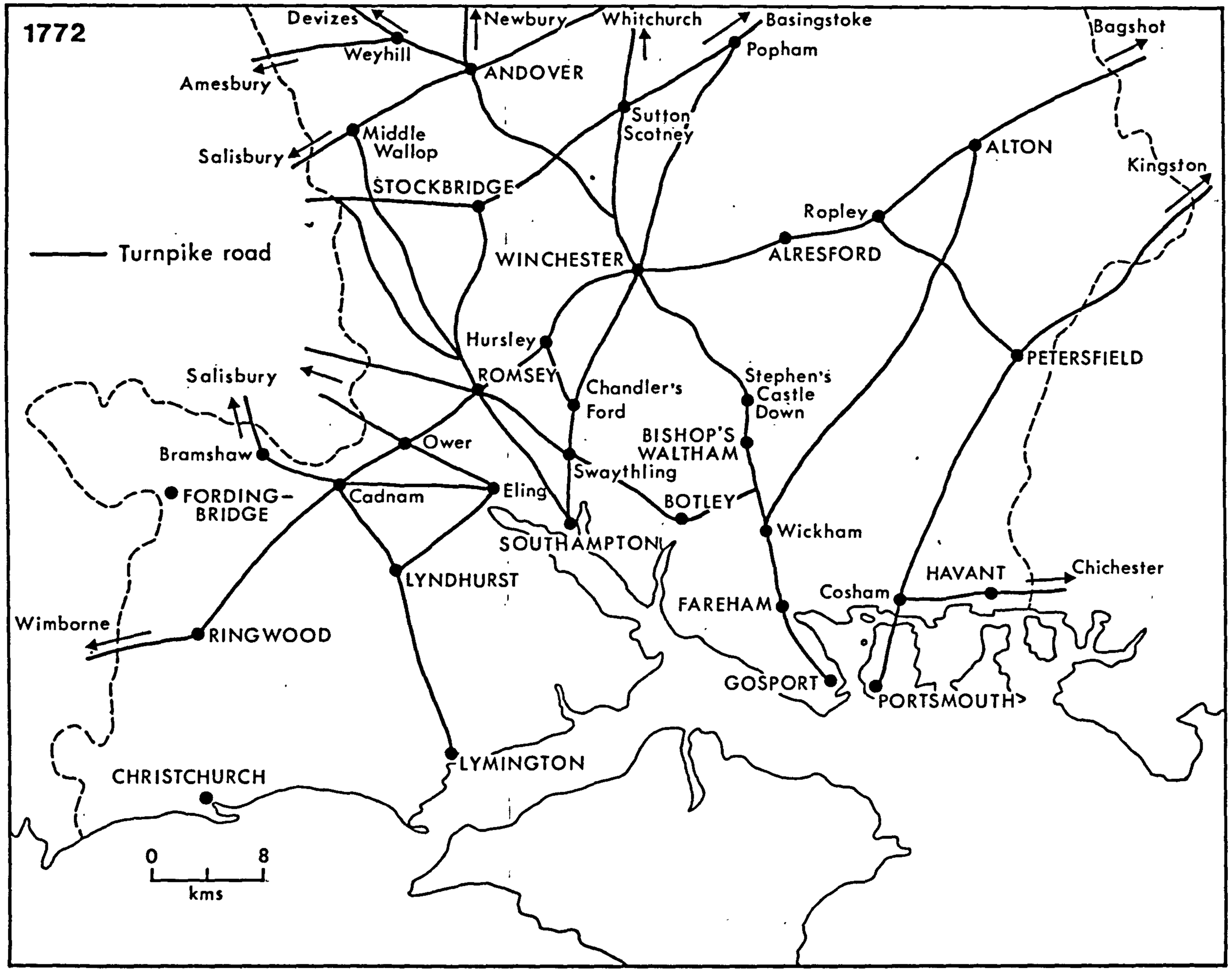
1772
Turnpike road
Devizes
Newbury
Whitchurch
Basingstoke
Bagshot
Weyhill
Popham
ANDOVER
Amesbury
Sutton Scotney
Middle Wallop
Salisbury
ALTON
Kingston
STOCKBRIDGE
Ropley
WINCHESTER
ALRESFORD
Hursley
PETERSFIELD
Salisbury
ROMSEY
Chandler's Ford
Stephen's Castle Down
BISHOP'S WALTHAM
Ower
Bramshaw
Swaythling
FORDING-BRIDGE
Cadnam
Eling
BOTLEY
SOUTHAMPTON
Wickham
LYNDHURST
HAVANT
Chichester
Cosham
FAREHAM
Wimborne
RINGWOOD
GOSPORT
PORTSMOUTH
LYMINGTON
CHRISTCHURCH
0
8
kms

FIGURE 6.2

principal roads had been turnpiked. In particular, the years from 1753 to 1772 saw the passing of 17 new turnpike Acts,[1] involving some 500 kms of the region's roads.

The first trusts to be established during this major 20-year expansion phase, both in 1753, were those covering roads from Bagshot to Winchester,[2] and from Salisbury to Eling, near Southampton.[3] The Bagshot-Winchester turnpike, or Winchester turnpike, covered part of the main London-Southampton/Poole road,[4] while the Salisbury (Sarum)-Eling turnpike covered three different roads. The two main ones ran from Salisbury to Eling via Landford, Bramshaw and Cadnam, and from Landford to Eling via Ower and Testwood.[5] The establishment of the Winchester and Sarum-Eling trusts was followed in 1755 by the setting up of a trust on a portion of the 'Western Road' between Basingstoke and Lobcomb Corner.[6] It became known as the Andover turnpike, passing by way of Whitchurch and Andover.[7] A year after, in 1756, a second trust was established between Basingstoke and Lobcomb Corner,[8] passing via Sutton Scotney and Stockbridge along part of the London-Weymouth road, and

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[1] Two of these, though - the ones relating to the Botley and Petersfield-Ropley turnpikes (5 Geo. III c. 95, 12 Geo. III c. 108) - were not really new Acts in the strict sense, as they were also amending and renewal Acts for trusts already in existence.

[2] 26 Geo. II c. 15

[3] 26 Geo. II c. 66

[4] In 1772, under 13 Geo. III c. 88, the turnpike was divided into two separate districts: the upper district covered the section from Bagshot to Holybourne (near Alton), and the lower district the section from Holybourne to Winchester.

[5] The third road covered was a short section of the main 'Western Road' between Lobcomb Corner on the Hants/Wilts border and Harnham Bridge just west of Salisbury. This road falls outside the study area.

[6] 28 Geo. II c. 44

[7] The turnpike also included a short branch road from Andover to Weyhill and Mullens Pond

[8] 29 Geo. II c. 46

became known as the Stockbridge turnpike. In the same year, a further link was introduced between Salisbury and Southampton, with the setting up of a trust on the road from Whiteparish to Southampton via Romsey.[1] This particular development meant that within the short space of three years, virtually three separate turnpikes were established between Salisbury and Southampton. In 1758, two more trusts were set up in the region: one covered a group of roads radiating from Winchester,[2] the other covered the road from Gosport to Alton.[3] The first of these was normally referred to as the Southampton, Winchester, Stockbridge and Stephen's Castle Down turnpike, and incorporated the roads from Southampton to Winchester, Winchester to Stockbridge, and Winchester to Stephen's Castle Down (near Bishop's Waltham).[4] The trust established on the Gosport-Alton road was known as the Gosport turnpike, and incorporated a branch road to Bishop's Waltham, which left the main road at Sherrill Heath.[5] The final development of the decade came in 1759, with the setting up of a trust on the roads from Popham (south-west of Basingstoke) to Winchester, Winchester to Romsey, Romsey to Ringwood, and Ringwood to Wimborne,[6] the last three forming part of the main London-Poole road. The result of this remarkable six-year burst of turnpike activity was that by 1760, some 370 kms of the region's roads

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[1] 29 Geo. II c. 45

[2] 31 Geo. II c. 75

[3] 31 Geo. II c. 73

[4] Under its first Act, this trust was effectively divided into two distinct parts: one covered the southern section of the Southampton-Winchester road, whilst the other covered the northern section of this road and the roads from Winchester to Stockbridge and to Stephen's Castle Down. For accounting purposes, there was yet a further division, with the northern section of the Southampton-Winchester road, the Winchester-Stockbridge road, and the Winchester-Stephen's Castle Down road all deemed separate entities. In effect, therefore, there were not two but four separate parts.

[5] The first Act also includes the road from Bishop's Waltham to Exton, but there is absolutely no evidence that the trust ever did anything to this road, or even considered it to be under its jurisdiction.

[6] 32 Geo. II c. 50 - This trust was divided into four separate districts, corresponding with the four different sections of the road. The second district, from Winchester to Romsey via Hursley, also incorporated a road from Hursley to Chandler's Ford, and under a later amending Act of 1765 (5 Geo. III c. 95), a road from Romsey to Swaythling was added as well.

were under the care of turnpike trusts, a dramatic advance over the 40 or so kms of ten years previously.

The intensive turnpike activity of the 1750s continued virtually unabated in the succeeding decade. In 1761, a trust was established on the road from Mullens Pond (near Andover) to Amesbury and beyond.[1] This was followed in 1762 by the setting up of three further trusts: the first covered the road from Weyhill (near Andover) to Lyde Way (near Devizes),[2] the second covered the roads from Winchester over Worthy Cow Down to Newtown (near Newbury) and from Worthy Cow Down to Andover,[3] and the third involved the coastal road between Cosham (near Portsmouth) and Chichester.[4] Two years later, in 1764, a trust was established on a number of roads radiating north and north-west of Romsey.[5] The three main ones were Romsey to Stockbridge, Romsey to Middle Wallop, and Romsey to Lobcomb Corner. In 1765, trusts were set up on the roads from Eling (near Southampton) to Lymington,[6] and from Swaythling to Sherrill Heath (near Wickham) via Botley.[7] These became known as the Lymington and Botley turnpikes respectively. In the following year, 1766, a trust was established on the road from Andover to Chilton Pond via Newbury,[8] and this major phase of turnpike activity was finally brought to a close with the establishment of a trust on the road between Petersfield and Ropley in 1772.[9] By 1772, some 540 kms of the region's roads were under the care of turnpike trusts, a substantial increase over the 370 kms of 1760.

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[1] 2 Geo. III c. 39

[2] 2 Geo. III c. 60

[3] 2 Geo. III c. 61 - From the start, this trust was effectively divided into two parts, corresponding with the two different sections of road.

[4] 2 Geo. III c. 84

[5] 4 Geo. III c. 47

[6] 5 Geo. III c. 59

[7] 5 Geo. III c. 95

[8] 6 Geo. III c. 86 - All the Acts relating to this trust also include the road from Andover to Hursley (between Winchester and Romsey). However, there is no evidence that the trust ever did anything to this road, or even considered it to be under its care.

[9] 12 Geo. III c. 108

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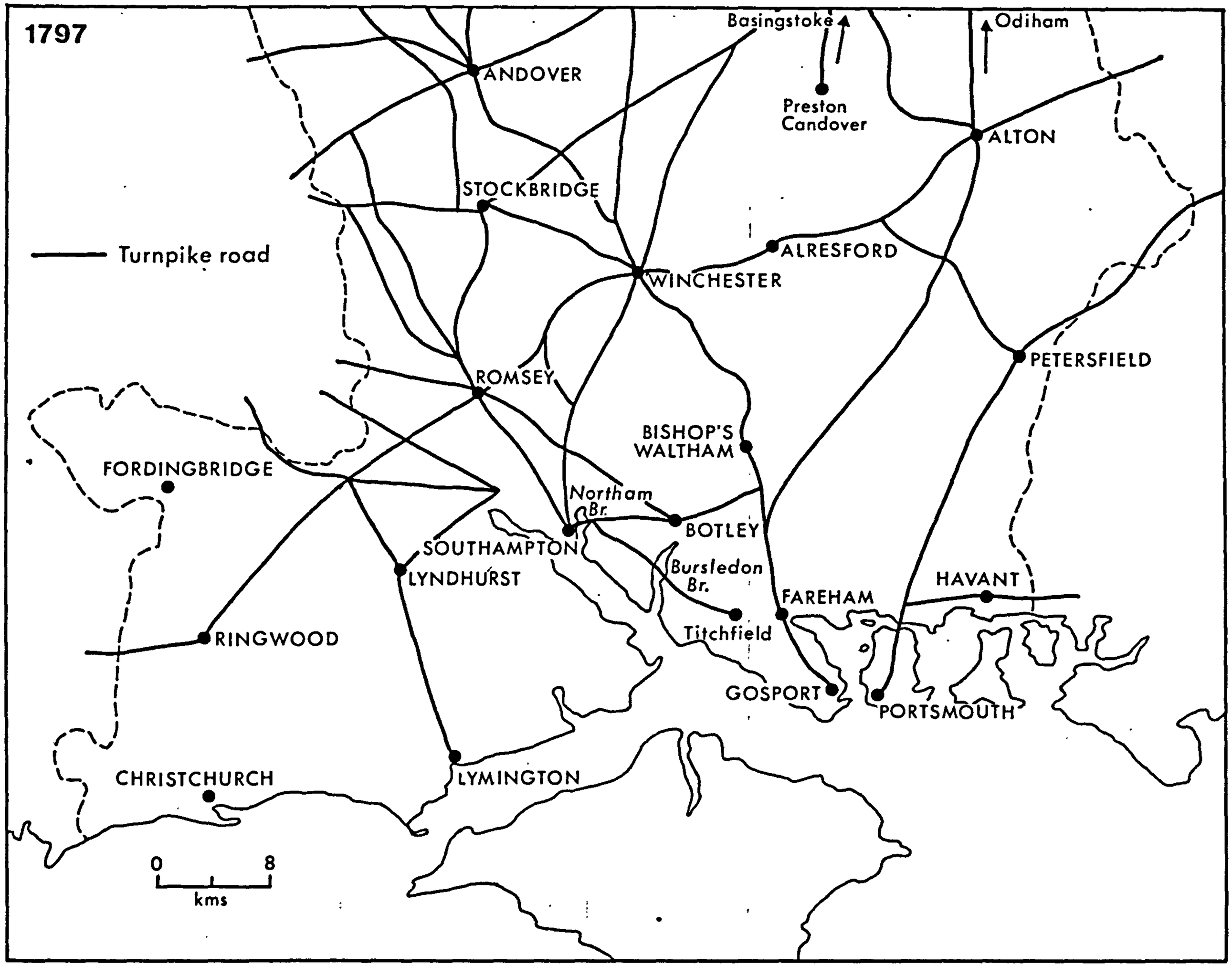
1797
Turnpike road
Basingstoke
Odiham
ANDOVER
Preston Candover
ALTON
STOCKBRIDGE
ALRESFORD
WINCHESTER
PETERSFIELD
ROMSEY
BISHOP'S WALTHAM
FORDINGBRIDGE
Northam Br.
BOTLEY
SOUTHAMPTON
LYNDHURST
Bursledon Br.
HAVANT
FAREHAM
Titchfield
RINGWOOD
GOSPORT
PORTSMOUTH
CHRISTCHURCH
LYMINGTON
0
8
kms

FIGURE 6.3

The years from 1772 to the early 1790s saw a complete cessation of turnpike activity in Southern Hampshire, and it was not until 1793, with the establishment of a trust on the road between Alton and Odiham,[1] that development was renewed (fig. 6.3). This was followed, in 1795, by the setting up of a trust on the roads from Basingstoke to Alton and from Basingstoke to Preston Candover,[2] and in 1796-7, by the establishment of turnpikes, or more correctly pseudo-turnpikes, on the roads associated with the two companies set up to erect bridges at Northam and Bursledon, over the Itchen and Hamble rivers respectively.[3] Although all of these 'bridge roads' were under the care of companies rather than trusts, the principles by which they were administered were remarkably similar. For example, the Bridge Proprietors were allowed to set up tollgates both at points along the roads and on the bridges themselves; they were also free to auction the tolls. To all intents and purposes, therefore, their establishment may be seen as part of the extension of the turnpike system in the region. By the end of the eighteenth century, the total length of turnpiked roads in Southern Hampshire had reached just over 600 kms, and advance of some 60 kms since 1772. However, not all of this increase is accounted for by the Alton-Odiham, Basingstoke-Alton, Basingstoke-Preston Candover, Northam Bridge and Bursledon Bridge roads. Several other roads were placed under the care of turnpike trusts during the period, but under existing rather than new ones. For example, several new roads were placed under the Andover trust in its renewal Acts of 1774[4] and 1797.[5] Roads incorporated in this way were normally fairly short, but some did form significant links.

The first half of the nineteenth century witnessed further extensions to the region's turnpike system (fig. 6.4), though on nothing like

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[1] 33 Geo. III c. 182

[2] 35 Geo. III c. 137

[3] 36 Geo. III c. 94 & 37 Geo. III c. 131 - The Northam Bridge Company's roads ran from the west end of the bridge to Southampton and from the east end of the bridge to Botley; the Bursledon Bridge Company's roads ran from the west end of the bridge to Northam and from the east end of the bridge to Titchfield.

[4] 14 Geo. III c. 104 - Andover-Tangley via Charlton; Charlton-Clanfield Bottom via Foxcote; and Weyhill-Sarson Street

[5] 37 Geo. III c. 169 - Sarson Street-Stockbridge

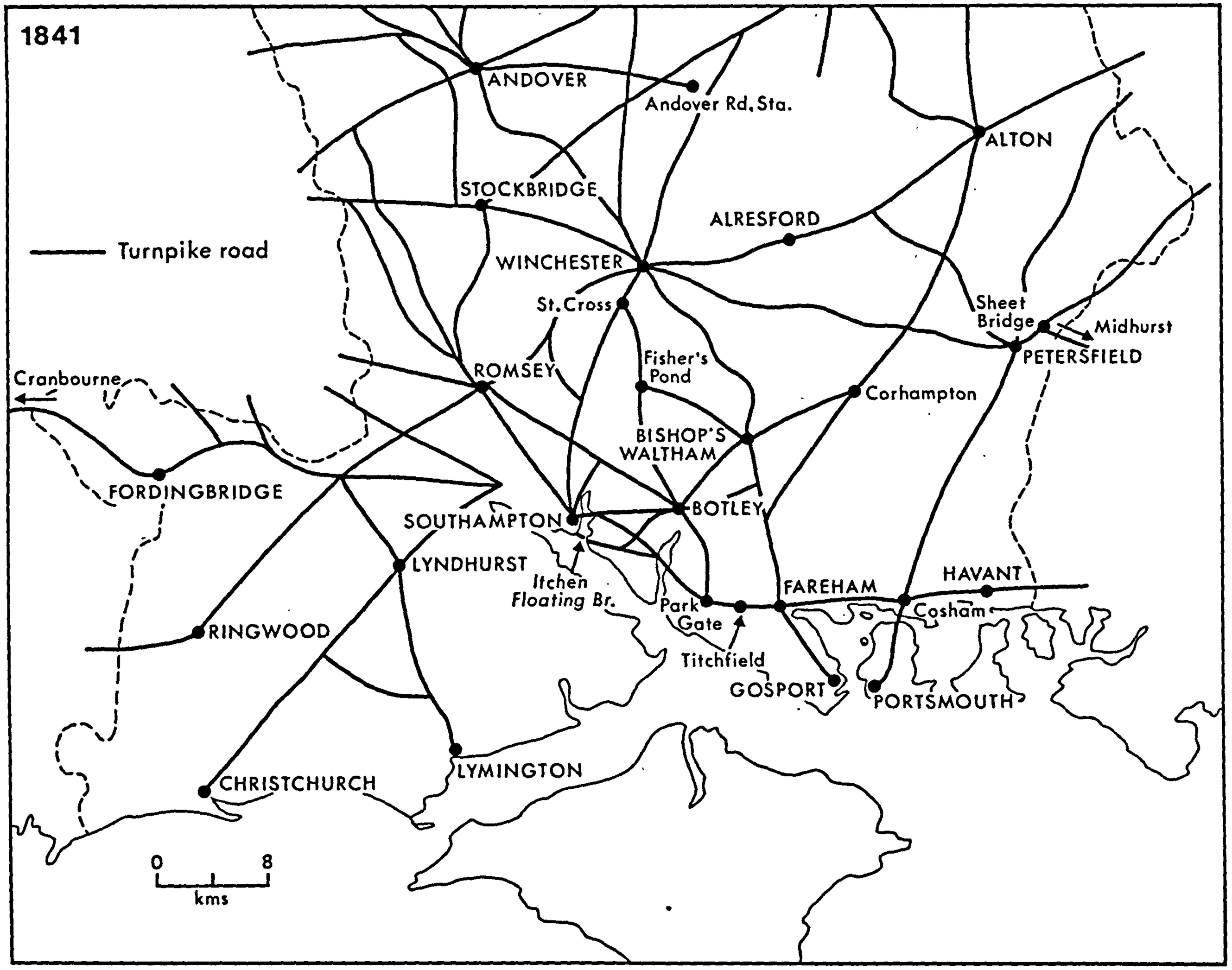
1841
Turnpike road
ANDOVER
Andover Rd. Sta.
ALTON
STOCKBRIDGE
ALRESFORD
WINCHESTER
St. Cross
Sheet Bridge
Midhurst
PETERSFIELD
Fisher's Pond
ROMSEY
Cranbourne
Corhampton
BISHOP'S WALTHAM
FORDINGBRIDGE
BOTLEY
SOUTHAMPTON
LYNDHURST
Itchen Floating Br.
FAREHAM
HAVANT
Park Gate
Cosham
RINGWOOD
Titchfield
GOSPORT
PORTSMOUTH
LYMINGTON
CHRISTCHURCH
0
8
kms

FIGURE 6.4

the scale of the period from 1753 to 1772. During this particular phase, development was much more piece-meal, largely consisting of a process of infilling. The first new turnpike of the period was that known as the London and Southampton, which was established in 1801.[1] It covered the road from Botley to Corhampton via Bishop's Waltham and was considered to provide the missing link for an alternative route between London and Southampton via Alton, Bishop's Waltham and the new bridge at Northam - hence the ''London and Southampton' label. In 1810, two further trusts were established in the region: the first covered the road from Titchfield to Cosham (near Portsmouth);[2] the second concerned a road from St. Cross (near Winchester) to Park Gate (near Titchfield) via Botley,[3] and was considered to provide an alternative route between Fareham and Winchester, in place of that via Wickham and Bishop's Waltham. The establishment of these two trusts was followed by a long period of inactivity, and it was 1825 before further development occurred. In that year, two new trusts were set up: one involved the road from Midhurst (Sussex) to Sheet Bridge (near Petersfield),[4] the other involved the road from Winchester to Petersfield.[5] In 1826, a trust was established on the road from Farnham to Petersfield,[6] and this was followed, in 1832, with the setting up of a trust on a road between Brook in the New Forest and Shaftesbury (Dorset) via

---

[1] 41 Geo. III c. 8 - This Act in fact empowered the trustees to make a road from Botley to Filmer Hill (near W. Tisted), with a branch from Corhampton Down to Corhampton. However, the final section of the road to Filmer Hill was never made and the branch thus became a continuation of the main road.

[2] 50 Geo. III c. 14

[3] 50 Geo. III c. 22

[4] 6 Geo. IV c. 11

[5] 6 Geo. IV c. 14 - An earlier unsuccessful attempt to establish a turnpike between these two places was made in 1809 - Hampshire Chronicle, 24/7/1809

[6] 7 Geo. IV c. 80 - Cochrane refers to this as the 'New Portsmouth Road', but no evidence has been found that it was ever given this name, although it did offer an alternative route to that via Hindhead - C. Cochrane, The Lost Roads of Wessex, (Newton Abbot, 1969), 184

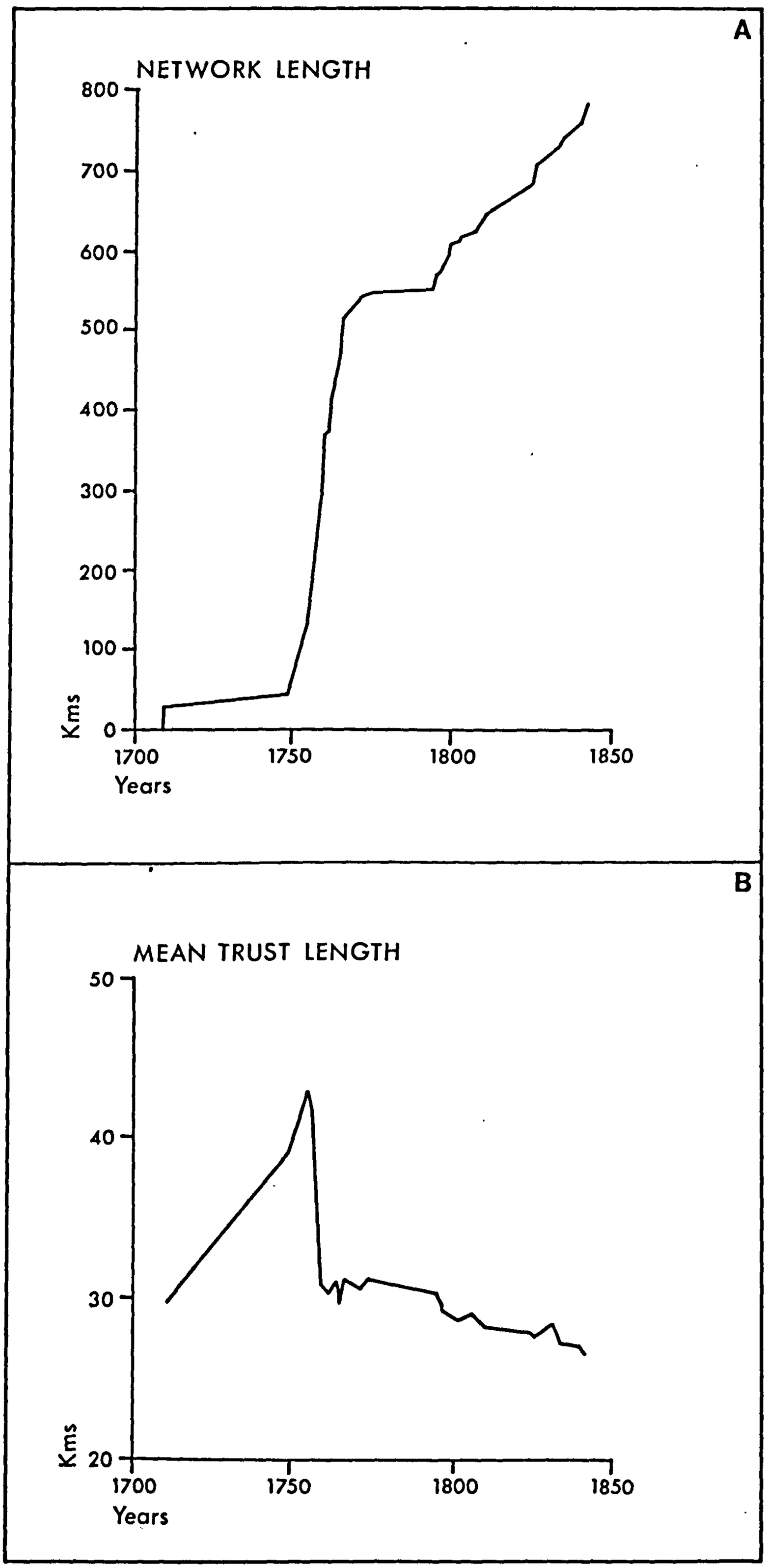
A
NETWORK LENGTH
800
700
600
500
400
300
200
100
0
Kms
1700
1750
1800
1850
Years
B
MEAN TRUST LENGTH
50
40
30
20
Kms
1700
1750
1800
1850
Years

FIGURE 6.5

Fordingbridge.[1] This particular trust was known as the Cranbourne Chase and New Forest turnpike, and was conceived as offering an alternative route between London and the West of England, via Winchester, Romsey, Fordingbridge and Cranbourne, instead of the normal routes through Andover/Stockbridge and Salisbury.[2] In 1833, a trust was established on a road between Bishop's Waltham and Fisher's Pond (near Twyford),[3] offering yet another alternative route between Fareham and Winchester, and in 1834, pseudo-turnpikes were established on the roads associated with the company set up to establish a floating bridge between Southampton and Woolston, across the mouth of the River Itchen.[4] The last trusts to be established in the region covered roads from Andover to Andover Road railway station (1840),[5] and from Christchurch to Lyndhurst (1841).[6] By 1841, therefore, Southern Hampshire's turnpike system had reached its fullest extent, with some 780 kms of roads under trust administration. This was against 600 or so kilometres at the end of the eighteenth century.

The rate of development of the region's turnpike system during the 131 years between 1710 and 1841 is summarised in figure 6.5A, which shows increase in network length over the period. The most striking feature of the graph is the dramatic growth of the system during the years 1750 to 1770. These two decades witnessed the establishment of trusts on some 500 kms of roads; in other words, approximately two-thirds of the Southern Hampshire turnpike system was brought into being in this short space of time. The periods between 1710 and 1750 and between 1770 and 1790, in contrast, saw remarkably little growth. The

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[1] 2 & 3 Wm. IV c. 17

[2] A branch road from Bramshaw to Downton was also incorporated

[3] 3 Wm. IV c. 17

[4] 4 & 5 Wm. IV c. lxxxv - The company's roads ran from Woolston through Sholing to Botley and from Sholing almost to Bursledon. The principles by which they were administered were almost identical to those for the Northam and Bursledon Bridge Companies. See B.C. Jones, 'Crossing the Itchen', Southampton Papers No. 1, (1960)

[5] This turnpike was not set up under a new Act. Instead, it was incorporated in a renewal Act for the Andover turnpike (3-4 Vict. c. xxxi), and came under that trust's overall jurisdiction. In the Act, Andover Road station is referred to as Warren Farm station, but once the turnpike had been made, it quickly became known as Andover Road.

[6] 4-5 Vict. c. xxii

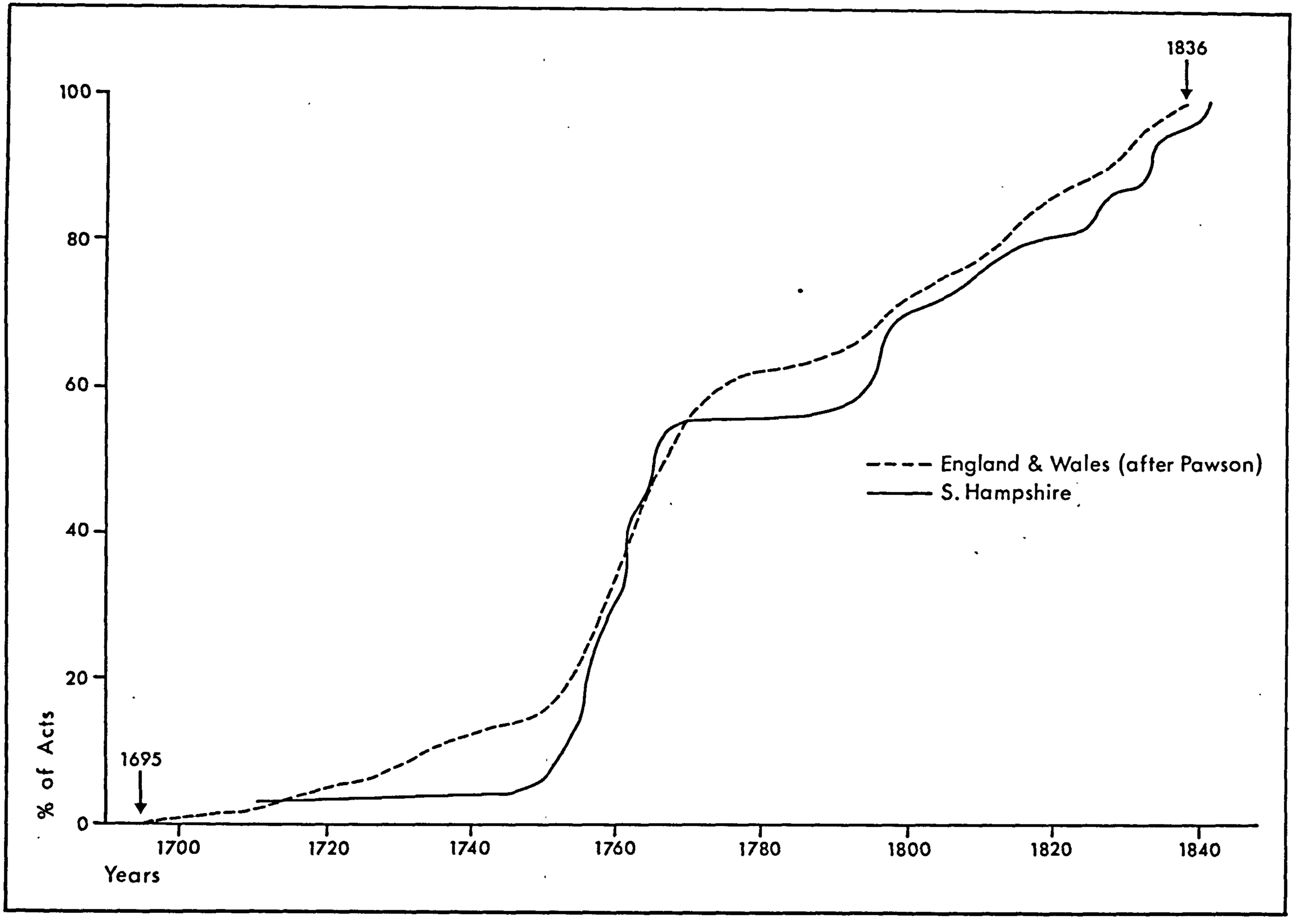
1836
100
80
60
40
20
0
% of Acts
1695
1700
1720
1740
1760
1780
1800
1820
1840
Years
England & Wales (after Pawson)
S. Hampshire

FIGURE 6.6

only other phase of expansion was in the earlier part of the nineteenth century, when a further 180 kms were added to the system. However, as the graph clearly shows, the rate of expansion during this period was well behind that sustained in the third quarter of the eighteenth century. Figure 6.5B traces changes in mean trust length between 1710 and 1841 and casts a valuable sidelight on the graph of network length. In the period from 1710 to the mid-1750s, mean trust length rose from just under 30 kms to 43 kms. Thereafter, however, it fell - dramatically at first, but more gradually later. The most dramatic fall occurred between the mid-1750s and 1760, when mean trust length decreased from 43 kms to slightly over 30 kms, remaining at that level until about 1800. After 1800, a further decline occurred, though much less dramatic than the first, and by 1841, mean trust length had fallen to little over 26 kms. The explanations for these changes in mean trust length are fairly clear. In the early development phase, it was the major roads that were being turnpiked, and these were often considerable in length, sometimes extending to points outside the region. Once these routes had been incorporated, however, turnpike activity focused on branch or cross roads, which were usually much shorter in length, and this trend almost certainly intensified during the later development phases.

An indication of the extent to which the Southern Hampshire turnpike system fits in with the national picture is given in figure 6.6, which compares the diffusion curve of new Acts for Southern Hampshire with that of England and Wales as a whole.[1] The most striking feature of the two curves is their remarkable similarity: in other words, the development of the Southern Hampshire turnpike system corresponded closely with development at the national scale. The two main exceptions were the periods 1720-50, and 1770-90, when regional growth fell slightly below the national rate. The result of this was that in Southern Hampshire, an even greater proportion of new turnpike activity was concentrated in the 1750s and 1760s.

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[1] The diffusion curve for England and Wales is taken from E.J. Pawson, 'The Development of the Turnpike Road System in the Eighteenth Century', (unpubl. D. Phil. thesis, Univ. of Oxford, 1975), 176

b) The turnpike system and the former major road system

Having outlined the spatial and chronological development of the Southern Hampshire turnpike system, it is important to establish to what extent it corresponds with the former major road system. The probable form of the major road system in the years immediately preceding the 'Turnpike Age' is illustrated in figure 5.4. If this is compared with figure 6.4, it is clear that the pre-turnpike road system formed the foundation of a very substantial part of the region's turnpike system. However, there were in fact several roads which were considered to be fairly important prior to 1750 and yet were never turnpiked. The most significant of these is the portion of the London-Southampton road between Alresford and Southampton via Twyford. This road was described in detail in Ogilby's Britannia and was shown on all the county maps of the period 1675-1750, which include roads. Clearly, therefore, it was a fairly well-established route and it is curious that it was not turnpiked. Cochrane considers that the importance of the route was closely tied to the changing economic fortunes of Winchester: with the decline of Winchester in medieval times, it quickly became established as a very useful way of by-passing the old capital; with Winchester's revival in Georgian times, it declined in importance as traffic started passing by way of the old capital again.[1] This might well explain why the route was not turnpiked. However, it should be stressed that there is no evidence that this route fell into complete disuse during the turnpike period. Indeed, it is quite possible that it continued to carry a fair amount of traffic, for in 1825, a notice was inserted in a local newspaper that an application was going to be made to Parliament for an Act to make a turnpike road from Southampton to Alresford via Twyford.[2] The application does not seem to have met with any success, but the fact that the idea was being considered suggests that the route was not unimportant.[3]

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[1] C. Cochrane, op. cit., 76-7, 88-92

[2] Southampton Herald, 31/10/1825, 7/11/1825

[3] This is reinforced by the fact that an attempt was made to obtain an Act for turnpiking the section from Southampton to Twyford in 1811 - Hampshire Chronicle, 2/9/1811, 16/9/1811 and Hants. R.O., Deposited Plan No. 28; and also by the fact that in 1819 a committee was formed to consult with trustees of adjacent turnpike roads for the same purpose and a subscription started - Hampshire Chronicle, 9/8/1819

A second fairly well-established road in the pre-turnpike period, which was not turnpiked, was the section of the London-Weymouth road between Stockbridge and Blandford (Dorset) via Broughton, Downton (Dorset), and Cranbourne (Dorset). Like the Alresford-Southampton road, it was described in detail in Ogilby's Britannia and was shown on virtually all the county maps of the period 1675-1750, which include roads. Cochrane considers this route rather extraordinary and suggests that it was perhaps surveyed for Ogilby by a rather below-par assistant and then merely copied by subsequent map-makers without question:[1] the more logical route to Weymouth would have been via Andover and Salisbury. However, from what is known about Ogilby's survey,[2] it is hard to believe that his London-Weymouth road could have differed from the actual road to any great extent. Furthermore, it is hard to imagine how nearly all later map-makers could have incorporated it on their maps if such a road did not exist in reality. It seems more likely that this particular road fell into relative disuse in the earlier part of the eighteenth century, and that when regional turnpike activity intensified in the 1750s and 1760s, it was left aside. This, of course, would have served to accentuate the decline further. The rejection of Cochrane's view is given added weight by the fact that when the Cranbourne Chase and New Forest turnpike was first proposed, it was considered to offer an alternative route between London and the West of England.[3] It is unlikely that such a claim would have been made had there not been some historical precedent for a main road along this general route. In addition, when made, the turnpike followed parts of Ogilby's London-Weymouth road quite closely.

Another of the region's roads that was fairly well-established in the pre-turnpike period, and yet was never turnpiked, was that from Poole to Lymington through Christchurch. In common with the two previous roads examined, this road was described in detail by Ogilby, and was included in all the county maps of the period 1675-1750, which show roads. However, on this occasion, it is a great deal more difficult to explain

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[1] C. Cochrane, op. cit., 123-4

[2] See chapter five, p. 83-4

[3] See this chapter, p. 113-4

why the road was never turnpiked. There is no indication that traffic on the route declined in the earlier part of the eighteenth century, and it was probably never very great anyway, since much traffic almost certainly went by sea. It is possible that the relatively level nature of the land in the area and the availability of ample local supplies of gravel made road maintenance a lot easier than in other parts, thus precluding the need for a turnpike. This is confirmed by Cochrane, who states that the coast road between Poole and Lymington 'prided itself on its good condition, even before the turnpikes were introduced',[1] although the authority upon which this statement is based is not given.

The last of the region's roads that was fairly well-established in the pre-turnpike period, and yet was never turnpiked, was the portion of the Oxford-Chichester road between Alton and Chichester via Petersfield. As before, this road featured in Ogilby's Britannia and in the majority of the county maps of the period, which include roads, and it is somewhat surprising that it was not turnpiked. The road traversed difficult stretches of country, both in terms of relief and surface rock, and one can only conclude that traffic was never sufficient to warrant the setting up of a turnpike. The Oxford-Chichester route may have been relatively important in the later seventeenth and early eighteenth centuries, and particularly as a link between the South Coast and the Midlands. But, with the growing influence of London during the eighteenth and early nineteenth centuries, the importance of this link may well have diminished. In addition, a place like Petersfield is likely to have had greater contact with its neighbouring Hampshire towns, the county town of Winchester especially, than with Chichester, which was in Sussex.

c) Motives for turnpiking

The two preceding sections have discussed the way in which the region's turnpike system developed and how it compared with the former major road system. However, what were the motives for turnpiking? Were all turnpikes established for the same one reason, as a reading of the preambles of most turnpike Acts would suggest - i.e. that the road or roads proposed to be placed under their jurisdiction were badly out of

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[1] C. Cochrane, op. cit., 160

repair? The ensuing discussion aims to examine this important question.

The first of Southern Hampshire's roads to be turnpiked was that from Portsmouth to Sheet Bridge, in 1710, and the events leading up to this were considered in the previous chapter.[1] The Act specifically stated that the road had fallen into disrepair and that it was beyond the ability of the parishes to maintain it in a proper condition. This fact is borne out by evidence in the Quarter Sessions records, and notably in respect of the portion of road within the vicinity of Butser.[2] In common with many of the trusts set up in other parts of the country during this early development period, the state of the road constituted the prima facie reason for turnpiking; to all intents and purposes, turnpiking was a necessity if the road was to be kept open.

During the period of intensive turnpike activity of the 1750s and 1760s, however, a rather different primary motive emerges. In common with the Portsmouth-Sheet Bridge turnpike Act, the majority of the Acts of this period cite the bad condition of the roads as the reason for turnpiking, but there are signs that this was not universally the case. For example, the Quarter Sessions Order Books for the period from Michaelmas 1749 to Midsummer 1758 contain only two instances of highway rates being levied on parishes in the Southern Hampshire area.[3] If <u>all</u> the many roads that were turnpiked in the 1750s and early 1760s had been in a bad state of repair, as their respective Acts indicate, one would have expected rather greater numbers of highway rates to have been levied at the time, even given the problems associated with the operation of this particular maintenance mechanism. The fact that this was not the case suggests that the state of roads was not necessarily the prime motive for turnpiking. Instead, the most significant motive was probably one of status. In Britain, the period from 1751 to 1772 has often been described as the years of 'Turnpike Mania', by virtue of the fact that more trusts were established in this period than in

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[1] See chapter five, p. 90

[2] See chapter five, p. 92

[3] <u>Hants. R.O.</u>, Q016, 128, 132

either the preceding 40 or succeeding 66 years.[1] A variety of factors underlay this phenomenal expansion - an increasing rate of population growth, agricultural and industrial advance, among them, but considerably more important was the way the turnpike suddenly became a symbol of progress or improvement. Like the railway in the Victorian Age, it assumed the role of something of a status symbol. Local merchants and farmers realised the benefits that could result from the turnpiking of a particular stretch of main road in their area and thus they often did their utmost to obtain the necessary statutory authority. The result was the development of a kind of 'snowball' effect, and this seems to have been particularly true of Southern Hampshire in these years. Indeed, in a number of cases, the situation got out of hand completely and Acts were obtained for roads which under normal conditions would not have been turnpiked at all, at least not at this point in time. The prime example of this is the Act obtained in 1758 for turnpiking the road from Bishop's Waltham to Odiham via Stephen's Castle Down, Tichborne and Alresford.[2] It is extremely hard to understand why an Act was obtained to turnpike this road, or more correctly group of roads, for none of them were recognised by Ogilby, nor were they shown on any of the county maps of the pre-turnpike period. It is not surprising, therefore, to find that this Act was never implemented, for no renewal Acts were granted and documentary evidence about the trust is entirely absent. A rather different example is provided by the Andover-Chilton Pond trust, established in 1766. As pointed out earlier, all the Acts relating to this trust also include the road from Andover to Hursley, but nothing ever seems to have been done to this stretch of road, and it is unlikely that the trustees ever considered it to be under their jurisdiction.[3] As with the road from Bishop's Waltham to Alresford and Odiham, there was little justification for making the Andover-Hursley road a turnpike, and it is probable that under normal conditions, it

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[1] W. Albert, The Turnpike Road System in England, 1663-1840, (Cambridge, 1972), 49

[2] 31 Geo. II c. 74 - The passing of this Act explains why an Act was passed in the same year covering the road from Winchester to Stephen's Castle Down, instead of from Winchester right to the town of Bishop's Waltham, as would have been expected.

[3] See Hampshire Chronicle, 26/2/1827 and B.P.P., 1852, (1521), xliv, 263

would never have been considered. A rather different example again is provided by the Winchester-Stephen's Castle Down road, which was turnpiked along with the roads from Winchester to Southampton and from Winchester to Stockbridge in 1758. On this occasion, the trust did in fact maintain the road, though apparently not all of it, for in 1782 a £90 fine was imposed upon the trustees by the local Quarter Sessions for having neglected to repair the section over Stephen's Castle Down.[1] While there was obviously some justification for turnpiking this particular section of road, in that it featured in several of the county maps of the second quarter of the eighteenth century, this was perhaps not quite the right time to do so, and under normal circumstances, turnpiking would probably have come rather later. Of course, some of the more doubtful schemes put forward during the 'mania' period - the Rumsdean Bottom to Petersfield scheme of 1758, for instance[2] - never got through Parliament, but the fact that some of them did succeed affords a useful indication of the determination of their promoters.

With the passing of the 'mania' period, the principal motive for turnpiking changed again. As was demonstrated earlier, by 1772 a considerable number of Southern Hampshire's roads had been placed under the care of turnpike trusts, and further developments could involve little more than infilling. Not surprisingly, therefore, quite a number of the turnpikes established in the post-1772 period were motivated with this specific purpose in mind. The Alton-Odiham, Basingstoke-Alton/Preston Candover, Titchfield-Cosham, Winchester-Petersfield, and Lyndhurst-Christchurch trusts could be considered to fall within this general category. This does not mean that the state of roads or the status motive ceased to be of importance, just that they were no longer as significant as in previous periods. Another important reason for

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[1] At the hearing, in October 1782, it was stated that the trustees had not done any repairs to the road - i.e. the section across Stephen's Castle Down - since the Act of 1758, and that 'for too long a time (it) had been the complaint and dread of almost every person who has travelled over it in the winter season, or by night' - Hampshire Chronicle, 14/10/1782

[2] Commons Journals, XXVIII, 162, 291 - This road was eventually turnpiked in 1772, as part of the Petersfield-Ropley turnpike, which was itself annexed to the Portsmouth-Sheet Bridge trust.

turnpiking during this later development phase was the desire to open up a shorter or easier alternative route between two places, sometimes involving the construction of almost completely new roads. The London and Southampton turnpike, for example, was established with this aim in view, and similar motives lay behind the setting up of the St. Cross-Park Gate, Farnham-Petersfield, Cranbourne Chase and New Forest, and Bishop's Waltham and Fisher's Pond trusts. Once again, other motives were still of importance, but some - the state of the roads, for instance - had clearly become insignificant.

d) A graph-theoretic analysis

Until recently, one of the principal criticisms of the English turnpike system was that it developed in a piece-meal and half-hearted fashion, exhibiting little spatial or temporal continuity. The Webbs, in particular, have stated that:

> 'If, during the eighteenth century, anyone had taken the trouble to make a turnpike map of England, this would have shown, not a system of radiating arteries of communication, but scattered cases of turnpike administration, unconnected with each other; appearing at first as mere dots on the map, then gradually increasing in number and size so as to form continuous lines; and only by the end of the century becoming, as John Holt somewhat optimistically declared in 1794, "so multiplied and extended as to form almost an universal plan of communication through the Kingdom"'.[1]

The researches of Albert and Pawson, however, have shown that much of this view is misconceived.[2] If the Webbs had bothered to construct a turnpike map of England in the eighteenth century, they would have discovered that by 1750, many of the London roads were almost completely turnpiked, and that during the 1750s and 1760s there was a phenomenal extension of trust development throughout the country, so that John Holt's remark of 1794 was probably not optimistic at all. Furthermore, Albert considers that the Webbs' claim that turnpike development was

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[1] S. & B. Webb, The Story of the King's Highway, (London, 1913), 125

[2] W. Albert, op. cit.; E.J. Pawson, op. cit.

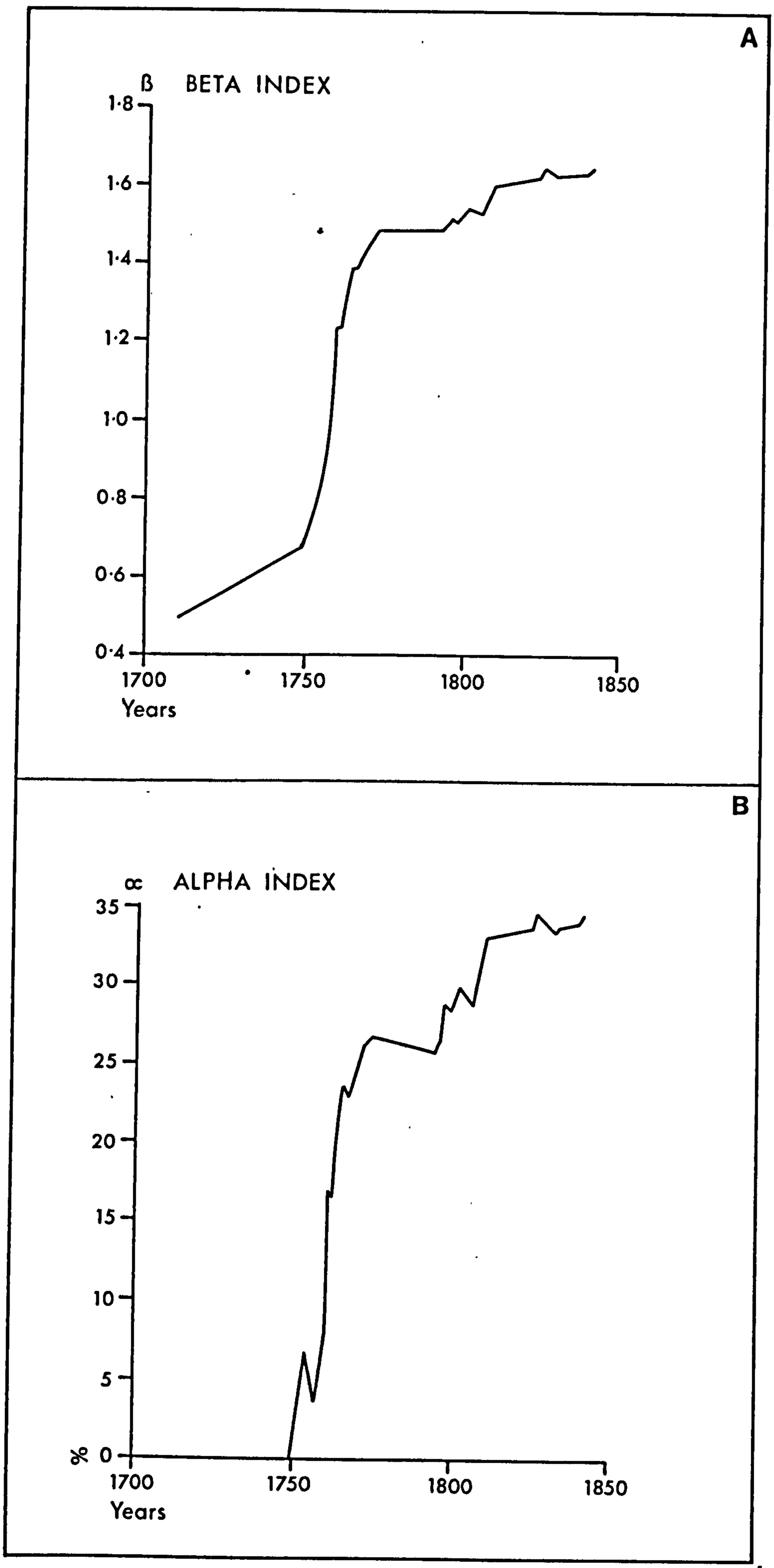
A
ß BETA INDEX
1·8
1·6
1·4
1·2
1·0
0·8
0·6
0·4
1700
1750
1800
1850
Years
B
α ALPHA INDEX
35
30
25
20
15
10
5
% 0
1700
1750
1800
1850
Years

FIGURE 6.7

'scattered' and 'unconnected' is misleading. He points out that whilst in most cases trusts were not set up consecutively on contiguous sections of road, there was nevertheless a coherent pattern to trust development, and this is supported by the fact that in the 1720s, 47 per cent of the new trusts in England were linked to established ones, in the 1730s 75 per cent, and in the 1740s this figure increased to 82.5 per cent.[1] Clearly, therefore, the work of Albert and Pawson has overturned a view that has prevailed for the best part of half a century. However, it must be added that the methods by which this has been achieved are not nearly as effective as they might have been. Pawson, for example, makes little attempt to trace the spatial pattern of turnpiking other than by means of a series of maps showing the extent of the system at three different dates, while the method by which Albert examines whether turnpike development was 'scattered' and 'unconnected' is highly generalised. A much more satisfactory and more effective approach would have been to draw upon the resources of techniques of network analysis, graph theory, in particular. The value of graph theory here, or more especially the value of the graph-theoretic indices as developed by Garrison and Marble, and Kansky,[2] in that as well as providing an exceptionally useful objective method for describing network change over time, they also act as indicators of network connectivity. In other words, if, as the Webbs have stated, turnpike development was 'scattered' and 'unconnected', the values of the beta and alpha indices should have remained below 1.0 and ten per cent respectively for the greater part of the eighteenth century. The earlier the indices rose above these figures, the more doubtful the Webbs' assertions would become. It is not intended in the present study to examine the development of the national turnpike system along these lines. The intention is rather to demonstrate the value of this approach in the context of Southern Hampshire, though in so doing, making its wider applicability clear.

The results of a graph-theoretic analysis of the region's turnpike system are shown in figure 6.7, which includes graphs for the beta and alpha indices. The value of the beta index (fig. 6.7A) rose from 0.5 in 1710 to 1.65 in 1841, with the most dramatic increase occurring between

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[1] W. Albert, op. cit., 56

[2] For explanatory information, see chapter three, p. 43-5

about 1750 and 1770. Clearly, the connectivity of the region's turnpike system increased both remarkably and continuously in the 'mania' period, offering conclusive evidence that development was far from 'scattered' and 'unconnected', even at this relatively early stage. The attainment of a connectivity level of 1.5 by the early 1770s (indicative of a fairly well-developed transport system) reinforces this point further. Similarly, the attainment of a connectivity level of 1.65 by 1841 provides strong evidence of the effectiveness of the turnpikes in linking the region's towns. Changes in the value of the alpha index (fig. 6.7B) reflect the same kind of pattern. Up to 1752, the index remained at zero, but thereafter, it increased fairly rapidly and by 1841 had reached close on 35 per cent - again a connectivity level indicative of a fairly well-developed transport system. As with the beta index, the most dramatic rise was recorded in the 1750s and 1760s, and by the early 1770s, it stood at approximately 27 per cent. Unlike the beta index, though, further significant increases were recorded after the 1770s. Admittedly, there was quite a perceptible rise in the value of the beta index in the later development stages, but a comparison of the graphs clearly reveals that the rise in the alpha index was greater. Of the two indices, the alpha index is the more sophisticated connectivity measure, so that while the conclusions drawn about network connectivity in the 1770s still hold true, the rise in connectivity in the succeeding period to 1841 was greater than the beta index indicates.

The conclusion to be drawn from this graph-theoretic analysis is already fairly clear. Turnpike development in Southern Hampshire during the eighteenth century was far from 'scattered' and 'unconnected'. Instead, the majority of turnpikes were set up contiguously, in a logical and rational way, and the region possessed a well-integrated system by 1770. The addition of further links over the ensuing 70 or so years ensured that by 1841 the system could justly be described as well-developed.

e) A hypothetical sequence

While the application of graph theory provides valuable insight into the nature of regional turnpike development, still more can be learnt by the introduction of a hypothetical sequence or model. By comparing or testing actual turnpike development with a hypothetical

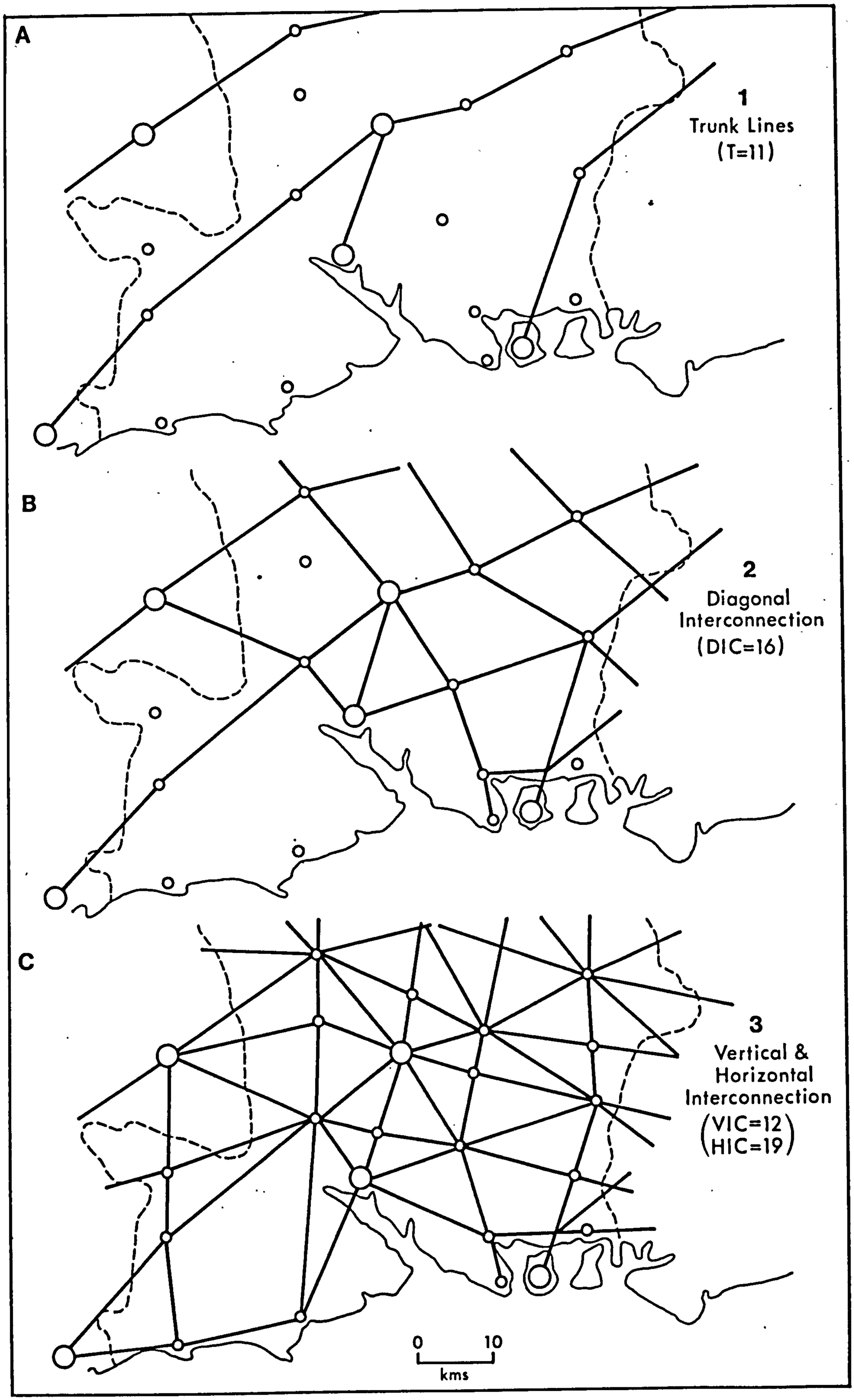
A
1
Trunk Lines
(T=11)
B
2
Diagonal
Interconnection
(DIC=16)
C
3
Vertical &
Horizontal
Interconnection
(VIC=12
HIC=19)
0
10
kms

FIGURE 6.8

sequence of development, attention is focused not just on the pattern of growth but also on the processes involved. In the graph-theoretic analysis, the network formed the main object of interest, but the introduction of a hypothetical sequence takes one beyond the study of the network per se to an examination of the factors which influenced its formation. The result is a useful adjunct to more intuitive forms of explanation.

Figure 6.8 shows a three-stage hypothetical sequence of turnpike development for Southern Hampshire. The general model upon which this sequence is based and the details of its derivation were discussed in detail in an earlier chapter.[1] The first stage of the sequence (fig. 6.8A) envisages the turnpiking of pre-existing trunk lines - i.e. the High Roads to London. These were the roads from London to Portsmouth, London to Southampton, London to Poole, and London to the West of England.[2] The second stage of the sequence (fig. 6.8B) envisages the establishment of turnpikes forming diagonal links between adjacent inland centres, and between adjacent inland and coastal centres. However, owing to the deflective effect of London on the orientation of the region's trunk lines, some of these diagonal links would have been established in the first stage of the sequence. Thus, this second phase essentially envisages the completion of a process already under way. The Portsmouth/Gosport-Bishop's Waltham-Winchester and Southampton-Romsey-Salisbury routes provide examples of links that would be expected at this period in the model's evolution.[3] The third and final stage of the sequence (fig. 6.8C) envisages the setting up of turnpikes forming vertical and horizontal links between adjacent inland centres, adjacent coastal centres, and between adjacent inland and coastal centres. As with the diagonal interconnection stage, some of these links, the vertical ones especially, form parts of trunk lines and would thus have been

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[1] See chapter three, p. 47-8

[2] It might be considered that the London-Weymouth road should also be included, but as there is some dispute over the importance and even existence of this particular road (see this chapter, p. 117), it was thought better to omit it altogether.

[3] It might be considered that the inclusion of a link to Gosport is unjustified, but in many senses, the two towns of Portsmouth and Gosport could be thought of as one (see chapter four, p.65), so that the link is fairly logical.

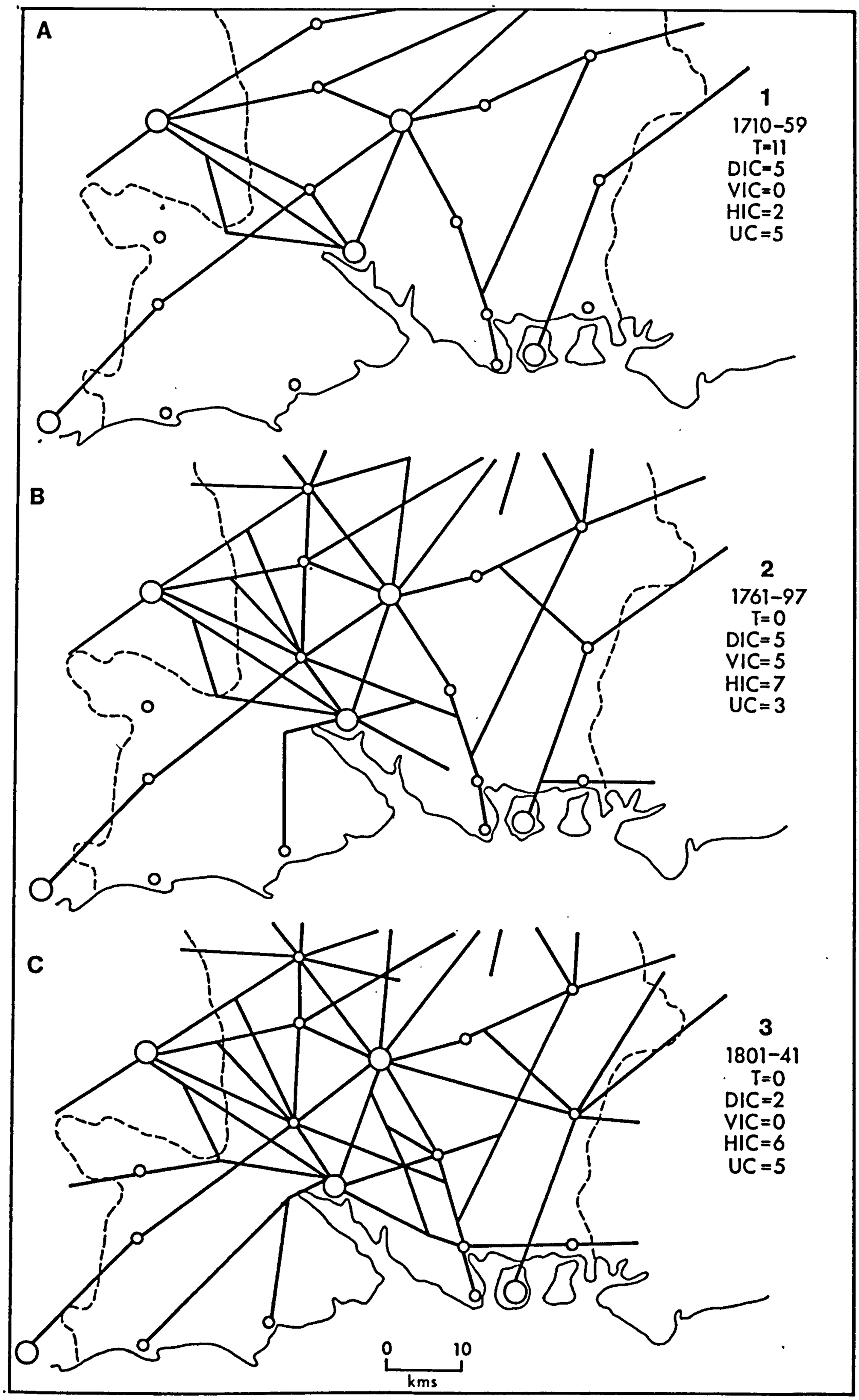
A
1
1710–59
T=11
DIC=5
VIC=0
HIC=2
UC=5
B
2
1761–97
T=0
DIC=5
VIC=5
HIC=7
UC=3
C
3
1801–41
T=0
DIC=2
VIC=0
HIC=6
UC=5
0
10
kms

FIGURE 6.9

established in the first stage. This final phase, therefore, mainly involves the completion of a process already in operation. Examples of routes that would be expected to have been turnpiked at this period in time are those from Romsey to Stockbridge and Andover, from Southampton to Fareham, Havant and Chichester, and from Christchurch to Ringwood, Fordingbridge and Salisbury. The last of these routes does not figure in the general model. It's inclusion here is explained by the fact that the next major coastal centre westward from Southampton is not Christchurch (as the distance between the other major coastal centres would have indicated) but Poole. Under the general model, this would have meant that no link would be envisaged between Christchurch and Salisbury. In reality, of course, this would be most unlikely, since the Christchurch-Salisbury route followed the valley of the Avon and turnpiking would have been essential for complete vertical and horizontal interconnection to be achieved.

The extent to which actual turnpike development in the region conformed to this three-stage hypothetical sequence can be seen by comparing figure 6.9 with figure 6.8. Figure 6.9 shows actual turnpike development in diagrammatic form, distinguishing three stages of growth: 1710-59, 1761-97, 1801-41.[1] Examining the degree of spatial conformity first, the hypothetical sequence ultimately envisaged the establishment of a total of 58 links in the region, and this closely compares with the 56 links ultimately established in reality. Of the 58 links envisaged in the hypothetical sequence, eleven formed parts of trunk lines (T), 16 were diagonal interconnectors (DIC), twelve were vertical interconnectors (VIC), and 19 were horizontal interconnectors (HIC). In comparison, of the 56 links established in reality, eleven constituted parts of trunk lines, twelve were diagonal interconnectors, five were vertical interconnectors, 15 were horizontal interconnectors, and the remaining 13 came in none of the categories identified in the hypothetical sequence and were therefore unclassified (UC). Thus, all of

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[1] This distinction has been made by dividing the number of separate trusts into three roughly equal categories. Thus, the period 1710-59 witnessed the setting up of ten trusts, the period 1761-97 the setting up of 13 trusts, and the period 1801-41, ten trusts.

the trunk lines envisaged in the hypothetical sequence were made in reality, as were 75 per cent of the diagonal interconnectors. This close degree of correlation between the abstract and the real reinforces the conclusion drawn earlier that by 1841 Southern Hampshire possessed a well-developed system of turnpike roads. Of the four missing diagonal interconnectors, the absence of those from Cosham towards Midhurst and from Petersfield towards Chichester is probably in part explained by the absence of an intermediate town between these two sets of places.

In contrast to the trunk and diagonal interconnecting links, only 40 per cent of the vertical interconnectors envisaged in the hypothetical sequence featured in reality. One of the missing links - that from Bishop's Waltham to Alresford - did in fact achieve turnpike status, as was seen earlier, but the relevant Act was never put into force.[1] Even so, this still means that only half of the vertical interconnectors envisaged featured in reality. Indeed, the absence of some - those from Christchurch to Ringwood, Ringwood to Fordingbridge, Fordingbridge to Salisbury, for example - is conspicuous. The explanation for this anomaly is by no means clear. The nature of the terrain might perhaps be cited as a significant factor - i.e. it is such that the parish repair system would have been found to be sufficient and turnpiking therefore rendered unnecessary. However, a number of the missing links traversed particularly difficult stretches of country, so that this explanation does not apply universally. Instead, a more probable explanation is that the anomaly is related to the distorting influence of London. This increases the importance of diagonal links at the expense of vertical ones.

In the realm of horizontal interconnection, almost 80 per cent of the links envisaged in the hypothetical sequence featured in actual development. Of those that were missing, several - like the one from Bishop's Waltham eastward into Sussex - were almost certainly absent because there were no intermediate towns. The unclassified links, those that were not envisaged in the hypothetical sequence at all, might perhaps be considered as redundant or unnecessary additions to the system. This was certainly true, for example, of the links from

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[1] See this chapter, p. 120

Romsey to Middle Wallop, Romsey to Lobcomb Corner, St. Cross to Park Gate, and Bishop's Waltham to Fisher's Pond. Others, however, like the two links from Southampton to Salisbury, and those from Winchester to Basingstoke, Fareham to Alton, and Andover to Andover Road station, were clearly neither redundant nor unnecessary. Their existence was, on the whole, a reflection of circumstances which would have been difficult to envisage in a hypothetical sequence. The Fareham-Alton link, for instance, arose largely in response to the growth of Gosport in the period, while the Andover-Andover Road station link arose because the town of Andover wished to obtain the maximum benefit from the availability of railway communication, and if it could not obtain its own railway, this was the next best thing.

Having examined the degree of spatial conformity between hypothetical and actual development, it is important to look at the way the two compared over time. In the hypothetical sequence, a three-stage process was envisaged: trunk lines - diagonal interconnectors - vertical/horizontal interconnectors (fig. 6.8). In reality, however, this three-stage process is evident but somewhat blurred (fig. 6.9). The first period, from 1710 to 1759, for example, witnessed the turnpiking of all four of the trunk lines (a total of eleven links), but it also saw the establishment of a further twelve links. Of these, five were diagonal interconnectors, two were horizontal interconnectors, and five were unclassified. The number of these additional links is indicative of the intensity of the 'mania'. The second period, from 1761 to 1797, corresponds with the diagonal interconnection stage in the hypothetical sequence, and showed a rather lesser degree of conformity than the first.[1] Five further diagonal interconnectors were added to the five already in existence, but the period also saw the addition of five vertical interconnectors and seven horizontal interconnectors. Whilst the total number of diagonal interconnectors (ten) still outnumbered the total numbers of vertical and horizontal interconnectors, the appearance of the latter was, theoretically, premature. Again, the numbers of additional or extra links established in the second period are perhaps indicative of the intensity of the 'mania'. The third period, from 1801 to 1841, corresponds with the vertical/horizontal

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[1] It should be noted that the decline in conformity is likely to be exaggerated somewhat, purely because of the cumulative effect anomalies in the first stage have on successive stages.

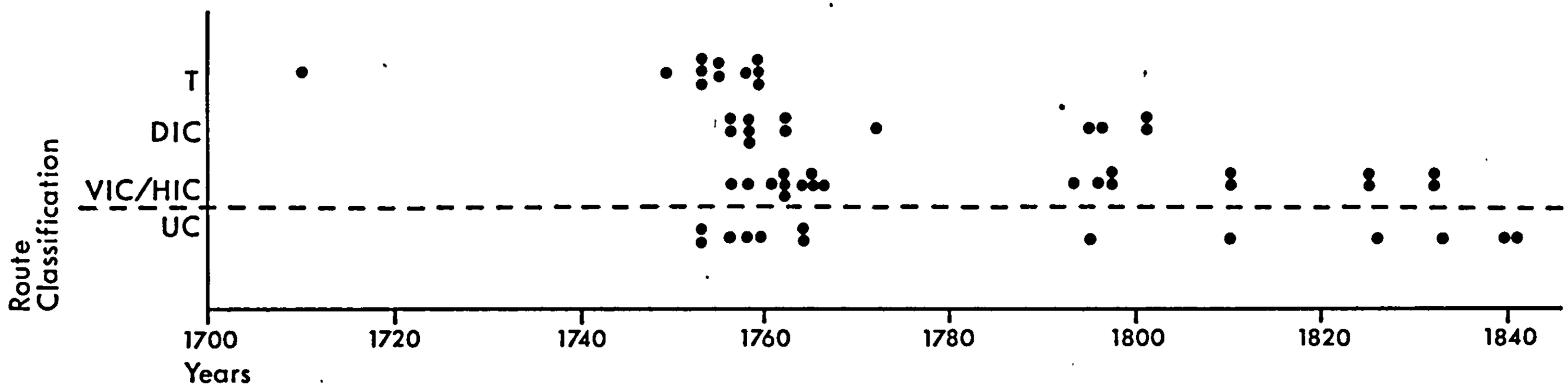
T
DIC
VIC/HIC
UC
Route Classification
1700
1720
1740
1760
1780
1800
1820
1840
Years

FIGURE 6.10

interconnection stage in the hypothetical sequence and an even lesser degree of conformity was exhibited here. No further vertical interconnectors were established, although an extra six horizontal interconnectors were added to the seven already in existence, and two more diagonal interconnectors also appeared. The almost complete absence of vertical interconnectors is curious. As mentioned previously, the distorting influence of London is probably significant, though it is difficult to see why vertical interconnection should cease altogether after 1800. Despite this somewhat glaring anomaly, however, horizontal interconnection is still the most prominent development form of this last period. Figure 6.10 provides a visual summary of the extent to which actual development followed the hypothetical pattern over time. Despite the considerable blurrings or anomalies, the basic elements of a three-stage process are evident. The trunk line stage is clearly placed in the early development period, while the vertical/horizontal interconnection stage continues through to the 1830s. This offers yet further confirmation of the logical and rational way in which regional turnpike development proceeded.

6.ii) The 'Turnpike Trusts' as mechanisms for road maintenance

While there can be no doubt that, by as early as the 1770s, Southern Hampshire possessed a comprehensive and well integrated system of turnpike roads, and while it is clear that the level of comprehensiveness and integration improved yet further over the succeeding six to seven decades, it does not necessarily follow that any benefit was gained by road-users. The utility of the turnpike roads as travel arteries was heavily conditioned by the effective functioning of the trusts set up to operate them: trusts may have had severe administrative weaknesses; toll income may have been adequate only to meet general running expenses; road repair activities may have been very limited in their nature and scope. The present section aims to tackle this highly important question by examining the effectiveness of the region's trusts as mechanisms for road maintenance.

a) The effectiveness of the trusts as administrative mechanisms

One of the outstanding weaknesses of the 'Statute' and 'Highway Rate' systems was that as administrative mechanisms they were seriously deficient. As discussed earlier, the responsibility for their operation lay mainly in the hands of the parish surveyors, and this brought all kinds of difficulties. The turnpike trust, although it embodied an entirely new principle of road maintenance - the taking of a toll from road-users, was primarily intended as a far more effective means of administering sections of the country's major roads, and in this respect it could be considered as replacing the 'Statute' and 'Highway Rate' systems. The care of a particular section of road was placed in the hands of a group of locally-appointed trustees who (supposedly) held regular meetings, and employed a clerk, a treasurer, and a surveyor (or surveyors) to assist in their activities. Potentially, therefore, the turnpike trust was an infinitely more effective administrative mechanism than either the 'Statute' or 'Highway Rate' systems, but this was not necessarily true in practice. The degree of independence that trusts possessed, particularly after the disappearance of the 'Justice' trust at the start of the eighteenth century, meant that there was much scope for defective or weak administration. Thus, the turnpike trust may have represented little improvement at all. Before examining the repairs and improvements that Southern Hampshire's turnpike trusts made to the roads placed under their jurisdiction, it is clearly important, therefore, to try to establish just how effective the region's trusts were as administrative mechanisms. The effectiveness of trust administration, of course, had a direct bearing upon the nature and success of any repairs or improvements that were undertaken.

Examination of trusts' administrative effectiveness, however, is beset with difficulties. For example, it is exceedingly hard to assess in any quantitative manner how conscientious or how effective the various trust officials were in carrying out their duties. Accordingly, an indirect approach must be adopted, and one simple and useful way of examining a trust's administrative effectiveness, at least where minutes have survived, is provided by counting the annual numbers of meetings that were held. Turnpike trust meetings normally fell into two categories: quoret and non-quoret. The number of trustees that were required to be present at a meeting before any business could be

(A) - Quoret meetings (means)

	1760-79	1780-99	1800-19	1820-39
Stockbridge	-	1.2	-	-
Southampton North etc.	5.65	7.3	10.65	13.95
Southampton South	8.6	5.9	14.3	11.1
Winchester-Romsey	5.05	-	-	-
Ringwood-Wimborne	3.85	1.6	2.7	2.9
London-Southampton			7.6	5.45
Titchfield-Cosham			-	5.25

(B) - Non-quoret meetings (means)

	1760-79	1780-99	1800-19	1820-39
Stockbridge	-	5.55	-	-
Southampton North etc.	3.05	1.3	0.8	1.5
Southampton South	8.35	5.75	3.8	2.5
Winchester-Romsey	4.55	-	-	-
Ringwood-Wimborne	4.95	8.1	9.8	4.4
London-Southampton			4.45	3.15
Titchfield-Cosham			-	0.3

TABLE 6.1

transacted was nearly always given in the relevant turnpike Acts.[1] If the required number were not present, the meeting had to be postponed until a later date. By counting the annual numbers of quoret and non-quoret meetings, by examining how these numbers varied over time, and then comparing the results for different trusts, it is possible to gain valuable insight into trusts' administrative effectiveness, although it should be stressed that in no way can this provide the full story.

Complete and partially complete minutes survive for ten Southern Hampshire trusts in the period,[2] and with one exception,[3] all have been used in the analysis. It might be argued that the evidence of nine out of a total of 36 trusts is insufficient to be conclusive, but this drawback is to some degree offset by the fact that the nine trusts in question cover a fairly wide spectrum, both in terms of size and date of inception. Thus, such an analysis is clearly rather more valuable than the relatively small sample size would suggest.

The results are summarised in table 6.1, which shows the mean annual number of quoret meetings (6.1A) and the mean annual number of non-quoret meetings (6.1B) for successive 20-year periods between 1760 and 1840. Examining the mean annual number of quoret meetings first, it is clear that the Southampton North (henceforward taken as including the Winchester-Stockbridge and Winchester-Stephen's Castle Down trusts) and the Southampton South trusts held the best records, with values in excess of ten recorded in the early nineteenth century. The worst record was

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[1] Albert gives the average number usually necessary for a quorum as from five to seven - W. Albert, op. cit., 61, and this was generally the case in Southern Hampshire. However, under the second General Turnpike Act of 1822 (3 Geo. IV c. 126), it was possible for three trustees to make a quorum, and this provision was fairly widely used by the region's trusts. The aim of the change was undoubtedly to help overcome the problem of poor attendances, which frequently caused long delays in making business transactions

[2] Sarum-Eling, Stockbridge, Southampton North, Southampton South, Winchester-Stockbridge, Winchester-Stephen's Castle Down, Winchester-Romsey, Ringwood-Wimborne, London-Southampton, and Titchfield-Cosham. The Southampton North, Winchester-Stockbridge, and Winchester-Stephen's Castle Down trusts are in fact covered by the same series of minutes.

[3] The Sarum-Eling trust. This trust was omitted for the simple practical reason that the minutes are not held by any of the Hampshire record offices. Instead, they are held by the Wiltshire Record Office.

held by the Stockbridge and Ringwood-Wimborne trusts, with values never rising above four. The means for the remaining trusts generally fell between about five and seven, and this was very close to the number most frequently prescribed in the local Acts. In the realm of the mean annual number of non-quoret meetings, it is evident that the best records were held by the Southampton North and Titchfield-Cosham trusts, with values never exceeding three. The worst record was held by the Ringwood-Wimborne trust, where the mean reached almost ten in the 1800s and 1810s. The record of the Southampton South trust was not very much better, with a mean for the 1760s and 1770s of 8.35.

If the evidence of the mean annual number of quoret and non-quoret meetings for these nine trusts is combined, it is apparent that the Southampton North trust was, on the basis of this particular criterion, the most effectively administered. In the 1820s and 1830s, at the height of the 'Turnpike Age', the trust was holding an average of 15.45 meetings a year and the average number that were non-quoret was 1.5. One obvious explanation for this favourable record is that the trust was a fairly large one, covering some 36 kms of road, and in fact made up of three quite separate trusts.[1] This probably meant that there was a rather greater volume of business to transact than several of the region's other trusts, and also there must have been a greater diversity of interests. In addition, of course, the Southampton-Winchester road was part of a major trunk route and the toll income from it would have been considerable, which would in turn have been reflected in repair activities. However, these factors alone do not explain the trust's favourable record, and much credit must still go to good administration, or perhaps more correctly, the diligence of a particular group of trustees. In contrast, the most ineffectively administered trust was undoubtedly the Ringwood-Wimborne. During the greater part of the period in question, it averaged less than three quoret meetings per year, while in the 1780s/1790s and 1800s/1810s, the average number of non-quoret meetings per year was 8.1 and 9.8 respectively. There is no obvious explanation for this state of affairs. The road for which the trust was responsible was a reasonably busy one, and covered some 20 kms, and it seems likely that continuing disinterest amongst the majority of trustees was the underlying cause. Of the remaining trusts, it would be fair to say that with the possible

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[1] See this chapter, p. 110

PAGE

NUMBERING

AS ORIGINAL

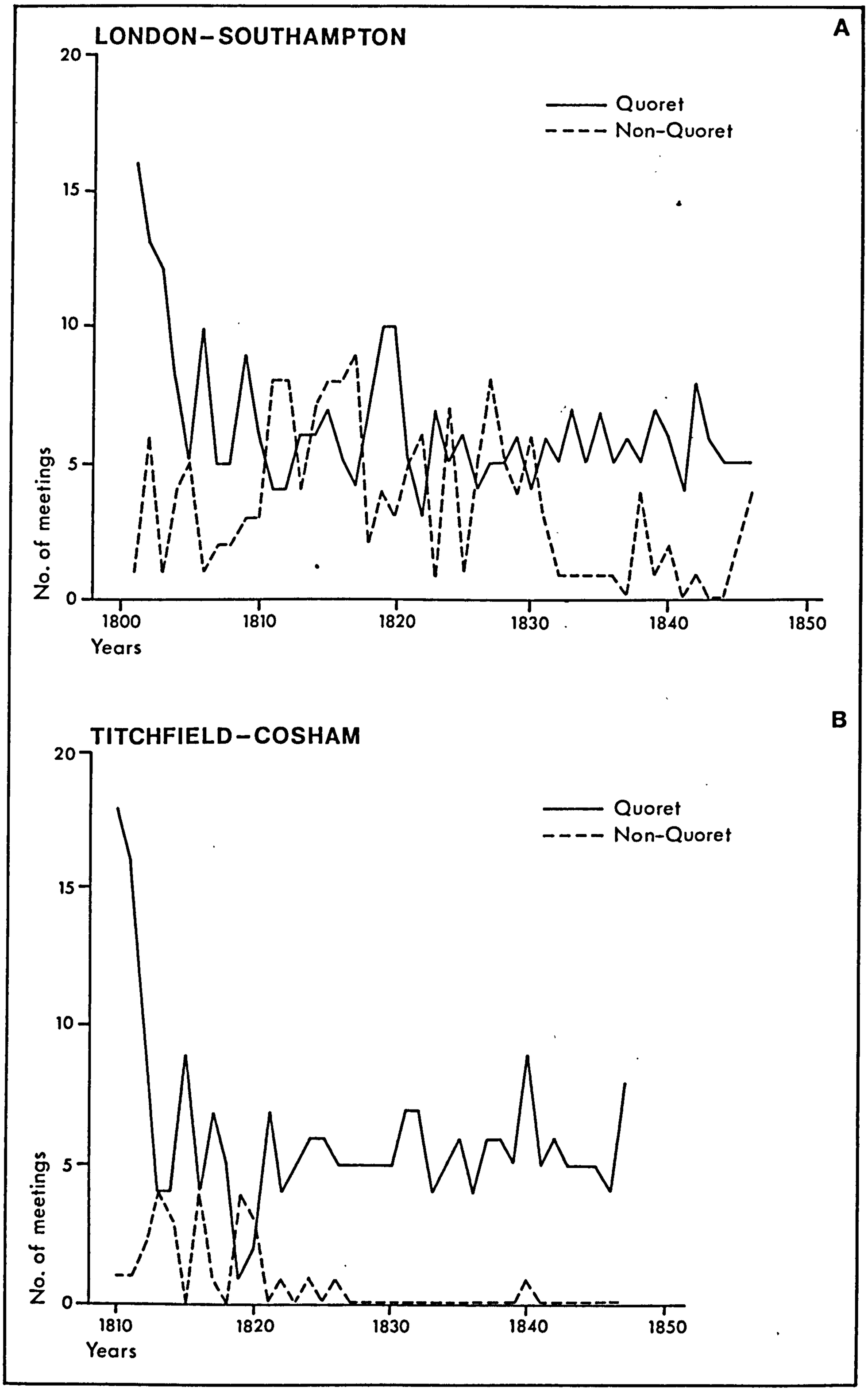
LONDON–SOUTHAMPTON
A
Quoret
Non-Quoret
No. of meetings
20
15
10
5
0
1800
1810
1820
1830
1840
1850
Years
TITCHFIELD–COSHAM
B
Quoret
Non-Quoret
No. of meetings
20
15
10
5
0
1810
1820
1830
1840
1850
Years

FIGURE 6.16

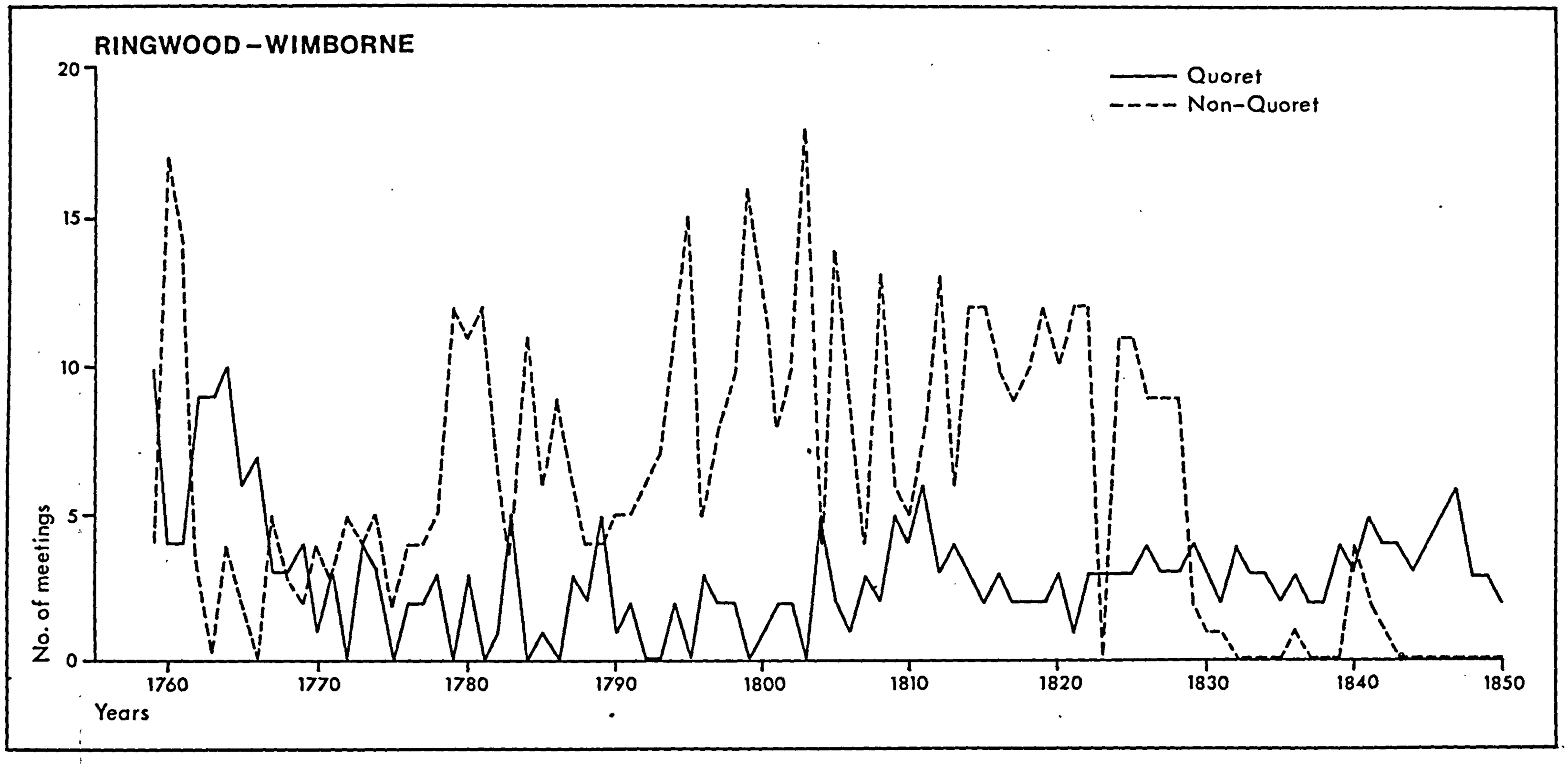
RINGWOOD – WIMBORNE
Quoret
Non-Quoret
No. of meetings
0
5
10
15
20
1760
1770
1780
1790
1800
1810
1820
1830
1840
1850
Years

FIGURE 6.15

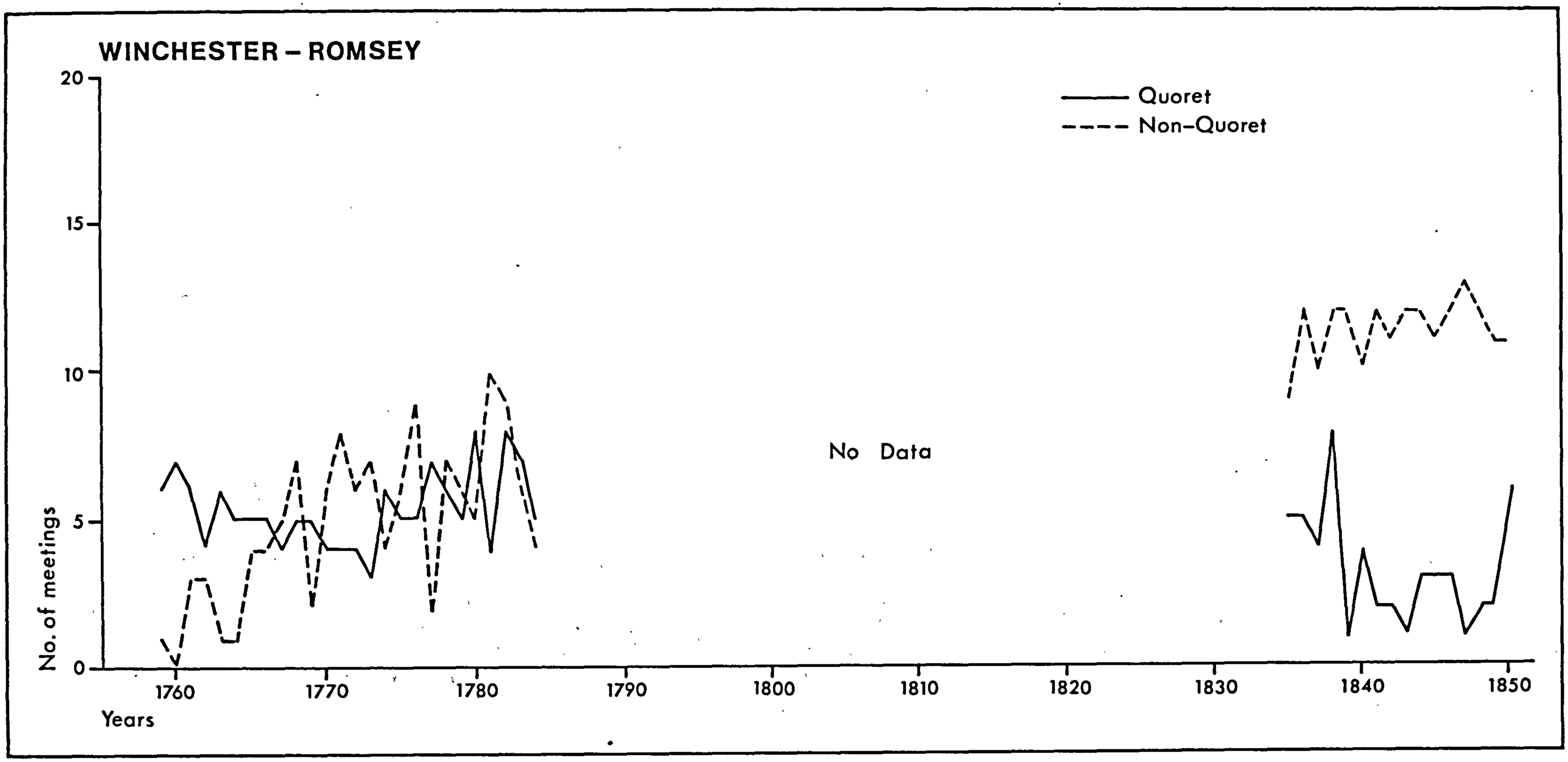
WINCHESTER – ROMSEY
Quoret
Non-Quoret
No Data
No. of meetings
20
15
10
5
0
1760
1770
1780
1790
1800
1810
1820
1830
1840
1850
Years

FIGURE 6.14

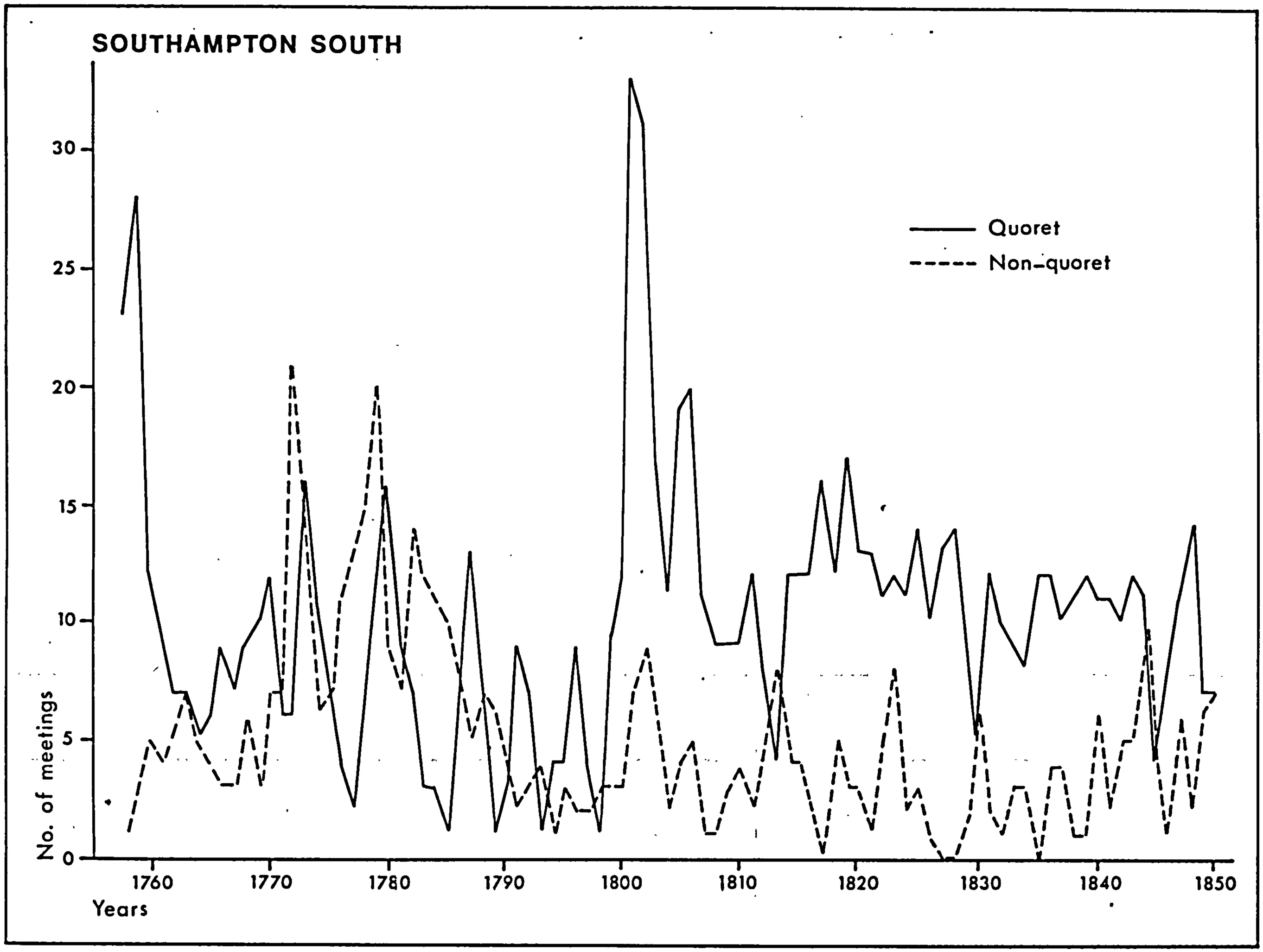
SOUTHAMPTON SOUTH
Quoret
Non-quoret
No. of meetings
0
5
10
15
20
25
30
1760
1770
1780
1790
1800
1810
1820
1830
1840
1850
Years

FIGURE 6.13

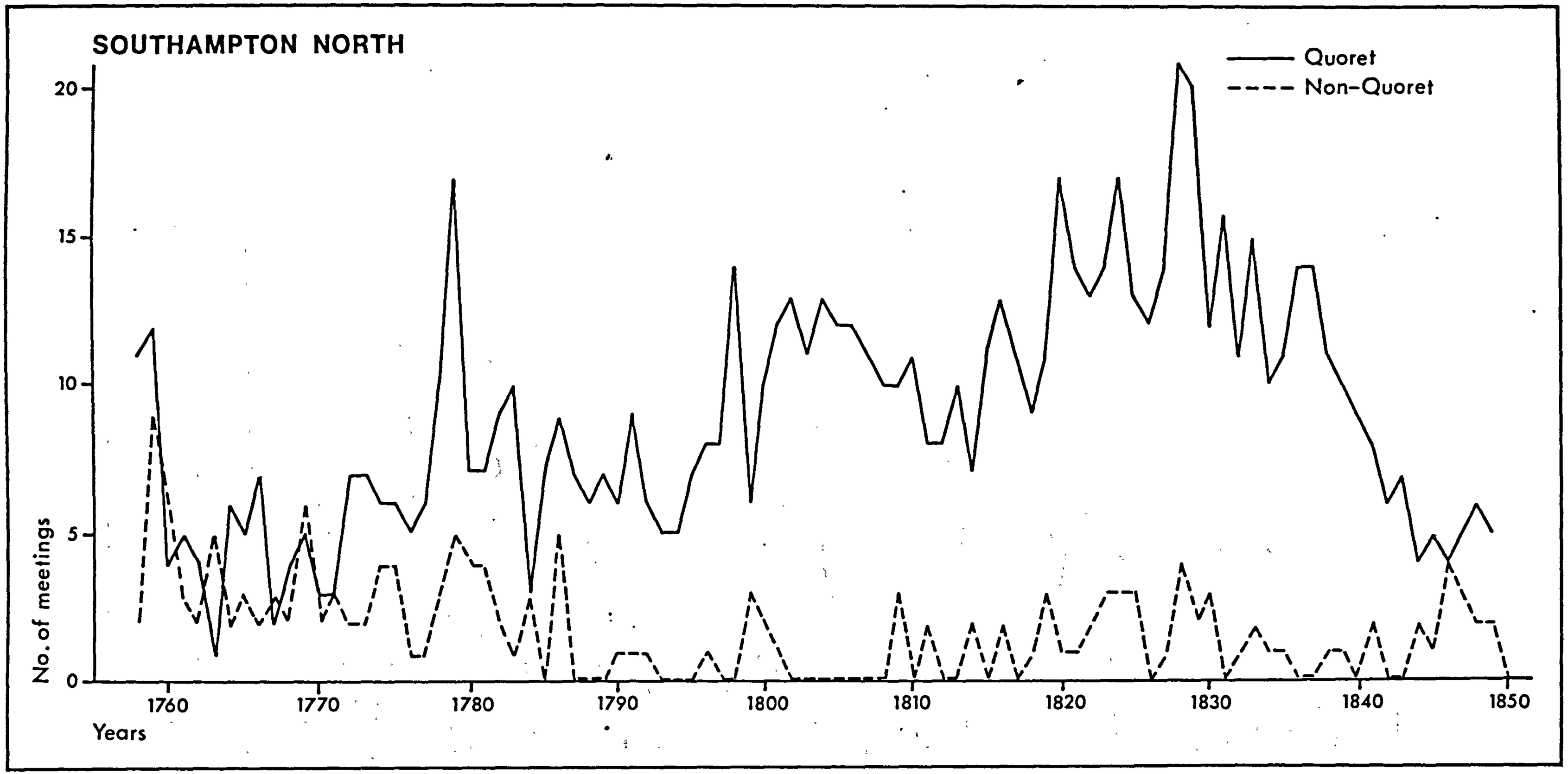
SOUTHAMPTON NORTH
Quoret
Non-Quoret
No. of meetings
0
5
10
15
20
1760
1770
1780
1790
1800
1810
1820
1830
1840
1850
Years

FIGURE 6.12

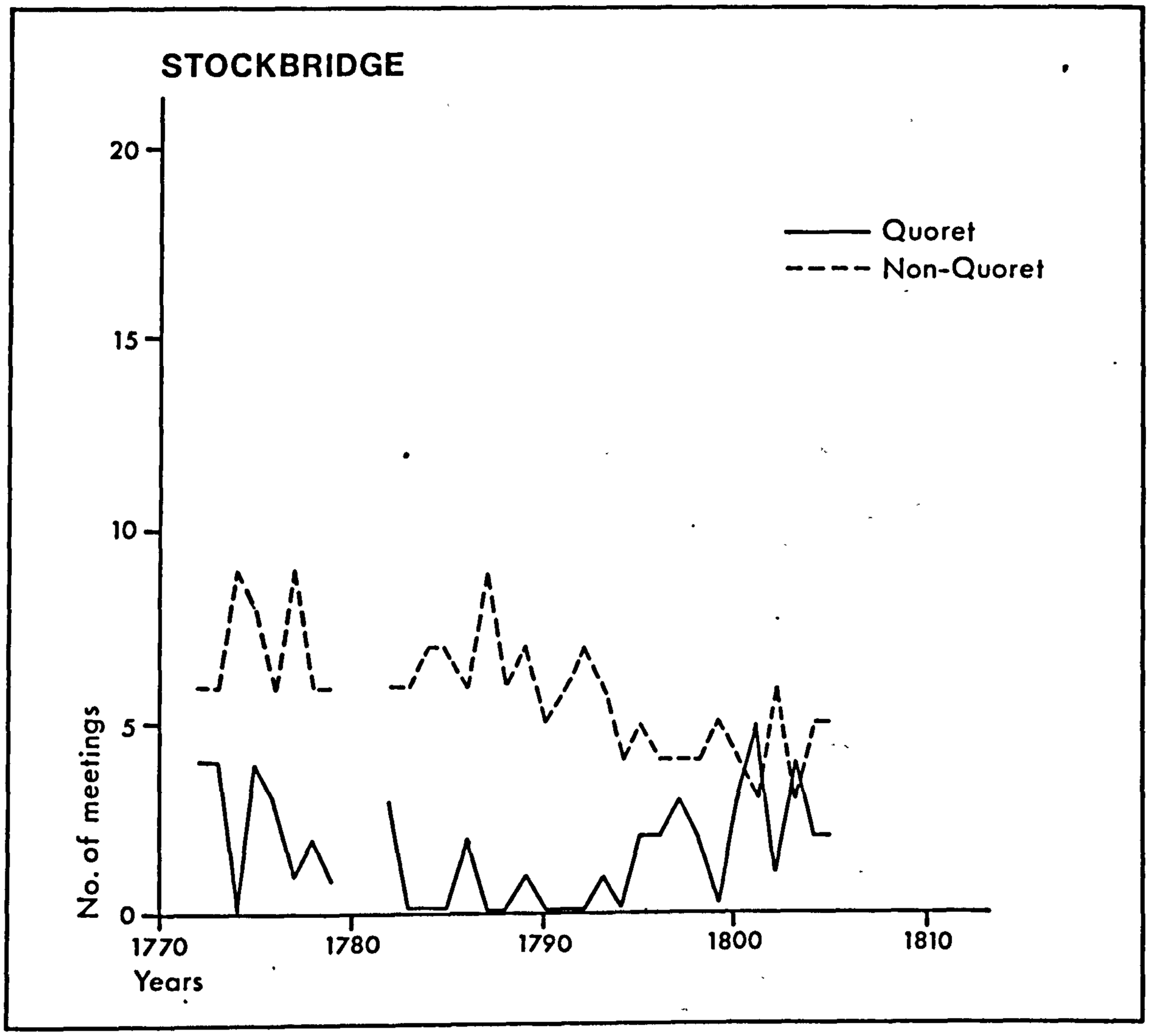
STOCKBRIDGE
Quoret
Non-Quoret
No. of meetings
0
5
10
15
20
1770
1780
1790
1800
1810
Years

FIGURE 6.11

exception of the Stockbridge trust, all came within the effectively administered category.[1] Admittedly, the Southampton South trust had a rather poor record in the sphere of non-quoret meetings, but its record for quoret meetings was good, sufficiently good to allow it to be classed as effectively administered. Whether these results are representative of the position for Southern Hampshire trusts as a whole is open to dispute, but as noted previously, the nine trusts are not an unreasonable sample.

The discussion so far has concentrated on the summary results of the examination of the annual numbers of quoret and non-quoret meetings. Whilst some form of summary is obviously fundamental here, illuminating information is nevertheless lost in the process. Thus, it is clearly useful to examine the results in more detail. Figures 6.11 - 6.16 show graphs of the annual numbers of quoret and non-quoret meetings for the trusts concerned, and close comparison of the pictures they present reveals a number of common trends. Firstly, as might be expected, the annual number of quoret meetings was usually high in the first few years of a trust's life[2] (figs. 6.12, 6.13, 6.15 and 6.16), but after these first years had passed, numbers fell dramatically. The only exception to this general rule was the Winchester-Romsey trust, though for what reason is not clear. Secondly, for obvious reasons, there was often an upturn in the annual number of quoret meetings immediately prior to applications for amending or renewal Acts. This is especially true of the Southampton North trust (fig. 6.12) and the Southampton South trust (fig. 6.13), where the years of the amending/renewal Acts were 1780, 1801, 1802 and 1823,[3] and also of the London and Southampton trust (fig. 6.16A), where the year of the one amending/renewal Act was 1823.[4] Several of the trusts examined, though - the Stockbridge, the

---

[1] The dividing line between 'effectively' and 'ineffectively' administered might perhaps be considered to fall where the means for quoret and non-quoret meetings are roughly equivalent, although there are obvious dangers in interpreting this too rigidly.

[2] Because of the large numbers of policy decisions that had to be made - the setting up of tollgates, the building of toll houses, the appointment of officers, for example.

[3] 20 Geo. III c. 90; 41 Geo. III c. xcv; 42 Geo. III c. lii; 4 Geo. IV c. xv

[4] 4 Geo. IV c. xlvi

Winchester-Romsey and the Ringwood-Wimborne, in particular - exhibit no traces of such a trend. However, as two of these trusts were recognised earlier as having been ineffectively administered, this is not at all surprising, and represents tentative confirmation of the conclusions drawn from the summary results.

b) Trust road repair expenditure

The primary objective in the establishment of turnpike trusts was the maintenance and improvement of the roads placed under their care. Examination of the level of trust road repair expenditure, how it varied over space and how it changed through time, thus forms an integral part of establishing the extent to which this objective was achieved. Finance for trust road repair came from two sources: toll income was first and foremost, and loans obtained on the security of the tolls the second. It should not be imagined, however, that all toll income and all money from loans went towards road repairs. A trust had numerous running expenses to meet - officers' salaries, the cost of erecting and maintaining toll houses and gates, Parliamentary expenses,[1] to name but a few. In addition, of course, there was interest to pay on the loans - normally at the rate of four or five per cent a year. Thus, only a certain proportion of a trust's income went towards road repairs, the exact size of the proportion varying from one trust to another. The governing factors here were the effectiveness with which a trust was administered, and related to this, a trust's general financial condition. Clearly, therefore, the establishment of the proportion of trust income expended on road repairs should cast useful light on the effectiveness with which trusts were administered, thereby supplementing the evidence presented in the preceding section. In consequence, the aim of the ensuing discussion is two-fold: firstly, to examine the level of trust road repair expenditure in the region, how it varied over space and how it changed through time; secondly, to establish the proportion of trusts' income that went towards road repairs.

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[1] Parliamentary expenses were considerable, often involving sums of money of the order of several hundred pounds for each Act obtained. For example, the cost of obtaining the renewal Acts for the Southampton, Winchester, Stockbridge and Stephen's Castle Down turnpike was £440/5/4½d in 1780, and £461/4/1d in 1801 - Hants. R.O., 4M30/1-3

	Means (£s)							
	1770s	1780s	1790s	1800s	1810s	1820s	1830s	1840s
Portsmouth-Sheet Bridge	-	-	-	-	-	-	56.5	31.9
Kingston-Sheet Br. Lower	-	-	-	-	-	-	48.2	31.0
Sarum-Eling	-	-	-	-	-	-	17.1	16.9
Winchester Upper	-	-	-	-	-	-	23.2	16.6
Winchester Lower	-	-	-	-	-	-	12.4	11.7
Andover	-	-	-	-	-	-	31.2	14.3
Stockbridge	-	-	-	8.6	-	-	13.3	4.3
Whiteparish-So'ton	-	-	-	-	-	-	11.4	10.0
Gosport	4.1	12.9	9.3	-	-	21.0	11.6	11.6
Southampton North	7.7	11.4	19.5	28.1	38.1	68.3	30.2	21.9
Southampton South	5.2	4.0	6.7	27.2	36.0	44.8	33.4	29.4
Winchester-Stockbridge	4.6	5.4	6.9	7.8	8.7	11.3	6.6	6.7
Winchester-S.C. Down	4.9	8.1	7.1	9.7	10.2	8.3	3.1	3.4
Popham-Winchester	-	-	-	-	-	-	13.8	7.2
Winchester-Romsey	-	-	-	-	-	-	6.4	5.0
Romsey-Ringwood	-	-	-	-	-	-	3.6	4.1
Ringwood-Wimborne	-	-	-	7.1	9.9	11.8	8.3	10.0
Winchester-Andover	-	-	-	-	-	-	6.7	5.2
Winchester-Newtown	-	-	-	-	-	-	7.6	7.2
Cosham-Chichester	-	-	-	-	-	-	46.7	33.2
Romsey-Stockbridge etc.	-	-	-	-	-	-	4.0	4.9
Lymington	-	-	-	-	-	-	7.0	9.7
Botley	-	-	-	-	-	-	3.1	4.8
Andover-Chilton	-	-	-	-	-	-	8.0	6.3
Petersfield-Ropley	-	-	-	-	-	-	6.9	4.8
Basingstoke-Alton etc.			-	-	-	-	4.4	4.8
London-Southampton				-	-	-	0.2	0
St. Cross-Park Gate					-	-	4.5	6.1
Titchfield-Cosham					-	4.1	19.8	13.2
Winchester-Petersfield						-	3.6	4.3
Midhurst-Sheet Bridge						-	12.9	10.0
Farnham-Petersfield						-	8.3	9.8
Cranbourne & New Forest							3.4	2.6
B. Waltham & F. Pond							12.7	0
Andover Station								14.3
Christchurch-Lyndhurst								2.5

TABLE 6.2

The extent of the available data on trust road repair expenditure is indicated in table 6.2, which shows mean annual repair expenditure per km for the eight decades from 1770 to 1850.[1] As can be seen, prior to the 1830s, data are extant for only eight trusts, but as three of these cover sections of major trunk lines, this survival rate is not as limiting as might be supposed. The highest total was recorded by the Southampton North trust in the 1820s, when mean annual road repair expenditure was £68.3 per km. This meant that the trust was spending an average of some £630 on road repairs each year during the period. The second highest total was recorded by the Portsmouth-Sheet Bridge trust, with a mean annual road repair expenditure in the 1830s of £56.5 per km. Not far behind was the lower district of the Kingston-Sheet Bridge trust, with a mean of £48.2 per km in the same period, and the Cosham-Chichester trust, with a mean of £46.7 per km, also in the 1830s. The lowest total was zero, recorded by the Bishop's Waltham and Fisher's Pond trust and the London and Southampton trust in the 1840s. In other words, throughout the 1840s, neither of these trusts spent any money on repairing their roads (their financial position prevented them from doing so[2]), and thus the care of the roads reverted to the parishes, despite the fact that tolls continued to be levied. The mean annual repair expenditure per km for all the Southern Hampshire trusts for the 1830s (the height of the 'Turnpike Age') was £13.3. This was equivalent to some 160 days manual labour[3] - just on one kilometre of road over one year. The six days statute labour, by comparison,[4] had to suffice for <u>all</u> the roads in a parish, which often totalled at least ten kilometres, and in some cases considerably more. If a parish contained 100 inhabitants liable to statute duty,[5] this means that some 600-650 days manual

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[1] For details of how these figures have been calculated and other related points, see chapter three, p. 49-50

[2] See statistical returns per 3 & 4 Wm. IV c. 80

[3] This is calculated on the basis of a wage of 1/8d per day - the general rate prevailing in the region at the time. For a discussion of turnpike labourers' wages, see chapter three, p. 50-1

[4] The 'Statute System' was in fact abolished in 1835 (2 & 3 Vict. c. 81) - i.e. mid-way through the period in question - but this does not make the comparison invalid, particularly because many trusts spent more on road repairs in the 1820s than in the 1830s.

[5] A reasonable average for a Hampshire parish in the period.

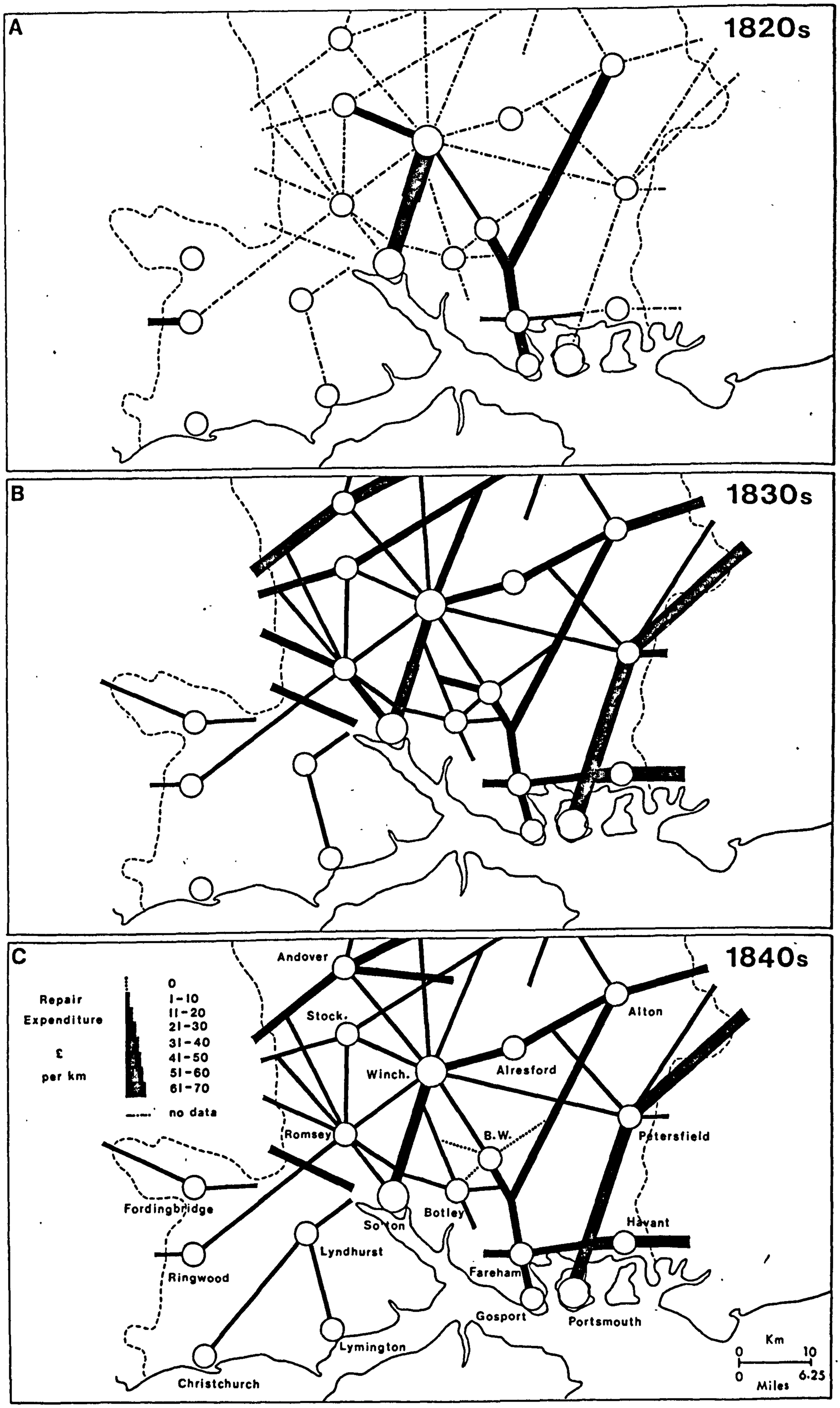
A
1820s
B
1830s
C
1840s
Repair
Expenditure
£
per km
0
1-10
11-20
21-30
31-40
41-50
51-60
61-70
no data
Andover
Stock.
Winch.
Alresford
Alton
Romsey
B.W.
Petersfield
Fordingbridge
Botley
So'ton
Havant
Lyndhurst
Ringwood
Fareham
Gosport
Portsmouth
Lymington
Christchurch
Km
0
10
0
6.25
Miles

FIGURE 6.17

labour would have done,[1] and if the parish in fact possessed ten kilometres of roads, this would have represented some 60-65 days manual labour per km per year. On the basis of these averages, therefore, the road repair resources of the turnpike trust were considerably greater than those of the 'Statute System', the more so when it is remembered that the full six days statute labour was not always performed, and that some inhabitants evaded their obligations altogether. The trust that was spending £50 per km on road repairs annually was obviously in an incredibly favoured position, for this was equivalent to some 600 days manual labour, or expressed in another way, almost equal to having two men working on each kilometre every day of the year (Sundays excepted). As shown earlier, an annual road repair expenditure of £50 per km was not uncommon for some Southern Hampshire trusts in the 1820s and 1830s, thus demonstrating the infinite superiority of the turnpike trust as a road repair mechanism, and particularly in thinly populated areas where statute labour resources were understandably limited.

Figure 6.17 shows the mean annual road repair expenditure per km for the three decades from 1820 to 1850 plotted in the form of a series of flow maps, although no actual flow is involved, the thickness of the lines merely indicating the different levels of repair expenditure for the various trusts. The aim in representing the data in this way is to draw attention to variations or changes in levels of road repair expenditure over space and time in this period.[2] The highest levels of expenditure were generally recorded on the trusts covering sections of major trunk lines - i.e. those on the London-Portsmouth route, the London-Southampton route (via Alton and via Basingstoke), the London-West of England route (via Andover and via Stockbridge) and the London-Gosport route. This is readily apparent in all three of the maps. These were the trusts with some of the highest volumes of traffic, and in consequence, the highest toll incomes.[3] Apart from the trusts covering sections of major trunk lines, a number of other trusts also

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[1] Inhabitants who owned or occupied lands valued at £50 per annum had to provide two labourers, along with a cart, horses and necessary implements - 2 & 3 Philip & Mary c. 8

[2] The paucity of data for the preceding decades obviously makes the construction of further maps of this type rather pointless.

[3] See chapter seven, p. 161

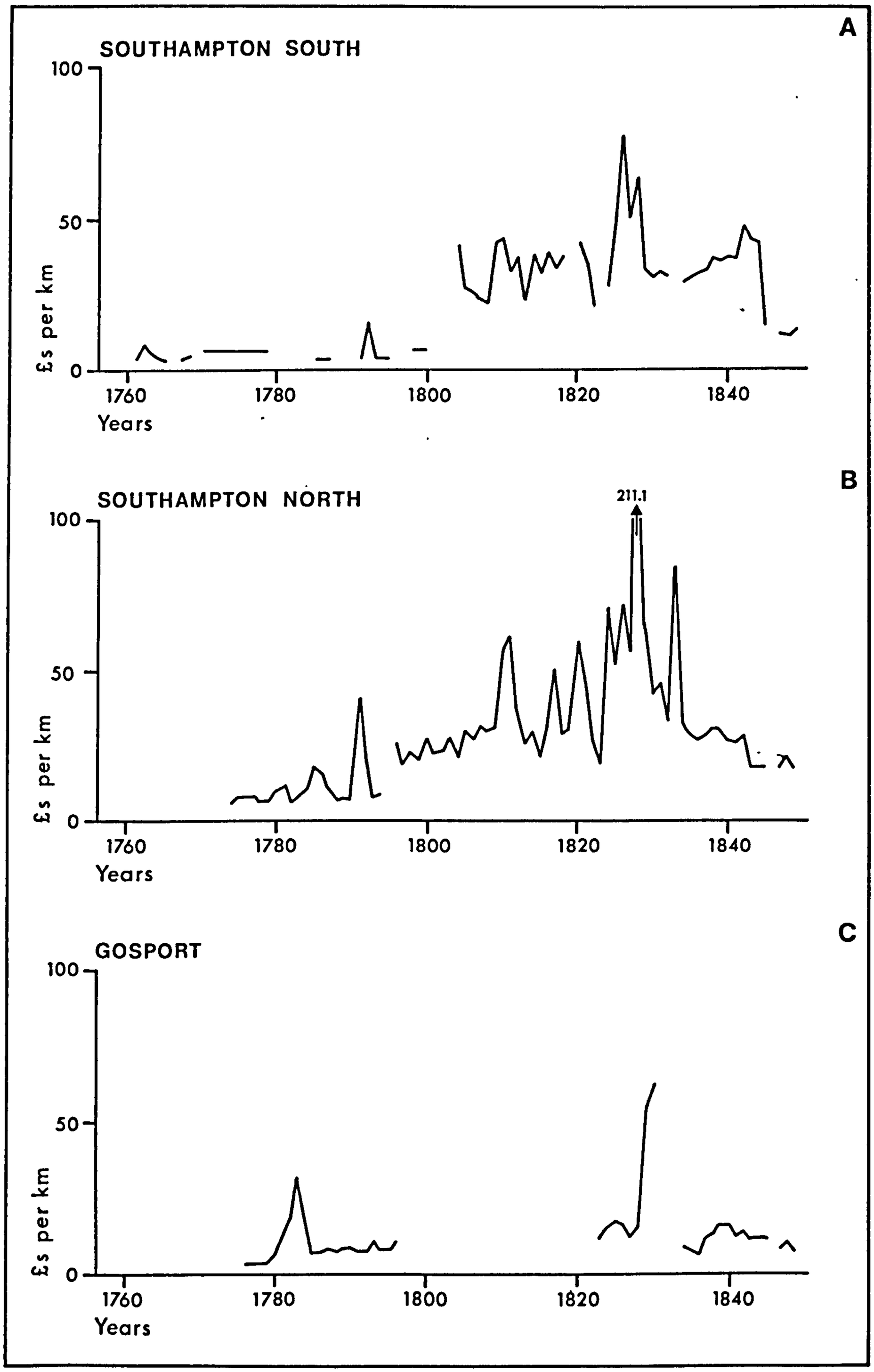
A
SOUTHAMPTON SOUTH
100
50
0
£s per km
1760
1780
1800
1820
1840
Years
B
SOUTHAMPTON NORTH
211.1
100
50
0
£s per km
1760
1780
1800
1820
1840
Years
C
GOSPORT
100
50
0
£s per km
1760
1780
1800
1820
1840
Years

FIGURE 6.18

recorded fairly high levels of repair expenditure, the Cosham-Chichester, the Sarum-Eling, and the Whiteparish-Southampton, in particular. The lowest levels of repair expenditure were recorded mainly on the minor or cross-country routes, where traffic volumes were considerably lower, and in consequence, toll revenue also. Comparing the evidence of the three maps, it is apparent that there was a fairly distinctive decline in road repair expenditure over the period. This was notably so between the 1830s and 1840s (figs. 6.17B and 6.17C), and is explained by railway competition in the 1840s, which caused a general reduction in toll income, which in turn reduced the resources available for road repair. However, the mean annual repair expenditure per km for all the Southern Hampshire trusts for the 1840s was not a great deal less than that for the 1830s, £10.6 as against £13.3, so that the decline was not particularly serious. The decline between the 1820s and 1830s (figs. 6.17A and 6.17B) is not nearly as clear, largely because of the incomplete nature of the data for the former decade. Nevertheless, a close comparison of the two maps does in fact reveal that in the case of the trusts between Southampton and Winchester, Gosport and Alton, and Winchester and Stockbridge, levels of repair expenditure were substantially higher in the 1820s than in the 1830s. Obviously, it is virtually impossible to say that this was true for any more of the region's trusts, but the fact that it was true for four is not without significance. The explanation for the decline between the 1820s and the 1830s is uncertain, although it is likely that it was connected with the fact that many of the region's trusts undertook major improvement schemes in the 1820s, the trusts covering the Southampton-Winchester, Gosport-Alton, and Winchester-Stockbridge roads among them.

Although the paucity of data on trust road repair expenditure prior to the 1820s precludes the construction of maps similar to those produced for the 1820-50 period, it is possible, nevertheless, to examine changes in road repair expenditure over the whole of the turnpike period for those trusts where sufficient records survive. Figures 6.18 and 6.19 show graphs of annual road repair expenditure for five of the region's trusts and these cast valuable light on the course of change on individual roads. The graphs exhibiting the most striking changes are those for the Southampton South and the Southampton North trusts (figs. 6.18A and 6.18B). Taking the Southampton South trust first, annual road repair expenditure remained around the £5 per km level up until 1800; in the 1800s and 1810s, it increased to around £30-40 per km, and the highest levels (£50-79 per km)

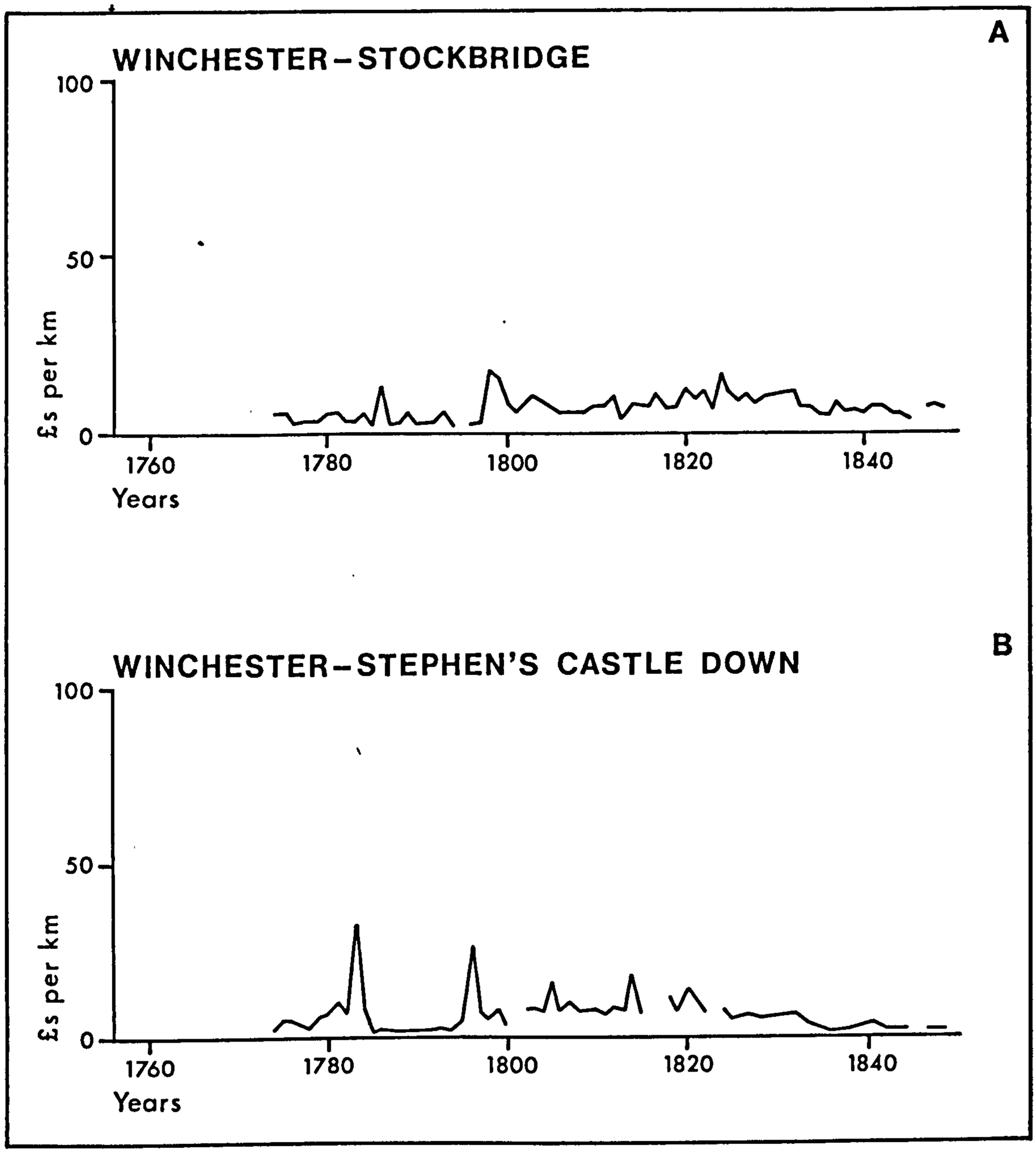
A
WINCHESTER–STOCKBRIDGE
100
50
0
£s per km
1760
1780
1800
1820
1840
Years
B
WINCHESTER–STEPHEN'S CASTLE DOWN
100
50
0
£s per km
1760
1780
1800
1820
1840
Years

FIGURE 6.19

were reached in the later 1820s. In the 1830s, expenditure fell back to the 1800-1820 levels; this was followed by a slight increase in the early 1840s, but by the late 1840s it had fallen to slightly over £10 per km. The Southampton North trust, in contrast, shows a rather different picture. Change was more even, though there were some noticeable fluctuations. In the 1770s, annual road repair expenditure averaged around £5-10 per km. Thereafter, it showed a relatively consistent increase, the highest level (£211.1 per km) being attained in 1828. After that date, expenditure began to decrease and by the 1840s had settled at around £20 per km. However, as noted earlier, there were some noticeable fluctuations, or more correctly, peaks in expenditure. The most significant were in 1791, 1811, 1817, 1820, 1828 and 1833, and all were associated with particular major improvement schemes. The magnitude of the increases in road repair expenditure recorded by these trusts between the 1770s and the 1820s is quite remarkable. In the 1770s, for example, the Southampton North trust's mean annual repair expenditure per km was £7.7; by the 1820s, this had risen to £68.3 - almost a nine-fold increase. Similarly, the mean annual repair expenditure per km of the Southampton South trust in the 1770s was £5.2, and by the 1820s, this figure had risen to £44.8 - almost a nine-fold increase again. It was indicated in chapter three that there was probably no very great advance (a doubling at most) in unit costs over this 50-year period,[1] so that the increases in repair expenditure recorded by these two trusts certainly represented real increases in the amount of repair work done, and thus serving to demonstrate further the significance of the turnpike trust as a road repair mechanism.

In comparison, the remaining graphs - for the Gosport trust (fig. 6.18C), the Winchester-Stockbridge trust (fig. 6.19A), and the Winchester-Stephen's Castle Down trust (fig. 6.19B) - do not exhibit nearly such striking changes. Annual road repair expenditure per km for the Gosport trust in the 1820s/1830s was little different from the level prevailing in the later eighteenth century, although there were two marked peaks - in 1783 and 1829-30. However, the evidence for this trust cannot really be considered to be conclusive, because of the large data gap between the mid-1790s and the early 1820s. Annual road repair expenditure for the Winchester-Stockbridge trust showed an even

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[1] See chapter three, p. 51

lesser degree of variation, remaining around the £5-10 per km level throughout the period. The Winchester-Stephen's Castle Down trust exhibits an almost equal lack of variation. The evidence of these last two trusts clearly shows that there was little increase in the amount of repair work done in the period between the 1770s and the 1830s. Indeed, it is possible that the amount of repair work done declined, as there was most certainly some advance in unit costs over these 50 or so years. This lack of increase in road repair expenditure was undoubtedly due in part to the comparatively small increase in traffic volume on these routes.[1] However, in no sense does this mean that the Winchester-Stockbridge and Winchester-Stephen's Castle Down trusts were insignificant as road repair mechanisms. The amount of repair work necessary to maintain a road in a good condition was obviously in some degree related to the amount of traffic passing over it, and in these two instances, there was apparently little increase in traffic volumes over the period.[2] The important point is that regular sums of money (generally £5-10 per km per annum) were being spent on road repairs, even though these may not have amounted to much more than the 'Statute System' was supposed to provide in labour services. In addition, of course, the setting up of a turnpike trust did not relieve parishes of their statutory obligations, so that any repairs a trust instituted were an advance on the status quo.

Having examined the level of trust road repair expenditure, attention is now directed to the second aim of this section, the establishment of the proportion of trusts' income that went towards road repairs. In attempting to achieve this aim, it was considered more appropriate to express road repair expenditure as a proportion of toll income rather than total income (i.e. toll income plus the income from loans obtained on the security of the tolls), and the reasons for this decision were discussed in an earlier chapter.[3] It is not easy to stipulate in any precise manner how much of its toll income the well-administered trust would have spent on road repairs. However, on the basis that all trusts had

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[1] See chapter seven, p. 169

[2] See chapter seven, p. 169

[3] See chapter three, p. 51

	Mean Percentages							
	1770s	1780s	1790s	1800s	1810s	1820s	1830s	1840s
Portsmouth-Sheet Bridge	-	-	-	-	-	-	61	59
Kingston-Sheet Br. Lower	-	-	-	-	-	-	63	65
Sarum-Eling	-	-	-	-	-	-	37	52
Winchester Upper	-	-	-	-	-	-	61	59
Winchester Lower	-	-	-	-	-	-	29	44
Andover	-	-	-	-	-	-	62	54
Stockbridge	-	-	-	44	-	-	62	40
Whiteparish-So'ton	-	-	-	-	-	-	47	46
Gosport	29	52	47	-	-	72	34	44
Southampton North	47	39	66	81	79	81	24	38
Southampton South	54	-	55	51	63	53	51	65
Winchester-Stockbridge	36	55	76	59	56	66	36	38
Winchester-S.C. Down	48	66	53	60	65	51	36	57
Popham-Winchester	-	-	-	-	-	-	30	28
Winchester-Romsey	-	-	-	-	-	-	40	36
Romsey-Ringwood	-	-	-	-	-	-	31	36
Ringwood-Wimborne	-	-	-	40	42	43	28	37
Winchester-Andover	-	-	-	-	-	-	55	52
Winchester-Newtown	-	-	-	-	-	-	33	49
Cosham-Chichester	-	-	-	-	-	-	79	60
Romsey-Stockbridge etc.	-	-	-	-	-	-	39	41
Lymington	-	-	-	-	-	-	35	56
Botley	-	-	-	-	-	-	27	43
Andover-Chilton	-	-	-	-	-	-	49	52
Petersfield-Ropley	-	-	-	-	-	-	86	70
Basingstoke-Alton etc.			-	-	-	-	37	34
London-Southampton				-	-	-	1	0
St. Cross-Park Gate					-	-	20	36
Titchfield-Cosham					-	7	25	24
Winchester-Petersfield						-	32	32
Midhurst-Sheet Bridge						-	73	54
Farnham-Petersfield						-	99	98
Cranbourne & New Forest							174	38
B. Waltham & F. Pond							213	0
Andover Station								63
Christchurch-Lyndhurst								42

TABLE 6.3

certain running expenses that they could not avoid incurring, it would seem that a figure within the range 50-80 per cent would have been quite reasonable.[1] Obviously, the percentage could have fluctuated considerably from one year to the next, but over a period of ten years or so, a figure of this order is what would have been expected for a well-run trust. Trusts that consistently spent less than 50 per cent of their toll income on road repairs clearly would not have been making effective use of their resources. Similarly, trusts that consistently spent in excess of 80 per cent of their toll income on road repairs would not have been using their resources effectively either, for to do so they would have had to borrow fairly heavily, and in time this could not fail to lead to a severe reduction in the funds available for road repairs through escalating interest payments and so on.

Table 6.3 shows mean annual road repair expenditure expressed as a percentage of mean annual toll income for the eight decades from 1770 to 1850. Once again, prior to the 1830s, data are extant for only eight trusts, but as three of these cover major trunk lines, such a survival rate is not as limiting as might be supposed.[2] It is readily apparent from table 6.3 that a considerable range of percentage values were recorded by the different Southern Hampshire trusts. The highest (213 per cent and 174 per cent) were for the Cranbourne Chase and New Forest, and Bishop's Waltham and Fisher's Pond trusts, in the 1830s. The explanation for these incredibly high values is that both trusts were set up only in the 1830s, and in common with the majority of other trusts in their early years of existence, were borrowing fairly heavily in order to complete the making of their roads. The lowest values (one per cent and zero) were for the London and Southampton, and Bishop's Waltham and Fisher's Pond trusts, in the 1830s and 1840s. The explanation here is simply that the toll incomes of these two trusts at the time were

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[1] In assessing the financial condition of turnpike trusts in England in the early nineteenth century, Albert reckoned that a trust could be considered to be in a favourable position if it allocated 55 per cent or more of its total expenditure to road repair ('road repair' here includes repairs to toll houses, tollgates etc.) - W. Albert. op. cit., 230

[2] For details of how these figures have been calculated and other related points, see chapter three, p. 51

	Mean percentages	No. of trusts covered
1770s	43 (36, 48)	5
1780s	53 (32, 44)	4
1790s	59 (36, 48)	5
1800s	56 (39, 46)	6
1810s	61 (35, 47)	5
1820s	53 (33, 44)	7

TABLE 6.4

insufficient to allow any money to be spent on road repairs.[1] The mean percentage value for all Southern Hampshire trusts in the 1830s was 53.2 per cent, suggesting that in overall terms, they were being administered effectively, though only just. However, if the two highest values (213 per cent and 174 per cent) are omitted - on the grounds that they are exceptional - this figure falls to 44.4 per cent, which is well outside the 50-80 per cent range. In the 1840s, the corresponding mean percentage value was 45.6 per cent, which is outside the 50-80 per cent range again. In other words, in overall terms, Southern Hampshire's turnpike trusts were not administered effectively in either the 1830s or the 1840s. Mean values of this kind, though, have limited significance, and it is clearly important to examine the data for the 1830s and 1840s contained in table 6.3 in more detail. Of the 34 trusts in existence in the 1830s, 26.5 per cent fell within the 50-80 per cent range, while 61.8 per cent fell below it and 11.7 per cent above it. In the 1840s, when the number of trusts had increased to 36, the corresponding figures were 38.8 per cent within the 50-80 per cent range, 58.3 per cent below and 2.9 per cent above. The picture presented by this breakdown is a particularly unfavourable one, and especially for the 1830s. However, examination of the available data for the decades prior to the 1830s reveals a rather different and decidedly more favourable picture, and the results are given in table 6.4. This shows the mean percentage values for each of the six preceding decades for all the trusts for which information survives. The two values in brackets give the corresponding mean percentages for the same trusts in the 1830s and 1840s. With but one exception, the mean percentages for these earlier decades consistently exceed the corresponding ones for the 1830s and 1840s. Moreover, all except one of the values falls within the 50-80 per cent range. On the basis of this evidence, trust management emerges in a much more favourable light, and especially so in the 1790s and 1810s. Because of the limited available data, however, it would be dangerous to place too much reliance upon such a conclusion, although as pointed out before, the surviving data for the pre-1830 period are by no means unrepresentative, and the fact that the mean percentages for the 1780-1830 period consistently exceed those for the 1830-50 period is undoubtedly significant.

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[1] Most local Acts stipulated that money could be spent on road repairs only when the trust's running expenses had been met (i.e. salaries, maintenance of toll houses, tollgates etc.) and the annual interest paid.

Finally, to what extent do the results of this examination of the proportion of trusts' income expended on road repairs correspond with those arising from the examination of the numbers of annual meetings held by trusts?[1] In the latter case, the Southampton North trust, which in this instance also incorporated the Winchester-Stockbridge and Winchester-Stephen's Castle Down trusts' roads, emerged as the most effectively administered (table 6.1 and fig. 6.12), and notably so after about 1790. This fits in fairly well with the evidence of the proportion of trust income devoted to road repairs, particularly in the case of the Southampton North trust and the Winchester-Stockbridge trust (table 6.3). The annual meetings evidence for the Southampton South trust exhibited something of a dichotomy, with an extremely good record in the realm of quoret meetings, but an extremely bad one in the realm of non-quoret meetings (table 6.1 and fig. 6.13). However, it was concluded that the trust just came within the effectively administered category and this judgement is borne out by the evidence of the proportion of the trust's income spent on road repairs, with values generally fluctuating around the 50 per cent mark (table 6.3). The most ineffectively administered trust, according to the annual meetings evidence, was the Ringwood-Wimborne (table 6.1 and fig. 6.15), and again this is confirmed by the evidence of the proportion of trust income spent on road repairs, with mean percentage values in the 1800-1830 period in the lower 40s (table 6.3). The annual meetings record for the Stockbridge trust (table 6.1 and fig. 6.11) was little better than that for the Ringwood-Wimborne, and the available data on the proportion of this trust's income that went on road repairs (table 6.3) also fits in with this evidence, though admittedly only tentatively. On the basis of the results of this comparison, it would seem that examination of the annual numbers of quoret and non-quoret meetings held by trusts does provide a valid means of assessing trusts' administrative effectiveness, so that the conclusions drawn earlier are confirmed and reinforced.

c) The nature and scope of trusts' road repair activities

While examination of trust road repair expenditure is clearly fundamental in establishing the extent to which the region's turnpike trusts fulfilled their intended objective of maintaining and improving the roads

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[1] See this chapter, p. 131-133

1st Act	Trust	(1) Improved existing road	(2) Made entirely new road	(3) Part new, part existing
1710	Portsmouth-Sheet Bridge	*		
1749	Kingston-Sheet Bridge Lower	*		
1753	Sarum-Eling			*
1753	Winchester Upper	*		
1753	Winchester Lower			*
1755	Andover	*		
1756	Stockbridge			*
1756	Whiteparish-Southampton	*		
1758	Gosport			*
1758	Southampton North	*		
1758	Southampton South			*
1758	Winchester-Stockbridge	*		
1758	Winchester-S.C. Down	*		
1759	Popham-Winchester	*		
1759	Winchester-Romsey	*		
1759	Romsey-Ringwood	*		
1759	Ringwood-Wimborne	*		
1761	Amesbury	*		
1762	Winchester-Andover	*		
1762	Winchester-Newtown	*		
1762	Cosham-Chichester	*		
1762	Weyhill-Lyde Way	*		
1764	Romsey-Stockbridge etc.	*		
1765	Lymington	*		
1765	Botley	*		
1766	Andover-Chilton	*		
1772	Petersfield-Ropley	*		
1793	Alton-Odiham	*		
1795	Basingstoke-Alton etc.	*		
1796	Northam Bridge		*	
1797	Bursledon Bridge		*	
1801	London-Southampton		*	
1810	St. Cross-Park Gate		*	
1810	Titchfield-Cosham			*
1825	Winchester-Petersfield		*	
1825	Midhurst-Sheet Bridge		*	
1826	Farnham-Petersfield		*	
1832	Cranbourne & New Forest			*
1833	B. Waltham & F. Pond		*	
1834	Itchen Bridge		*	
1840	Andover Station		*	
1841	Christchurch-Lyndhurst	*		

TABLE 6.5

placed under their jurisdiction, it is equally important to examine the nature and scope of trusts' road repair activities. The main advantage of looking at trust road repair expenditure is that it offers a means of examining road repair activity in a quantitative manner, but inevitably, this leaves many questions unanswered. For example, did the region's trusts make entirely new roads, or did they improve roads already in existence? How did they go about repairing their roads and did they ever embark on major works? It is essential to answer questions of this kind if the effectiveness of the region's trusts as mechanisms for road maintenance is to be fully assessed. The nature and scope of their road repair activities would obviously have had direct bearing on the utility of the region's turnpike roads as travel arteries.

The majority of the turnpike trusts set up in Southern Hampshire covered roads that were already well-established, and thus trustees normally concentrated their efforts on maintaining and improving the pre-existing roads. A few of the trusts covering established roads made new sections of road, and a number of trusts - particularly those that were formed in the later period - were set up for the specific purpose of making entirely new roads altogether. However, in Southern Hampshire the making of new roads was the exception rather than the rule. The concentration of effort on existing roads is clearly apparent in table 6.5, which classifies the trusts and pseudo trusts[1] in the region according to whether they maintained or improved existing roads (1), made entirely new roads altogether (2), or did a combination of both (3), although it should be stressed that in some cases classification is not absolutely certain.[2] Sixty per cent of trusts maintained and improved existing roads, while only 24 per cent made entirely new roads; the residue of 16 per cent was made up of trusts that did both. As the table shows, all the trusts that made entirely new roads were set up in the later development period. This is not unexpected, since trust

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[1] See this chapter, p. 112 and 114

[2] For example, the Winchester Lower turnpike (Winchester-Alton) deviated from the established route in one part by going via Ropley Dean and Four Marks, instead of via Bighton and Medstead, and thus was classified under (3). But, it is quite possible that the route taken by the turnpike was an established one as well, and classification under (1) would therefore be more appropriate.

development at the time consisted mainly of a process of infilling and opening up of alternative routes, and in both instances, there were often no well-established roads.

Whether trusts in the region improved existing roads or made entirely new ones, the basic pattern of repair activity was very much the same for both. All the work that was done on the roads had to be done by hand, using the most basic of tools, and the business of repair was thus highly labour intensive. For virtually all the region's trusts, the principal activity consisted of obtaining quantities of materials for laying on the road surface. Gravel was usually considered to be the best material for the purpose and trusts often rented gravel pits or gravel-bearing lands from local farmers or landowners in order to ensure a constant supply.[1] In addition, most local Acts gave trusts the power to take gravel or other similar materials from adjacent wastes and commons. If there were no supplies of gravel in the vicinity, or if the available supplies had been exhausted, the alternative was to collect large quantities of stones from the surrounding area, and with some of the region's trusts, stone-picking formed one of the major items of repair expenditure.[2] Women and children frequently performed this task, and although the incidence of stone-picking generally decreased in the nineteenth century as trusts increasingly contracted for the supply of materials, some trusts - the smaller ones especially - employed stone-pickers throughout their existence. Before the gravel or stones were laid on the road, it was usual to fill up any holes with faggots or other such materials and generally level the surface. Then, if the surveyor was attentive and possessed a modicum of common sense, the gravel or stone was screened, and the final stage was to rake the material into position to produce the desired thickness.

The second most important repair activity was probably that involving drainage. The provision of adequate drainage was fundamental to effective road maintenance, and it is fairly certain that the poor state of a number of the region's roads in the later seventeenth and earlier eighteenth centuries could have been avoided if due attention had been

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[1] See for example, Soton. R.O., Minutes of Southampton South trust, D/PM 8/1/2-3; Hants. R.O., Treasurers' Accounts of Gosport trust, 36M72/1

[2] See for example, Hants R.O., Treasurers' Accounts of Gosport trust, 36M72/1

paid to this. However, as was shown in the preceding chapter, the 'Statute' and 'Highway Rate' systems were hopelessly insufficient for the tasks they were intended, and construction of drains and ditches would have been outside their scope. The turnpike trusts, in contrast, possessed the resources to make such provisions, and in many respects, the extent to which they could improve road surfaces hinged upon their ability to achieve good drainage. The problem of drainage was normally most acute in areas where clay formed the dominant surface rock, and the Hampshire Basin, of course, has extensive clay deposits. A substantial portion of the Southampton South trust's road was on clay and the trustees were quick to appreciate the associated drainage problems, for within 18 months of the trust's establishment,men were being employed to open up the road to let the water out.[1] Later, as more funds became available, drains were constructed and ditches were dug in an attempt to ensure that water ran away freely, so avoiding the damage that prolonged waterlogging frequently caused.[2] Examination of the remaining minutes and accounts extant for Southern Hampshire trusts reveals that this kind of pattern was quite representative. One aspect of drainage that has not been mentioned is the form of the road surface. The most suitable from the point of view of drainage was the convex form so strongly advocated by McAdam and his family from the early nineteenth century onwards,[3] and all the available evidence indicates that this was the one eventually adopted by most of the region's trusts.[4] Indeed, several of them employed one of J.L. McAdam's sons - William McAdam - as surveyor,[5] and thus the degree of adherence to the 'McAdam principle' is not surprising.

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[1] Soton. R.O., D/PM 8/1/1

[2] Soton. R.O., D/PM 8/1/1-3

[3] J.L. McAdam, Remarks on the Present System of Road-making ... etc., (London, 1816), 5th edition, 1822, 38

[4] See in particular, Hants. R.O., Bishop's Waltham and Fisher's Pond road contract, 1833, 5M54/145; Hants. R.O., Gosport road contracts (Wickham-Droxford section), 1829-36, CC. 28. Some trusts adopted the convex form much earlier, as Arthur Young's remarks on the road between Salisbury and Romsey towards Winchester show - see this chapter, p. 151-152

[5] The trusts in question were the Southampton North, Winchester-Stockbridge, and Winchester-Stephen's Castle Down - Hants. R.O., 4M30/2-3; the Southampton South - Soton. R.O., D/PM 8/1/2-3; the Winchester Lower - Hampshire Chronicle, 10/1/1820; and the Andover - Hampshire Chronicle, 22/11/1819. In 1824, the Southampton South trust gave William McAdam's address as Burcombe House, near Wilton, Wiltshire - Soton. R.O., D/PM 8/1/3

While the laying of gravel or stone on the road and the provision of adequate drainage formed the principal occupations of the majority of the region's trusts, many also engaged in improving activities, and sometimes these had quite far-reaching effect. One of the commonest was road-widening and this was particularly characteristic of trusts set up on existing roads. For example, one of the earliest pre-occupations of the Stockbridge trust, established in 1756, was the widening of the existing road - at least where this was being utilised.[1] The same was true of the Winchester-Romsey trust, which was established in 1759, and again covered an existing road.[2] In fact, most trusts were involved in road-widening schemes at some stage during the course of their existence,[3] although the incidence of such activity obviously varied from one trust to another. Another activity in which the region's trusts frequently engaged was the lowering of hills. The characteristic rolling landscape of much of central Hampshire meant that few roads could avoid traversing hills, and on some sections the situation was such that there were hardly any level stretches at all. Hills inevitably slowed the passage of traffic, and it was therefore entirely logical that trusts should wish to attempt to lower them. The surviving minutes and accounts indicate that, as with road-widening, all trusts probably engaged in lowering hills at some stage during their existence, and in a number of cases, considerable expenditure was involved. For instance, in the year running from October 1825 to October 1826, the Southampton North trust spent some £400 on lowering hills on the road between the division stone[4] at Fernhill and Winchester, part of the main Southampton-Winchester road.[5] A similar amount of money was spent by the Southampton South trust in 1826-7 on lowering the hill at Chandler's Ford,[6] and the Portsmouth-Sheet Bridge trust made a commensurate improvement at Portsdown in 1824.[7]

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[1] Hants. R.O., CC

[2] Hants. R.O., CC

[3] For example, the Southampton North trust was especially active in road-widening schemes during the 1820s - Hants. R.O., 4M30/3

[4] The stone marking the division between the road belonging to the Southampton South trust and that belonging to the Southampton North trust

[5] Hants. R.O., 4M30/15

[6] Soton. R.O., D/PM 8/5/4

[7] Hampshire Chronicle, 8/3/1824

Sometimes, the material which was removed from the hills was transferred to the adjacent 'bottoms' and thus the lowering of hills could often have a double effect. This is what was done at Chandler's Ford Hill in 1826-7,[1] and the practice seems to have been fairly common throughout the region. In addition to engaging in schemes for widening roads and lowering hills, trusts quite frequently made short pieces of new road, or 'cut-offs', where considered advantageous. The Southampton North trust, for example, made a short section of new road between Otterbourne and St. Cross in 1828-9 in order to avoid Compton Hill,[2] and the Gosport trust made a new stretch of road at North Fareham for much the same reason.[3]

Bridges formed another object of trusts' attention and their maintenance and occasionally complete reconstruction sometimes constituted a significant item of expenditure. The county authorities were supposed to make some contribution to bridge repairs, but in Southern Hampshire they were apparently reluctant to do so,[4] and thus the burden of bridge maintenance rested directly upon the turnpike trusts. If trusts neglected to maintain the bridges along the courses of their roads, toll income obviously decreased, and in many respects, therefore, they had no alternative.

Although it is obviously important to discuss the nature and scope of trusts' road repair activities in general terms, on the basis of the evidence of Southern Hampshire as a whole, this inevitably obscures much valuable detail. However, close examination of the road repair activities of individual trusts is highly consumptive of both time and space. Thus the procedure adopted here has been to make a series of case-studies of individual trusts' repair activities, the trusts being selected in such a way as to provide a representative cross-section. Four trusts were singled out for close examination - the Stockbridge, the Southampton

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[1] Soton. R.O., D/PM 8/1/3

[2] Hants. R.O., 4M30/3

[3] Hants. R.O., Deposited Plan No. 45. This deviation was sanctioned under an amending/renewal Act - 9 Geo. IV c. xlix

[4] In 1809, the trustees of the Ringwood-Wimborne trust ordered that an Indictment should be presented against the County for the repair of a bridge on their road - Hants. R.O., 8M47/4

North, the London and Southampton, and the Titchfield-Cosham - and the results are presented in Appendix 6.2. Amongst the many points about trust road repair activity highlighted by these four case-studies, a number deserve particular mention. Firstly, they serve to demonstrate very clearly the considerable scale of the repair activities in which the region's trusts were capable of engaging. This was particularly the case with the Stockbridge and Southampton North trusts, where substantial engineering work was undertaken, often involving expenditure figures running into thousands of pounds. Secondly, they serve to emphasise the critical importance of regular well-attended meetings to effective road management. This was especially evident in the case of the Stockbridge and Southampton North trusts and offers further substantiation of the validity of using the criterion of the annual numbers of quoret and non-quoret meetings for assessing trusts' administrative effectiveness. Thirdly, they indicate the very conscious concern of some trusts to ensure that roads were kept in a reasonable state of repair. Finally, they serve to demonstrate that the poor financial condition of some trusts towards the mid-nineteenth century was quite often the result of over-zealous road-making and repair activity in earlier years. In a way, this amounted to straightforward mismanagement, but striking the correct balance between basic income (i.e. toll income) and road repair expenditure could not always have been easy, especially in the formative years of a trust's life.

d) The state of the turnpike roads as seen by contemporaries

The evidence of the preceding discussions, particularly those on trust road repair expenditure and the nature and scope of trusts' road repair activities, have established beyond virtually all doubt that, in the majority of cases, the region's turnpike trusts provided an infinitely more effective means of maintaining the major roads than the 'Statute' and 'Highway Rate' systems. Furthermore, it has been shown that the trusts not only maintained the roads, but also made substantial improvements. However, it might be argued that the spending of an average of £20 per km per annum on a road, for example, or the spending of £500 on a specific road improvement scheme, does not necessarily mean that the road was being properly maintained or improved. In using the evidence of trusts' minutes and accounts, one is really getting only a

subjective view. The answer to this criticism is to try to discover what contemporary travellers thought about the region's turnpike roads. Did they find them superior to the parochially-maintained roads? How did they find the state of the region's turnpike roads? In some respects, this provides an objective view. However, and as was pointed out in the preceding chapter, different people undoubtedly had different ideas as to what constituted a good or a bad road.[1] To a certain degree, therefore, contemporary travellers' views of turnpike roads are as subjective as they are objective. But, as noted before, if due attention is paid to the character and mode of writing of the individual, this problem is rendered considerably less serious.

One of the first contemporary travellers to make reference to the region's turnpike roads was Jonas Hanway, the philanthropist and traveller, in his journal of a tour from Portsmouth to Kingston-upon-Thames, published in 1756 as a series of letters.[2] Hanway was in fact a native of Hampshire - he was born in Portsmouth in 1712 - and was perhaps better placed than some to comment on turnpikes in the area. In addition, his philanthropic views and wide travelling experience[3] mean that his remarks are unlikely to be heavily biased in any way. Part of his tour took him over the newly-established turnpike between Winchester and Bagshot (via Alresford, Alton and Farnham). He described the section between Alresford and Alton as 'very fair and pleasant',[4] while that from Alton to Farnham was 'for the most parts through lanes'.[5] As this particular turnpike had only just been set up, the trustees would not have been able to make many improvements - evinced by the mention of the Alton-Farnham portion as being mostly through lanes. However, it is significant that Hanway found the Alresford-Alton portion very fair and pleasant, and also that there is no reference to any bad stretches. This provides a stark contrast to the

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[1] See chapter five, p. 93

[2] J. Hanway, A Journal of Eight Days Journey from Portsmouth to Kingston-upon-Thames thro' Southampton, Wiltshire etc., (London, 1756)

[3] He is especially known for his caravan expedition to Persia in 1743-5

[4] J. Hanway, op. cit., 192

[5] Ibid., 193

condition in which Stukeley found the same road some thirty years earlier,[1] and suggests that the trustees were not idle in the early years.

A second contemporary traveller to remark on the region's turnpike roads was Charles Dibdin, the composer, dramatist and poet, in his journal of a tour through England and Scotland, published in 1801-2, again as a series of letters.[2] Like Hanway, Dibdin was a native of Hampshire - he was born in Southampton in 1745 - and was particularly well-placed to comment on turnpikes in the area. Unlike Hanway, though, his remarks about the region's turnpikes derive largely from reminiscences of his younger days, rather than from direct observations while on his tour. Dibdin lived in Southampton for the first eight years of his life, and visited the town on several subsequent occasions up until he was 15. Drawing upon these experiences in his journal, he states:

> '... before 1755, there was no symptom of anything like a turnpike between Winchester and Southampton; and that when it came to be set about the improvement was as efficacious as it was incredible. A few months completely altered the face of the country. It was the old ground young. Everything wore a new aspect, and those chalky bottoms about Winchester, which had been at times impassable; and those slippery declivities, thro' which travellers climbed with so much difficulty over St. Giles's and Magdalen Hill, in the way to Alresford, soon wore the appearance of sober and gradual ascent, scarcely perceptible to the traveller'.[3]

In view of Dibdin's creative talents, it is obviously important to avoid reading these remarks too closely. However, the general impression is nevertheless clear: the establishment of turnpike trusts in the area, and on the Southampton-Winchester and Winchester-Alresford roads, in particular, brought about a very significant improvement in the condition of

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[1] See chapter five, p. 94-5

[2] C. Dibdin, Observations on a Tour through almost the whole of England, and a considerable part of Scotland, in a series of letters, addressed to a large number of intelligent and respectable friends, (London, 1801-2)

[3] C. Dibdin, op. cit., I, 48

the roads, and moreover, within a relatively short space of time, although Dibdin's 'few months' is almost certainly an exaggeration.

Another contemporary traveller to refer to turnpike roads in the region was Richard Pococke, in his journal covering the second series of travels that he made in England, in 1764.[1] Curiously, Pococke was also a native of Hampshire. He was born in Southampton in 1704 and travelled extensively both in Britain and abroad from the mid-1830s onwards. However, while Pococke certainly refers to turnpikes in the area on quite a number of occasions, he seldom commends them or complains about them. One might infer from this lack of comment that the turnpikes over which Pococke travelled were generally fairly good, although admittedly, the tour was made in summer, when they were likely to have been at their best. Some would argue that such an inference is unjustified, but the fact that Pococke says nothing against turnpikes is clearly not without significance.

One of the most well-known contemporary travellers to remark on turnpike roads in the region was Arthur Young, in his record of the tour he made through the southern counties of England in 1767.[2] Young was a prolific author of agricultural treatises and articles and his tour of Southern England, like the ones he made of Northern and Eastern England in 1768 and 1770 respectively,[3] was undertaken mainly to study the different agricultural methods employed in different parts of the country. Not surprisingly, Young's travels took him over turnpike roads and his remarks about them - their generally poor condition, in particular - have frequently been cited by economic and social historians working on the period, often in an alarmingly uncritical way.[4] Interestingly, though, Young made no complaints about the turnpike roads of the Southern Hampshire

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[1] B.M., MS., 14,260, 14,261 - The first series were undertaken in the 1750s and the associated journal was published by the Camden Society in 1888-9 - J.J. Cartwright, (ed.), The Travels through England of Dr. Richard Pococke, (London, 1888-9)

[2] A. Young. A Six Weeks Tour through the Southern Counties of England and Wales, (London, 1768)

[3] A. Young, A Six Months Tour through the North of England, (London, 1770); A. Young, The Farmer's Tour through the East of England, (London, 1771)

[4] This uncritical approach is highlighted in an article by E.F. Gay, 'Arthur Young on English Roads', Quarterly Journal of Economics, 41, (1926-7), 545-51

region, despite the fact that he passed over quite a number of them. Indeed, he considered one of the region's turnpikes - that from Salisbury to four miles the other side of Romsey, towards Winchester[1] - to be the finest he had ever seen,[2] even though there was a considerable waggon traffic over it.[3] In particular, he was struck by the firmness of the materials used and the way that they were ' so firmly united, and kept so totally free from loose stones, rutts and water'.[4] In addition, the road had a gentle fall throughout (presumably the convex form so strongly advocated by McAdam some 40 years later) - explaining why it was free from water - and was broad enough for three carriages to pass each other.[5] Young was so impressed that he took the trouble to enquire how the road was constructed and how it was maintained. As always, there is a danger in reading these remarks too closely, but it would probably be fair to say that Young's praises of good turnpikes are rather closer to the truth than his deprecations of bad ones. Thus, his comments on the turnpike road in question are definitely significant, the more so when it is remembered that the three trusts under which it was administered were all of fairly recent origin at the time the tour was made.[6]

After Young, the only other contemporary traveller, or perhaps more correctly, contemporary observer, to refer to the region's turnpike roads was Charles Vancouver, in his general view of the agriculture of Hampshire, drawn up for the Board of Agriculture and Internal Improvement in the first decade of the nineteenth century.[7] A glance at this very detailed survey shows that Vancouver was strongly familiar with the geography of the region - he did in fact live in the area - and thus

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[1] Young seems to have thought that this turnpike road was administered by one trust, but it in fact came under three separate trusts - the Sarum-Eling, the Whiteparish-Southampton, and the Winchester-Romsey.

[2] A. Young, A Six Weeks Tour through the Southern Counties of England and Wales, (London, 1768), 248

[3] A. Young, op. cit., 172

[4] Ibid., 248

[5] Ibid., 249

[6] The dates of establishment were 1753, 1756 and 1759

[7] C. Vancouver, General View of the Agriculture of Hampshire, including the Isle of Wight, (London, 1810)

would have been particularly well qualified to comment on the turnpike roads. Vancouver described the roads of Hampshire as being 'in general, good; some, the very best in the Kingdom',[1] and later added that 'the public or turnpike roads are ... no where better than what may generally be met with in Hampshire'.[2] He qualified these remarks, however, by pointing out that materials of excellent quality were readily available in the area, and also that the many of the region's parochially-maintained roads, in the New Forest district especially, could 'vie for goodness with the best turnpikes in the Kingdom'.[3] At the end of the survey, Vancouver included a section on possible improvements, and among these there was a proposal to make a turnpike road from Winchester to Petersfield through the valley of Bramdean.[4] He thought that this would prove of considerable benefit to the public at large and to the country through which the road would pass, particularly at the times of the Weyhill and Magdalen Hill fairs. As it turned out, of course, a turnpike trust was established between Winchester and Petersfield, although not until 1825.

On the basis of the evidence of these five contemporaries, it would be fair to conclude that, generally, the region's turnpike trusts carried out their designated task in a proper manner, and moreover, to considerable economic and social advantage. In other words, there can be little doubt about the conclusions drawn from the examination of trust road repair expenditure and the nature and scope of trusts' road repair activities. The region's turnpike trusts did provide a much more effective means of road maintenance than the 'Statute' and 'Highway Rate' systems, and furthermore, they did make substantial road improvements.

Before closing this section, however, it should be mentioned that the remarks of Hanway, Dibdin, Pococke, Young and Vancouver do not encompass all the available contemporary travellers' views of the state of the region's turnpikes. The ones that have been omitted are those contained in the contemporary newspapers of the region. These nearly always

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[1] C. Vancouver, op. cit., 391

[2] Ibid., 392

[3] Ibid.

[4] Ibid., 503-4

take the form of letters of complaint from travellers about the condition of particular stretches of turnpikes, and it is for this reason that they were not incorporated in the main part of the discussion. Nevertheless, it is clearly of value to examine the incidence of such letters and also their precise nature.

Out of the 87 years of contemporary newspapers examined,[1] only seven letters of complaint were discovered, and in view of the time-span searched, this surprisingly small number must obviously provide tentative confirmation of the conclusions drawn from the evidence of the five contemporaries cited above. The seven letters are distributed over a period extending from 1773 to 1840 and all relate to the turnpikes in the Southampton-Winchester area. The first appeared in the Hampshire Chronicle for 1773 and related to the Botley turnpike from Swaythling to Sherrill Heath (near Wickham).[2] At first sight, it represents a fairly serious indictment of the trust's road repair activities, with the correspondent - a Londoner - congratulating himself on having escaped from being 'lost in the mire'. The most execrable section was that passing over Curdridge Common. However, from the correspondent's later comments, it would seem that the trust set up to administer this particular road (the first Act was passed in 1765) was not functioning properly. This is fully confirmed by a notice inserted in the Hampshire Chronicle seven years later, in 1780, in which the trustees of the Botley turnpike invited tenders for the making of the road, including the construction of bridges, drains, and the erection of a toll house and gate at Botley.[3] It is clear from this that nothing at all could have been done to the road during the preceding 15 years and that no tolls were collected. Thus, its bad state of repair in 1773 was really no more than a further reflection of the total inadequacy of the 'Statute' and 'Highway Rate' systems as road maintenance mechanisms. The explanation for the delay in implementing the 1765 Act is uncertain, but it is quite possible that disinterest on the part of the original trustees was a major factor.

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[1] Hampshire Chronicle, 1772-1830 (inclusive); Hampshire Advertiser, 1823-50 (inclusive) - until 1827, this newspaper was named the Southampton Herald

[2] Hampshire Chronicle, 1/2/1773

[3] Hampshire Chronicle, 6/3/1780

The second letter of complaint appeared in the Hampshire Chronicle for 1776 and concerned 'the New Road, leading to Romsey, Redbridge etc., from Southampton'.[1] This, presumably, was the Whiteparish-Southampton turnpike, established in 1756. The correspondent, who was on this occasion a local inhabitant, was critical of the lack of adequate drainage provision on the road, which was endangering its 'good' quality. Clearly, this was more a recommendation than a complaint, and in part, it offers useful evidence of the success of the particular trust concerned in maintaining its road.

The third letter of complaint was contained in the Hampshire Chronicle for 1779, and concerned the several turnpike roads leading into the City of Winchester.[2] It took the form of a request from a local inhabitant to the respective surveyors to cover the loose flints laid on the road with either chalk or gravel, as 'not doing it, is not only spoiling many horses, but endangering the limbs, if not the lives of His Majesty's subjects'. However, in no sense did this constitute a major indictment of the local trusts' road repair activities.

The fourth letter of complaint appeared in the Hampshire Chronicle in 1782, and concerned part of the turnpike from Winchester to Stephen's Castle Down - in fact the section over Stephen's Castle Down itself.[3] Unlike the previous letter, though, it came in the form of a report of evidence submitted at the local Quarter Sessions as part of a case against the parish of Bishop's Waltham for neglectful road maintenance. The court decided, rightly, that the turnpike trustees and not the parishioners were the guilty party, and according to a witness, the trustees had done nothing to the section of road in question since the first Act of 1758, with the result that it had fallen into a chronic state of disrepair.[4] This obviously constituted a fairly significant indictment of the trust's road repair activities, although it should be stressed that it was not a case of poor or lax repair methods, but a case of neglecting a particular section of road altogether.

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[1] Hampshire Chronicle, 15/1/1776

[2] Hampshire Chronicle, 25/1/1779

[3] Hampshire Chronicle, 14/10/1782

[4] For the exact comments, see this chapter, p. 121

The fifth letter of complaint about turnpike roads in the region appeared in the Southampton Herald in 1824.[1] It involved the roads from Southampton to Swaythling (a branch road of the Southampton South trust) and from Swaythling to Botley (part of the Botley trust). The correspondent, who was a local inhabitant once again, stated that the sections of these two turnpikes were in a disgraceful state and nearly impassable to pedestrians - 'if they were repaired according to the plan recommended by Mr. McAdam, the water from the numerous springs conveyed by underground drains into the river, and many overhanging branches of trees properly trimmed, this road, instead of being one of the worst in England, might be converted into a very good one'. Somewhat ironically, one of the McAdams was surveyor to the Southampton South trust at this time,[2] but clearly the trust's main branch road had escaped his attention. The nature of the local inhabitant's recommendations about these two sections of turnpikes indicate that even the most basic of road maintenance was lacking.

The sixth letter of complaint appeared in the Hampshire Advertiser in 1836 and once again came from someone who was relatively familiar with the locality.[3] It related to the turnpike road between Winchester and Southampton and represented a fairly serious criticism of the repair activities of two of the region's premier trusts - i.e. the Southampton North and the Southampton South. The correspondent pointed out that he had travelled over upwards of 100 miles of turnpiked and parochial roads on his way to Southampton and could recollect no parallel to the condition of the turnpike from Winchester to Southampton. He stated that he could not have selected 'so great a distance of road, calculated to impede the progress of a carriage, from want of the application of the simplest rules of road management'. He drew attention particularly to the filthy state of the repair materials used and the lack of proper road-scraping (i.e. dirt removal). Apparently, the poor quality of the materials had attracted his attention on previous journeys, but on this occasion the situation was much worse, and he considered the road 'unsuited for (the) rapid travelling of the present day'. The criticism

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1 Southampton Herald, 18/10/1824

2 See this chapter, p. 145

3 Hampshire Advertiser, 5/11/1836

of the quality of materials used on the Southampton South trust is especially surprising, since the position of surveyor at the time was held jointly by William McAdam and his son,[1] two people who would have been expected to take considerable care over the quality of repair materials. On the other hand, this is perhaps rendered less surprising by the fact that in 1831 the Southampton North trust dispensed with William McAdam's services as surveyor because it was dissatisfied with the condition of the road; McAdam had held the post since 1820.[2] However, while there may clearly be some cause to believe that the standard of road maintenance on these two trusts in the mid-1830s was not good, it should be mentioned that several parts of the road were being subjected to unusually heavy wear and tear at the time, on account of the construction work in progress on the Winchester-Southampton section of the London and Southampton Railway.[3] The Southampton North trust's road had to be altered in a number of places to accommodate the railroad,[4] and this may well have contributed to a decline in the quality of the road. Clearly, therefore, if the Winchester-Southampton turnpike was really in an unsatisfactory state of repair at the time the complaint in question was made, to a certain extent this was the result of circumstances beyond the trustees' control.

The final letter of complaint appeared in the Hampshire Advertiser in 1840, and concerned the newly-established turnpike between Bishop's Waltham and Fisher's Pond.[5] It was made by the newspaper editor as a result of several letters of complaint received from persons who used the road regularly. The whole of the turnpike was quoted as being in

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[1] Soton. R.O., D/PM 8/1/3

[2] Hants. R.O., 4M30/2-3

[3] For example, the minutes for the meeting of the Southampton South trust of 28/1/1837 record that 'the road to Swaythling (the trust's branch road) has been very much cut up by the materials for the railway being carried thereon'. In direct contradiction to the newspaper complaint, though, the trust's main road was reported as 'in a good state of repair' - Soton. R.O., D/PM 8/1/3

[4] The trustees gave consent for several such alterations at a meeting in August 1836 - Hants. R.O., 4M30/3

[5] Hampshire Advertiser, 27/11/1840

an 'almost impassable state', and the section across Stroud Wood, in particular, had been in a miserable condition for three years. However, there was a very simple explanation for this state of affairs: the trust was in financial difficulties and since 1837 had been unable to devote any part of its income to road repairs. The responsibility for maintaining the turnpike therefore rested with the parishioners and the trustees informed the newspaper editor accordingly, suggesting that indictments should be preferred against the respective parishes.[1]

At the start of this examination of the contemporary newspaper evidence about the state of the region's turnpikes, it was stated that as only seven letters of complaint were discovered out of the 87 years searched, this offered tentative confirmation of the conclusions drawn from the remarks of Hanway, Dibdin and others. Detailed scrutiny of these letters clearly reinforces such a view, since none of them constituted really serious criticisms of trusts' road repair activities. In five out of seven instances, there were extenuating circumstances of one kind or another, while the remaining two letters of complaint were of relatively minor significance.

The turnpike system of Southern Hampshire, 1750-1850 - retrospect

The period from 1750 to 1850 undoubtedly witnessed remarkable changes in the nature and quality of Southern Hampshire's main road system. The introduction and widespread adoption of the turnpike concept effected a dramatic transformation of the principal roads. Under the auspices of the region's turnpike trusts, road surfaces were progressively improved, road drainage and road-widening schemes implemented, hills lowered and, in some instances, entirely new roads constructed altogether. The result was that by the 1820s and 1830s, Southern Hampshire possessed a system of main roads which would have exhibited a surprising degree of modernity even to present-day eyes. The standard width of the majority of the region's turnpike roads by this time was 10 metres (as wide as present-day B Class roads), the convex surface form was widespread, and steep gradients and tortuous bends were the exception rather than the rule. Perhaps more

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[1] Hampshire Advertiser, 4/12/1840

significant, the roads were almost invariably bordered by hedged or fenced banks,[1] and these banks sometimes continued uninterrupted for several kilometres, to be broken only where a parish road[2] or another turnpike road joined or traversed.[3] Their purpose was to prevent travellers circumnavigating tollgates and thereby evading toll payment.[4] They also prevented local inhabitants, farmers especially, using stretches of turnpike road between tollgates, thereby also evading payment. The existence of these banks meant that access to and from the region's turnpike roads was restricted, which suggests a strong analogy with the twentieth century motorway concept, though obviously on a much lesser scale. As well as vastly improving the nature and quality of roads, therefore, the region's trusts were, through their concern to minimise toll evasion, responsible for the creation of a system of 'through-ways', which were in themselves conducive to much greater and faster travel, and in some respects anticipated a road transport development of more than a century later.

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[1] See for example, Hants. R.O., Gosport road contracts, 1829-36, CC 28; Hants R.O., Bishop's Waltham and Fisher's Pond road contract, 1833, 5M54/145; Hants R.O., Accounts for road-works etc. for Andover trust, 1782-90, 5M52/TR5

[2] Trusts often erected side-gates or bars at such points.

[3] Most turnpike Acts gave trusts powers to stop up any lanes leading into their roads.

[4] In the early days of turnpikes, this was a common practice.

CHAPTER SEVEN

TRAFFIC OVER THE TURNPIKE SYSTEM, 1750-1850

The introduction of a transport improvement invariably represents a response to growing demand for transport facilities. At the same time, the transport improvement, itself, may act as a stimulus to that demand. The relationship between transport and economic growth is a mutually reinforcing one, and this was particularly so in the context of the development of the Southern Hampshire turnpike system. While it is true that various motives underlay the establishment of turnpike trusts in the region, the most significant factor at the basis of motivation was the growing demand for better roads. The volume of traffic using the region's roads in the mid-eighteenth century was showing clear signs of increase and the turnpike activity of the period reflects this closely. In turn, the development of the turnpike system acted as a stimulus to that increase. The combined result was a remarkable expansion in the volume of traffic passing over the region's roads from the 1750s. This involved both private and public transport, the movement of passengers as well as goods, and was halted only with the advent of the railways from 1840. The primary aim of the present chapter is to examine the changes in the volume of traffic over the region's turnpike system between 1750 and 1850, with particular emphasis on the scale of expansion from the 1750s up to 1840. However, some attention will also be given to the questions of traffic type and seasonal fluctuations in traffic.

7.i) Traffic volume

The most obvious sources for examining changes in the volume of traffic over the region's turnpikes are undoubtedly the toll returns of turnpike gatekeepers. Unfortunately, though, the most obvious sources prove to be those with the poorest survival rate.[1] Clearly, therefore, it is necessary to look for alternative sources, and the next most obvious are trusts' toll income statistics, which must invariably bear some relationship to traffic volume. The survival rate here is much greater, with data available in trust minutes and accounts, in toll

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[1] See chapter two, p. 24

	Means (£s)									
	1760s	1770s	1780s	1790s	1800s	1810s	1820s	1830s	1840-5	1847-9
Portsmouth-Sheet Bridge	-	-	-	-	-	-	-	91.9	60.4	43.1
Kingston-Sheet Br. Lower	-	-	-	-	-	-	-	77.5	53.7	38.0
Sarum-Eling	-	-	-	-	-	-	-	46.8	42.3	18.5
Winchester Upper	-	-	-	-	-	-	-	37.6	28.9	26.1
Winchester Lower	-	-	-	26.6	26.4	33.1	34.7	43.2	27.8	24.6
Andover	15.7	17.9	15.7	16.4	19.4	32.2	49.2	50.6	30.7	18.4
Stockbridge	13.8	13.0	12.0	13.1	17.5	-	19.1	21.4	12.1	6.2
Whiteparish-So'ton	-	-	-	-	16.4	-	-	23.9	25.5	15.6
Gosport	10.1	12.5	24.1	22.0	32.1	-	31.0	33.8	28.1	22.6
Southampton North	-	18.0	29.5	29.0	36.1	46.7	87.9	127.8	68.3	43.1
Southampton South	9.5	9.6	7.1	12.2	47.6	58.3	83.8	66.0	65.3	25.3
Winchester-Stockbridge	-	13.2	10.3	9.7	14.1	16.5	18.5	18.4	16.4	18.5
Winchester-S.C. Down	-	10.3	11.4	12.8	16.2	16.4	16.9	8.7	6.6	4.9
Popham-Winchester	-	-	-	15.7	18.8	22.1	33.5	45.2	25.4	24.6
Winchester-Romsey	-	-	-	-	12.1	-	13.7	16.1	15.3	11.7
Romsey-Ringwood	-	-	-	-	12.3	12.8	-	11.4	13.1	9.4
Ringwood-Wimborne	-	-	-	-	17.5	23.7	27.7	29.9	32.8	18.3
Winchester-Andover	-	-	-	-	-	5.2	7.3	12.5	10.4	9.2
Winchester-Newtown	-	-	-	-	-	11.2	14.8	23.1	16.0	11.7
Cosham-Chichester	-	-	-	35.7	75.0	86.7	72.0	58.9	71.5	35.5
Romsey-Stockbridge etc.	-	-	-	-	-	-	-	10.1	11.9	12.3
Lymington	-	-	-	-	-	-	-	19.8	19.4	13.8
Botley	-	-	14.4	15.6	-	-	11.2	11.6	10.6	12.1
Andover-Chilton	-	-	-	-	-	-	-	17.2	12.3	11.2
Petersfield-Ropley		-	-	-	-	-	-	8.0	7.1	6.1
Basingstoke-Alton etc.				-	8.7	11.5	11.5	12.1	14.3	14.5
London-Southampton					-	-	10.4	15.3	11.4	13.0
St. Cross-Park Gate						13.1	14.6	21.7	16.5	15.5
Titchfield-Cosham						65.2	56.0	79.6	61.2	42.7
Winchester-Petersfield							-	11.2	12.9	13.9
Midhurst-Sheet Bridge							-	17.7	19.0	17.9
Farnham-Petersfield							-	8.4	10.1	9.7
Cranbourne & New Forest								3.9	6.9	7.4
B. Waltham & F. Pond								15.0	14.2	15.0
Andover Station									23.5	19.3
Christchurch-Lyndhurst									7.2	7.8

TABLE 7.1

leases, in toll auction announcements in local newspapers, and in British Parliamentary Papers.[1] By combining these different categories of evidence, it is possible to build up a fairly comprehensive picture of the changing toll incomes of Southern Hampshire trusts during the period in question.

The extent of the available data on trusts' toll incomes assembled from the various sources is indicated in Table 7.1. The table shows mean annual toll income per km for ten different time-periods: the eight decades from 1760 to 1840, the years 1840-5 and the years 1847-9.[2] The highest value - £127.8 per km - was for the Southampton North trust in the 1830s, the turnpike which would be expected to have been among the busiest in the region because it covered a section of the main London-Southampton road. High values were recorded also by the Portsmouth-Sheet Bridge trust (£91.9 per km in the 1830s), the Cosham-Chichester trust (£86.7 per km in the 1810s), the Southampton South trust (£83.8 per km in the 1820s[3]), the Titchfield-Cosham trust (£79.6 per km in the 1830s) and the Kingston-Sheet Bridge trust - lower district - (£77.5 per km in the 1830s). The Portsmouth-Sheet Bridge trust and the lower district of the Kingston-Sheet Bridge trust covered portions of the main London-Portsmouth road and thus the high values recorded by them are in no way unexpected.[4] Similarly, the Southampton South trust covered part of the main London-Southampton road and thus the figure of £83.8 per km for the 1820s is not surprising either. The high values recorded by the Titchfield-Cosham and Cosham-Chichester trusts, however, are somewhat unexpected, since neither of the roads they covered could be described as major routes. The high value for the Titchfield-Cosham trust is perhaps in part explained by the

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[1] See chapter two, p. 24, 29-32

[2] For details of how these figures have been calculated and other related points, see chapter three, p. 51-3

[3] The 1830s value would most certainly have been higher but for the fact that no tolls were collected at Southampton gate and Love Lane bar in this decade - Soton. R.O., D/PM 8/1/3

[4] It should be noted, though, that the figures for both these trusts are most certainly slightly inflated, since under the Portsmouth-Sheet Bridge trust's 1826 renewal Act (6 Geo. IV c. lxxxvii), a new and rather exorbitant toll schedule was introduced - see Appendix 3.1, and under the Kingston-Sheet Bridge (lower district) trust's 1823 renewal Act (4 Geo. IV c. lxxix), the number of tolls permitted to be levied was increased from two to five, and five were taken.

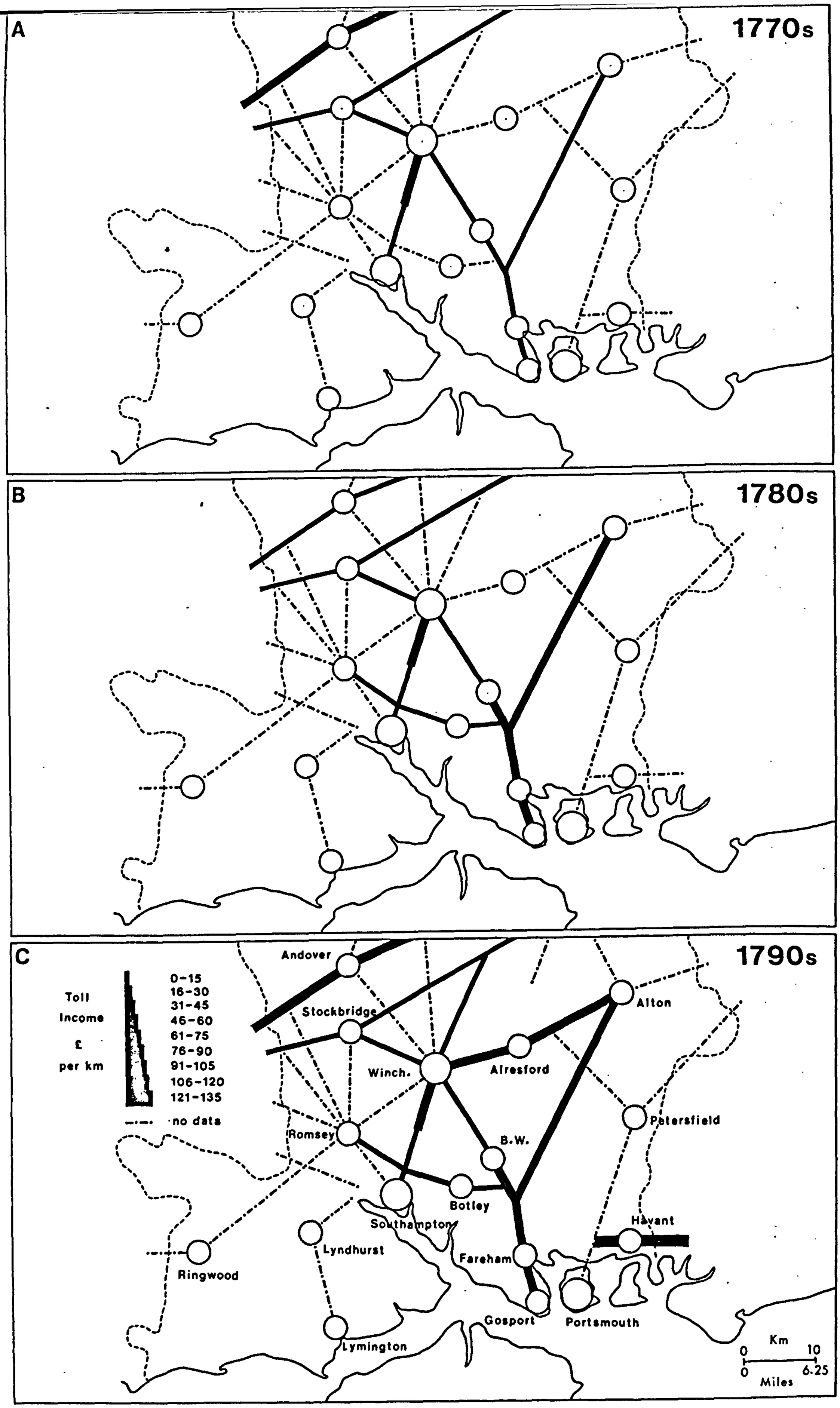
A
1770s
B
1780s
C
1790s
Toll
Income
£
per km
0-15
16-30
31-45
46-60
61-75
76-90
91-105
106-120
121-135
no data
Andover
Stockbridge
Alton
Winch.
Alresford
Romsey
B.W.
Petersfield
Botley
Southampton
Havant
Lyndhurst
Fareham
Ringwood
Gosport
Portsmouth
Lymington
Km
0
10
0
6.25
Miles

FIGURE 7.1

fact that, under its second Act of 1831,[1] the trust was empowered to take (and took) a second toll. Even so, the trust's toll income was still fairly high in the 1810s and 1820s. Similarly, the high value for the Cosham-Chichester trust is perhaps partially explained by the fact that the trust was permitted to take (and took) two tolls, which was somewhat unusual for a trust covering some 20 kms only. However, a value of this magnitude was recorded as early as the 1810s, so that it is unlikely that the number of tolls levied is the major explanatory factor. An alternative explanation for the high values recorded by these two trusts might be that they had unusually high toll schedules, but examination of the evidence reveals that this was not the case at all.[2] It must be concluded, therefore, that this coastal route was a busy one, even though it was not a traditionally important communication line.[3] At the other end of the scale, the lowest toll income value - £3.9 per km - was for the Cranbourne Chase and New Forest trust in the 1830s. Again, this is in no way surprising, as the trust in question was set up only in 1832, and moreover, its foundation might well be considered unwarranted, even though it offered an alternative route to the West of England. Closely behind the Cranbourne Chase and New Forest trust was the trust covering the road from Winchester to Stephen's Castle Down, with a mean value of £4.9 per km in the period 1847-9. This particular trust covered what was once a fairly important cross-country route, but the establishment of competing trusts over approximately the same route,[4] and then railway competition, resulted in a substantial fall in its toll income, especially after 1830.

The information contained in Table 7.1 is presented in cartographic form in figures 7.1 - 7.3, and the maps afford a useful overall indication of changes in the volume of traffic over the region's turnpikes during the period. An examination of figures 7.1A, 7.1B and 7.1C, which show mean annual toll income per km for the three decades from 1770 to 1800, reveals a limited though clearly noticeable increase in trusts'

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[1] 1 Wm. IV c. 61

[2] See Appendix 3.1

[3] This was true also in the first half of the eighteenth century - see chapter five, p. 98-9

[4] The St. Cross-Park Gate trust (1810) and the Bishop's Waltham-Fisher's Pond trust (1833)

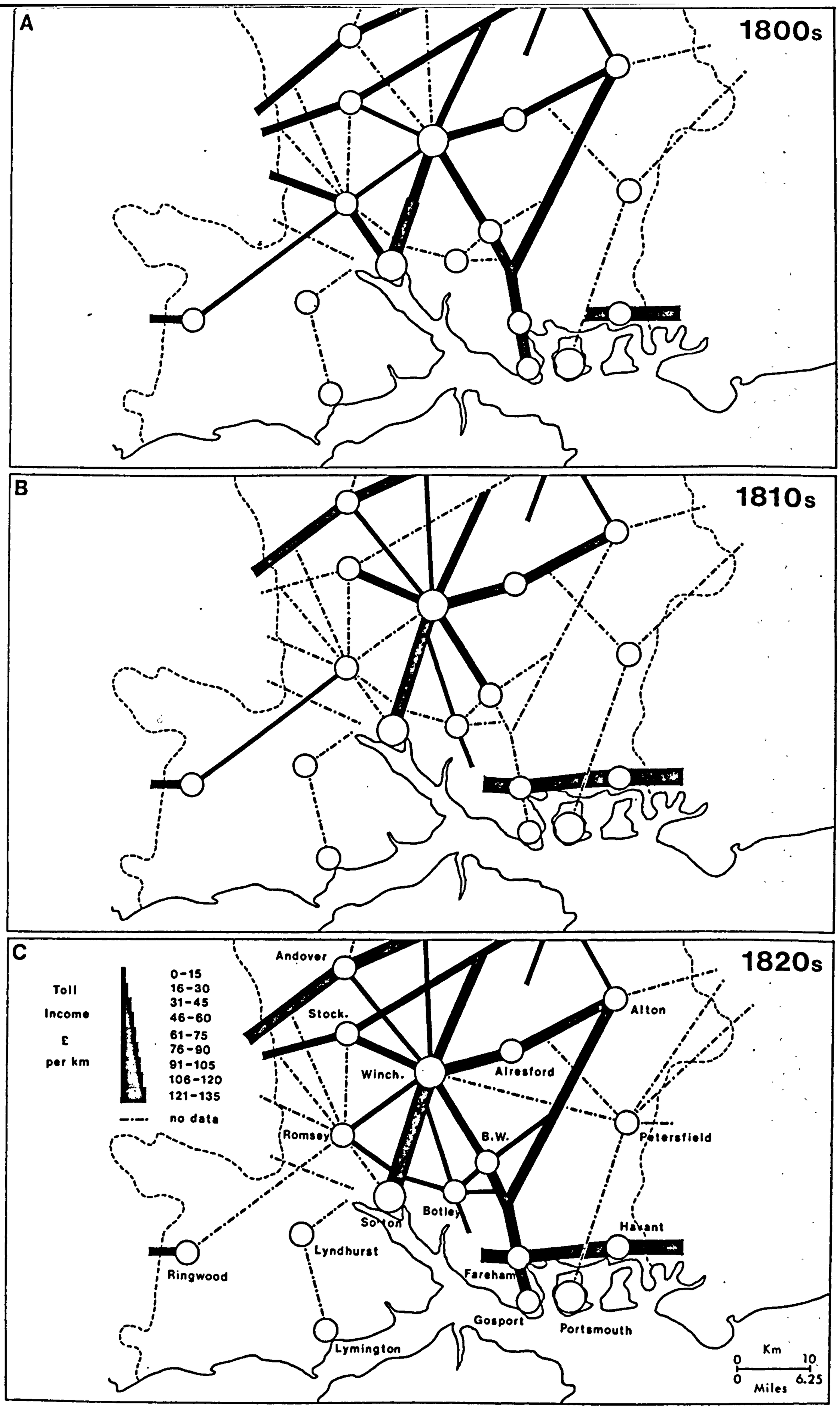
A
1800s
B
1810s
C
1820s
Toll
Income
£
per km
0-15
16-30
31-45
46-60
61-75
76-90
91-105
106-120
121-135
no data
Andover
Stock.
Winch.
Alresford
Alton
Romsey
B.W.
Petersfield
Botley
Havant
Lyndhurst
Ringwood
Fareham
Gosport
Portsmouth
Lymington
Km
0
10
0
6.25
Miles

FIGURE 7.2

toll income. Admittedly, there are a fair number of gaps in the data, but at the same time, the data that are available cover most of the more important routes, the only really serious omission being the route from London to Portsmouth. An interesting feature of figure 7.1C is the high value (relatively speaking) for the Cosham-Chichester trust, higher even than the Andover trust on the main Western Road. As was pointed out earlier, the Cosham-Chichester trust's toll schedule was not unusually high, and at this particular point in time, it fell very closely in line with the majority of other trusts in the region. It is true that it took two tolls from road-users, and this was rather high for a trust of this length. However, this fact alone could not possibly explain away the high toll income figure, and thus the conclusion drawn earlier that this coastal route was a busy one is reinforced. Another interesting feature of this series of maps - figures 7.1B and 7.1C especially - is the prominence of the Gosport trust. Before about 1750, the route covered by this trust was virtually non-existent: it did not feature in Ogilby's survey of 1675 and it was not included in any of the county maps of the period 1675-1750 which showed roads.[1] Thus, the relatively high toll income value for the trust, even as early as the 1780s is particularly interesting, and provides strong evidence of the growing significance of Gosport as a naval and military centre at this time.[2]

Figures 7.2A, 7.2B and 7.2C show mean annual toll income per km for the three succeeding decades from 1800 to 1830. In this instance, it is possible to discern a very marked increase in trusts' toll income over the period. This increase is especially prominent in respect of the Andover trust, the Southampton North and the Southampton South trusts, the Winchester Lower trust and the Popham-Winchester trust - all of which covered major routes. A comparison of figures 7.2C and 7.1A shows that between the 1770s and the 1820s, some trusts recorded increases of the order of 200 per cent and more. Although the majority of trusts registered significant increases in toll income over the decades from 1800 to 1830, a number registered virtually no increases at all, the Gosport and Cosham-Chichester trusts among them. These two trusts, of course, were the ones that were of particular prominence in the last decade of the eighteenth century and it is therefore somewhat unexpected that they

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[1] See chapter five, p. 85-6

[2] See chapter four, p. 64-5

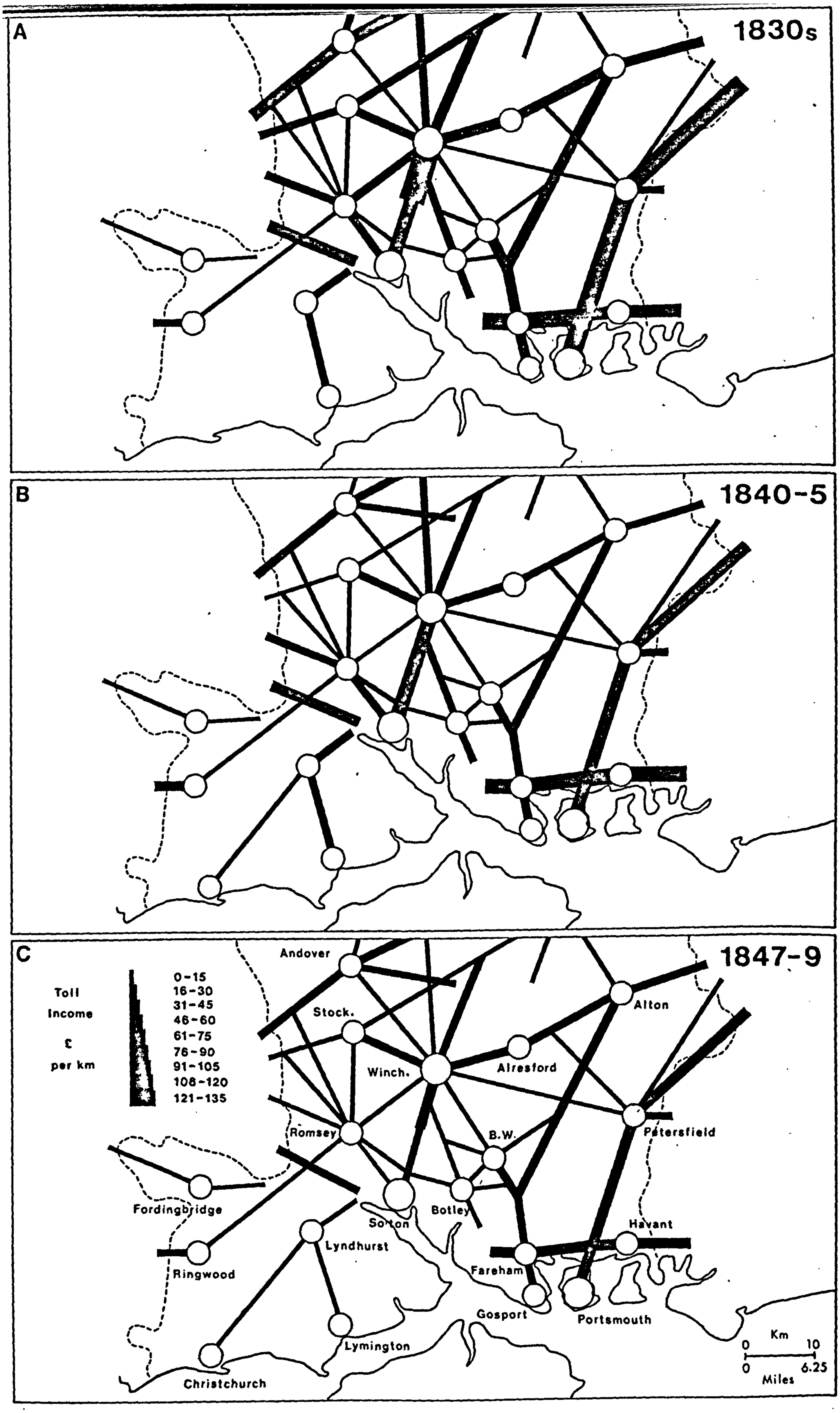
A
1830s
B
1840-5
C
1847-9
Toll
Income
£
per km
0-15
16-30
31-45
46-60
61-75
76-90
91-105
106-120
121-135
Andover
Stock.
Alton
Winch.
Alresford
Romsey
B.W.
Petersfield
Fordingbridge
Botley
Soton
Havant
Lyndhurst
Ringwood
Fareham
Gosport
Portsmouth
Lymington
Christchurch
Km
0
10
0
6.25
Miles

FIGURE 7.3

registered little increase in toll income in the first decades of the nineteenth. However, in the context of the Gosport trust, this is not really unexpected at all. As was pointed out in an earlier chapter, Gosport's fortunes were closely tied to its naval and military functions - in wartime it thrived, while in peacetime it stagnated or even declined - and in the extended peace from 1815, these functions inevitably lost much of their former importance, resulting in a contraction of economic activity, trade with London and the immediate hinterland especially.[1] A rather similar explanation may well apply in the case of the Cosham-Chichester trust. The road the trust administered was close to Portsmouth, and Portsmouth's fortunes, like those of Gosport, were closely linked to its naval and military functions. The extended period of peace from 1815 meant that the town lost much of its former importance, which in turn resulted in a fall-off in economic activity, notably in the sphere of its hinterland trade.[2]

Figure 7.3A shows mean annual toll income per km for the 1830s, probably the height of the 'Turnpike Age' in the region. This is the first time-period for which full data are available and, in consequence, the initial impression is that trusts' toll incomes have increased significantly over the previous decade (fig. 7.2C). However, while this may well be so for a number of trusts - the Southampton North and the Winchester-Newtown trusts being the most obvious examples - it is not so in the majority of instances. Most trusts registered only very marginal increases. The explanation is by no means clear. Railways did not become a serious competitor to the turnpike trusts until well into the 1840s, so that the most logical factor is ruled out immediately. It might be possible to argue that this virtual stagnation was in part a reflection of the state of the contemporary regional economy. As pointed out previously, the immediate post-war decades were particularly difficult ones for the Southern Hampshire area, in respect of both agricultural and industrial activity,[3] and it is perfectly feasible that the pace of economic growth slackened at the time. This would undoubtedly have affected the expansion of trade, which would in turn have affected

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[1] See chapter four, p. 65

[2] See chapter four, p. 64

[3] See chapter four, p. 72-3, 76-9

trusts' toll incomes, though why toll incomes exhibited this tendency towards stagnation only in the 1830s and not before remains obscure.

The two final maps (figs. 7.3B and 7.3C) show mean annual toll income per km for the years 1840-5 and 1847-9, a period that might well be described as the railway transition phase. Although the early 1840s witnessed the opening of but two railway lines in the area - from London to Southampton via Basingstoke and Winchester, and from Bishopstoke to Fareham and Gosport - there was a marked decrease in trusts' toll incomes throughout the region during this period. This was particularly true of the trusts covering the London-Southampton route (via Basingstoke and via Alton), the London-West of England route (via Andover and via Stockbridge), the London-Gosport route and the London-Portsmouth route. The opening of the London-Southampton railway line was clearly the main factor in the fall in the toll incomes of trusts along the London-Southampton route, but on the London-West of England, London-Gosport and London-Portsmouth routes, there were no railway lines in existence. Why, therefore, did the trusts along these routes register falls in toll income? The explanation is simply that the power of the London-Southampton railway to attract traffic went considerably beyond the immediate bounds of the London-Southampton route itself, largely on account of the substantial saving in travel time which the railway afforded. Thus, a considerable amount of traffic on both the London-Gosport and London-Portsmouth routes transferred to the London-Southampton railway,[1] and this was facilitated, of course, with the opening of the Gosport branch (1842), and also the establishment of a floating bridge between Gosport and Portsmouth (1840). Similarly, a fair amount of traffic on the London-West of England route through Andover and through Stockbridge transferred to the London-Southampton railway for part of the way,[2] usually joining or leaving it at either Winchester or Andover Road. However, a more significant factor in the decline in the toll incomes of trusts along this route was probably the opening of the

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[1] This is especially evident in the way the stage-coach and carrier services between London and Gosport and London and Portsmouth contracted at the time - see chapter eight, p. 188 and chapter nine, p. 207

[2] For an approximate indication of the size of this transfer, see H.L.R.O., Minutes of Evidence, H.L., 1846, Vol. 34, London and South Western Railway Basingstoke and Salisbury Extension, 1-9

Great Western Railway line between London and Bristol in 1841, offering a far quicker means of reaching the West of England than even the combined rail/road route through Hampshire. The later 1840s witnessed further railway development in the area - notably, Southampton to Dorchester via Ringwood, Bishopstoke to Salisbury, Fareham to Portsmouth, and London to Portsmouth via Chichester and Brighton - and not unexpectedly, this was accompanied by a further fall in trusts' toll incomes (fig. 7.3C). It is true that a number of trusts attempted to combat the problem of rail competition at this time by making selective reductions in their toll schedules, but in few instances were such reductions very great and thus the effect upon trusts' toll incomes was relatively marginal.[1] It is perhaps important to point out here that it was not always a straightforward task for a trust to introduce a reduced toll schedule, since any change of this nature had to have the consent of a substantial portion of the trust's creditors, and if the financial prospects of the trust were not particularly favourable, this is unlikely to have been given readily.

On the basis of this examination of changes in trusts' toll incomes, it is clear that between about 1770 and 1830, there was a very substantial increase in the volume of traffic over the region's turnpikes. In particular, the second half of the period - 1800 to 1830 - emerges as an especially expansive phase. However, to establish the extent of this traffic increase with any degree of precision, it is obviously necessary to look closely at the record of individual trusts. This is possible only where sufficient runs of data are available, and also, of course, only where trusts were fairly long-established. The results are graphed in figures 7.4 - 7.7 and cover 14 trusts in all. The ones exhibiting the most striking increases in toll income are the Southampton North (fig. 7.4D), the Southampton South (fig. 7.5A), the Andover (fig. 7.4B) and the Cosham-Chichester (fig. 7.6D) and these merit detailed examination.

Of the four, the record of the Southampton North trust is by far the most impressive. During the last two decades of the eighteenth century,

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[1] In 1844, for example, selective reductions were made in the toll schedules for the Southampton North, Winchester-Stockbridge and Winchester-Stephen's Castle Down trusts, but these cuts amounted to an average of 25 per cent only, and thus coupled with their selective nature, would not have affected toll income to any great extent - Hants. R.O., 4M30/3

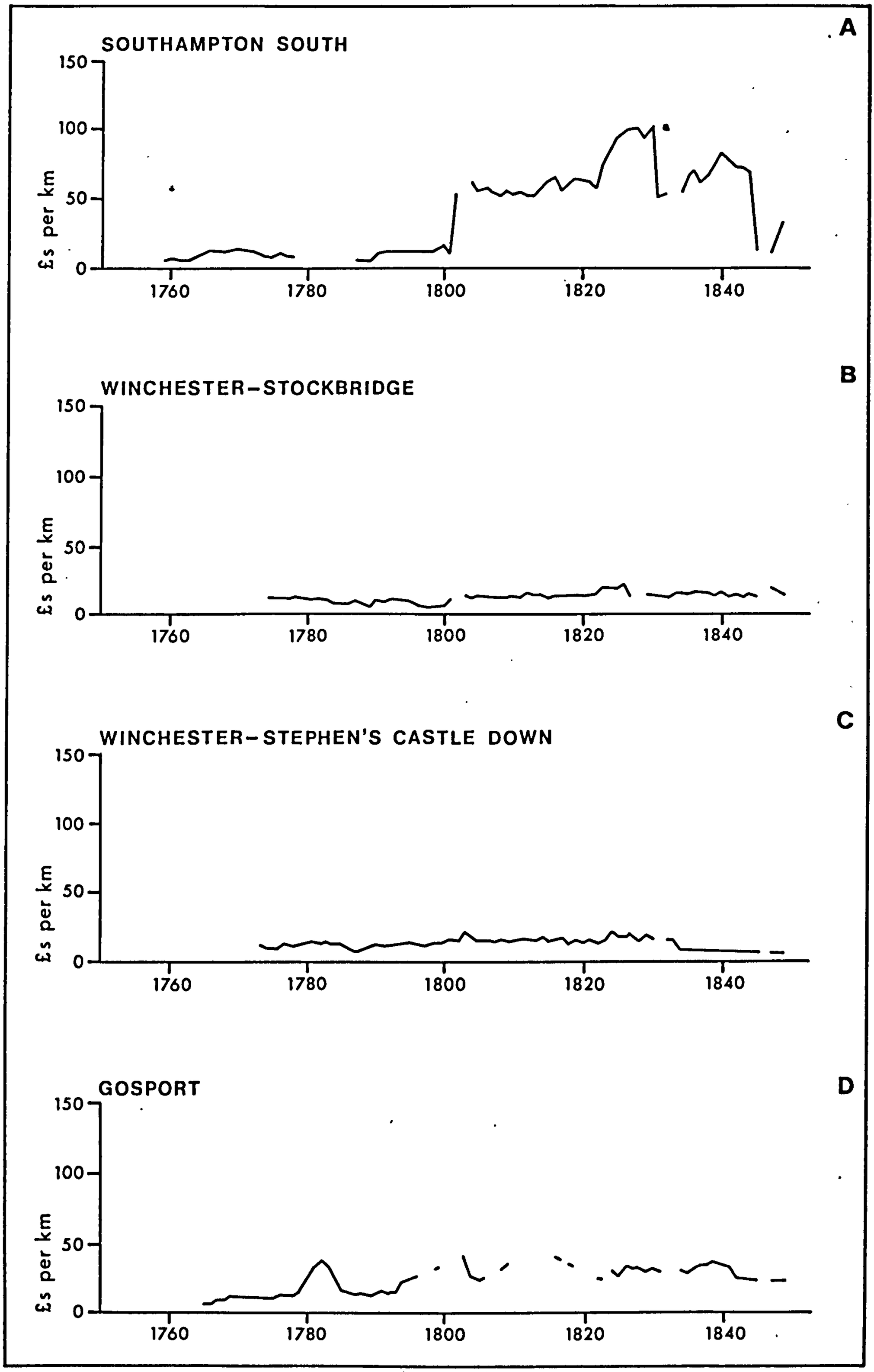
A
SOUTHAMPTON SOUTH
£s per km
150
100
50
0
1760
1780
1800
1820
1840
B
WINCHESTER–STOCKBRIDGE
£s per km
150
100
50
0
1760
1780
1800
1820
1840
C
WINCHESTER–STEPHEN'S CASTLE DOWN
£s per km
150
100
50
0
1760
1780
1800
1820
1840
D
GOSPORT
£s per km
150
100
50
0
1760
1780
1800
1820
1840

FIGURE 7.5

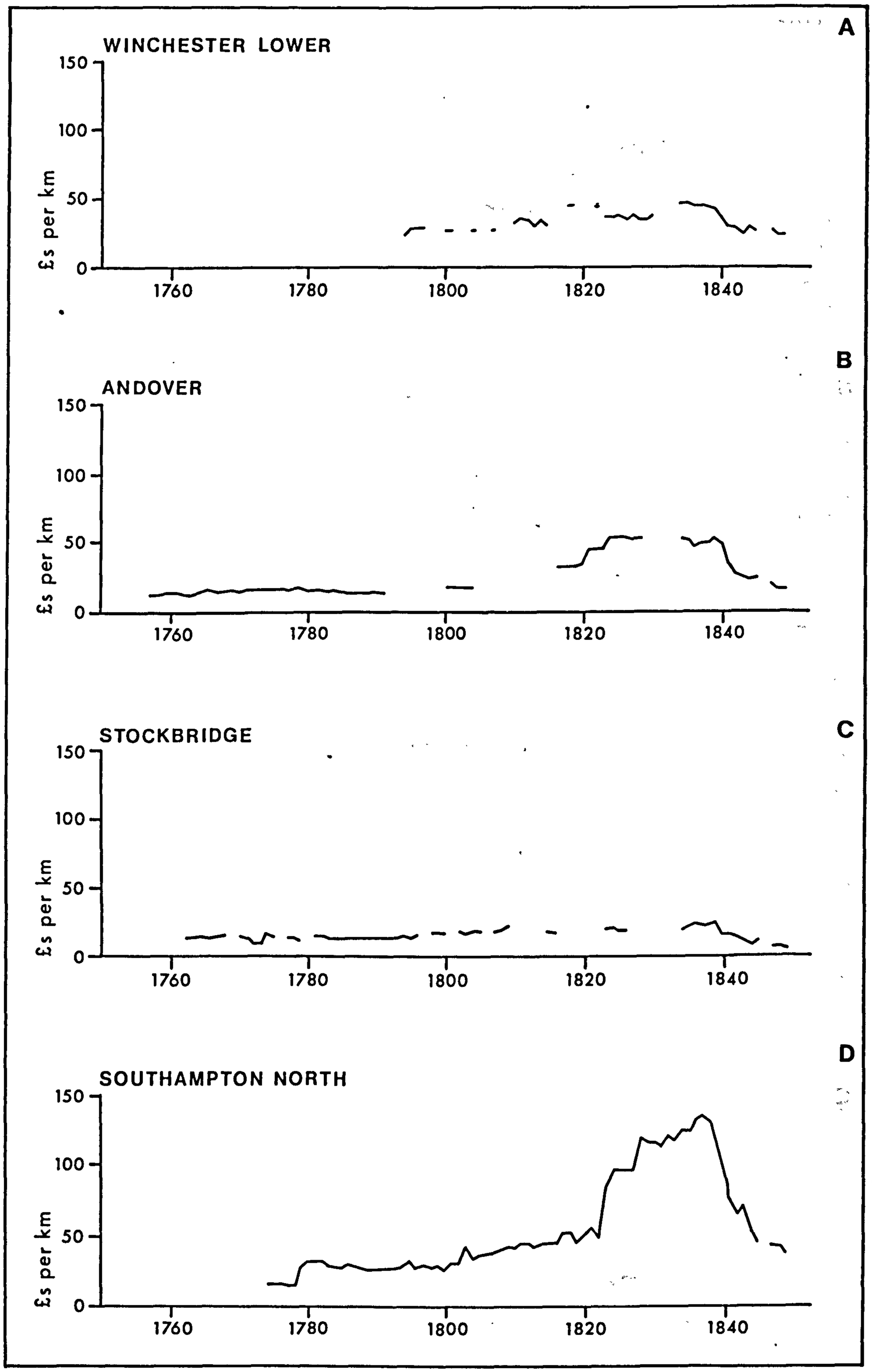
A
WINCHESTER LOWER
£s per km
150
100
50
0
1760
1780
1800
1820
1840
B
ANDOVER
£s per km
150
100
50
0
1760
1780
1800
1820
1840
C
STOCKBRIDGE
£s per km
150
100
50
0
1760
1780
1800
1820
1840
D
SOUTHAMPTON NORTH
£s per km
150
100
50
0
1760
1780
1800
1820
1840

FIGURE 7.4

the trust's annual toll income remained around the £30 per km mark. From about 1800, however, it began to increase, slowly at first and then rather more dramatically, until by the 1830s, annual toll income per km was averaging some £120, a four-fold increase over the 1780s and 1790s. To establish what this four-fold increase in toll income represented in terms of the real increase in traffic over the turnpike, it is clearly necessary to take account of the question of toll increases. A detailed scrutiny of the trust's toll schedules[1] indicates that the real increase in traffic over the turnpike between the 1780-1800 period and the 1830s was of the order of a three-fold advance, with the 1820s and 1830s emerging as a very significant expansion phase.

In comparison with its northern neighbour, the Southampton South trust's record (fig. 7.5A) is rather less impressive, although there were some fairly dramatic fluctuations. Throughout the last four decades of the eighteenth century, the trust's annual toll income remained around the £10 per km mark. Then, during the following two decades from 1800 to 1820, it averaged around £60 per km, and for a brief spell in the late 1820s, reached £100 per km. This last figure was in fact the highest achieved, since in the early 1830s, income fell back to around £50 per km, although there was some recovery in the later years of that decade. The range of increase in toll income per km, therefore, was from £10 to £100 - a ten-fold expansion. This is considerably greater than for the Southampton North trust, although if data had been available for that particular trust for the 1760s and 1770s, the pictures presented by the two trusts may not have been very different. Once again, to establish what this ten-fold increase in toll income represented in terms of the real increase in traffic over the turnpike, it is necessary to take account of the question of toll increases. However, before proceeding, there is another very important consideration to be taken into account here. Somewhat unusually, the major part of the trust's toll income was not always derived from the dues taken on its principal road (Southampton towards Winchester). Up to 1801, there is no difficulty as the trust possessed one gate only, at Marlbrook Pond, approximately seven kms north of Southampton. In that year, though, it was authorised to set up a second gate at Four Posts, on the road leading westward from

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[1] See Appendix 3.1

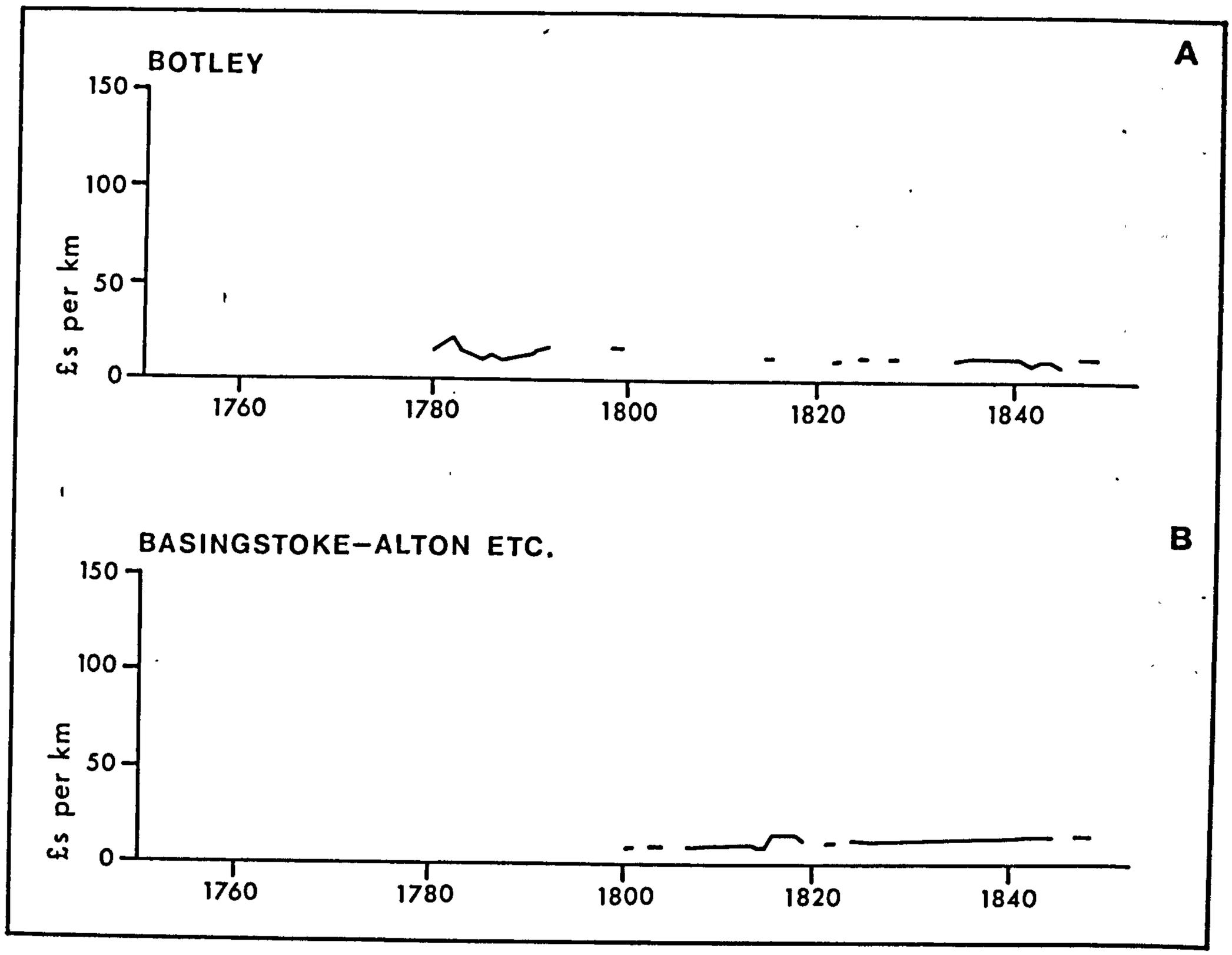
A
BOTLEY
£s per km
150
100
50
0
1760
1780
1800
1820
1840
B
BASINGSTOKE–ALTON ETC.
£s per km
150
100
50
0
1760
1780
1800
1820
1840

FIGURE 7.7

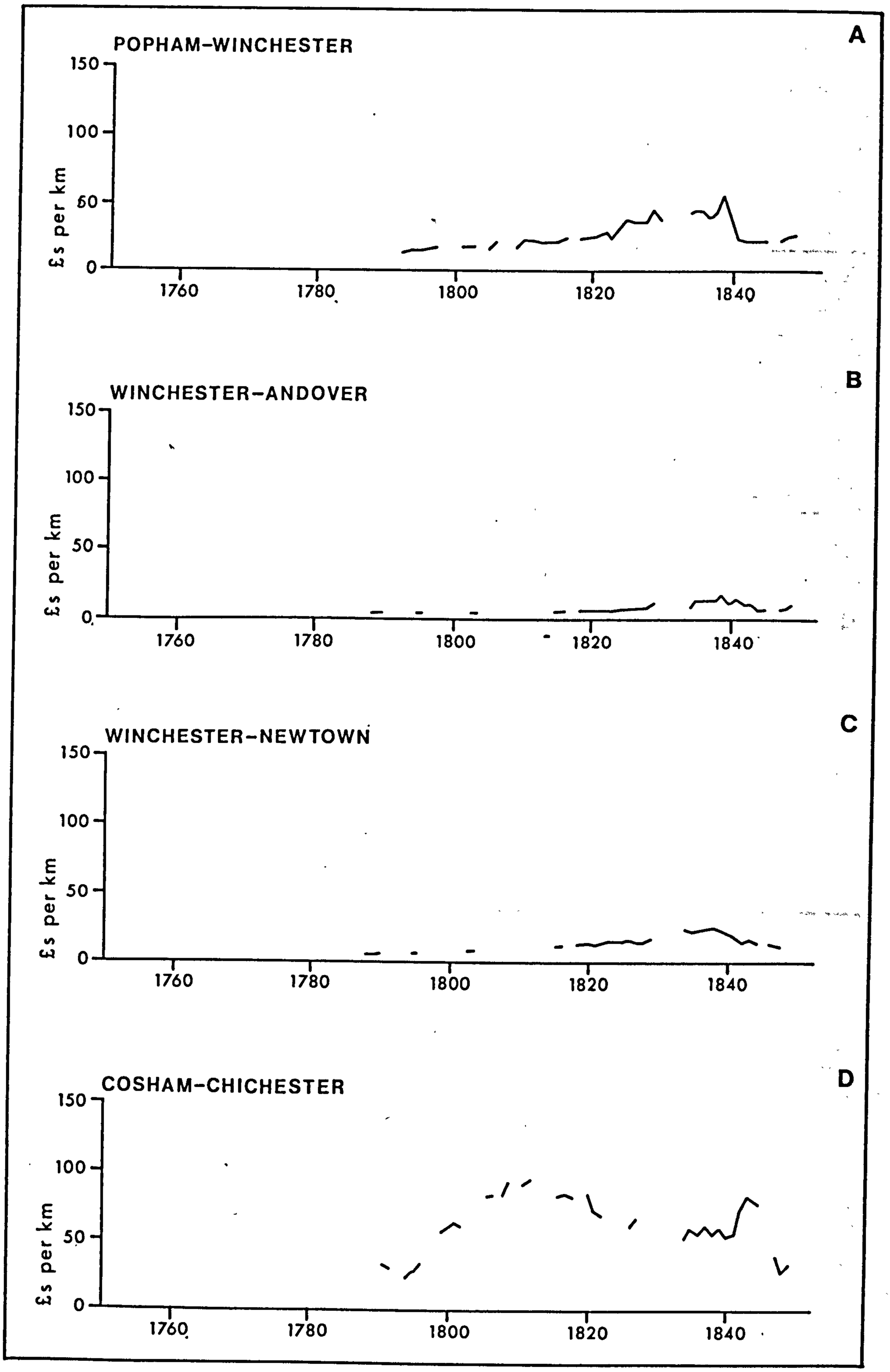
A
POPHAM–WINCHESTER
£s per km
150
100
50
0
1760
1780
1800
1820
1840
B
WINCHESTER–ANDOVER
£s per km
150
100
50
0
1760
1780
1800
1820
1840
C
WINCHESTER–NEWTOWN
£s per km
150
100
50
0
1760
1780
1800
1820
1840
D
COSHAM–CHICHESTER
£s per km
150
100
50
0
1760
1780
1800
1820
1840

FIGURE 7.6

Southampton towards Romsey, Salisbury, Ringwood and Lyndhurst.[1] However, yet further qualification is necessary here since the second gate, which became known as the Southampton gate, was not a permanent one. The trust was permitted to take tolls for but four months each year, and even then only if the state of funds deemed it necessary. The result is that up to 1801, toll income was derived entirely from dues taken on the principal road, but after that date, and with the exception of the years 1831-9,[2] toll income includes dues taken on the road leading westward from Southampton. These changes are reflected clearly in figure 7.5A and must obviously be taken carefully into account. Returning to the question of toll increases, examination of the relevant toll schedules indicates that the real increase in traffic over the trust's principal road between the 1760-1800 period and the 1830s would have been of the order of a three to four-fold advance.

The third trust to exhibit a fairly striking change in toll income was the Andover (fig. 7.4B). During the period 1760-90, annual toll income per km averaged around the £15-20 mark. In the first years of the nineteenth century, this figure increased to £20, and by the later 1810s had reached just over £30. Further increases followed, and in the later 1820s and later 1830s, toll income was averaging around £50 per km, a roughly three-fold increase over the figure for the 1760-90 period. When account is taken of toll increases, it is clear that the real increase in traffic over the turnpike between the 1760-90 period and the 1820-40 period was of the order of a two-fold advance, with the years between about 1805 and 1815 emerging as the significant growth phase.

The fourth and final trust to exhibit a fairly striking change in toll income was the Cosham-Chichester trust (fig. 7.6D). Although there are a number of gaps in the data, the overall trend is fairly clear. In the last decade of the eighteenth century, toll income per km was averaging around the £30 mark. By about 1800, this had risen to approximately £60 and by about 1810 to some £90. Thereafter, income declined and by the later 1820s was averaging only around £60 per km. There was a sharp rise in the early 1840s, but by the close of that decade, the income level had fallen back to around £30. Compared with the three other trusts

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[1] 41 Geo. III c. xcv

[2] The trust collected no tolls at the Southampton gate during this period at all.

Trust	Period covered by data	Traffic increase
Winchester Lower	1790s-1830s	Marginal
Andover	1760s-1830s	Two-fold
Stockbridge	1760s-1830s	Marginal
Gosport	1760s-1830s	Two to three-fold
Southampton North	1780s-1830s	Three-fold
Southampton South	1760s-1830s	Three to four-fold
Winchester-Stockbridge	1770s-1830s	Zero
Winchester-S.C. Down	1770s-1830s	Zero
Popham-Winchester	1790s-1830s	Two-fold
Winchester-Andover	1790s-1830s	Three to four-fold
Winchester-Newtown	1790s-1830s	Three to four-fold
Cosham-Chichester	1790s-1830s	Marginal
Botley	1780s-1830s	Zero
Basingstoke-Alton etc.	1800s-1830s	Zero

TABLE 7.2

examined in detail, this undoubtedly presents a curious picture, mainly because the highest values were recorded in the 1800-1820 period. In particular, between the mid-1790s and about 1810, toll income per km increased three-fold. Furthermore, and as stated previously, the general level of toll income in the years from 1800 to 1820 was considerably higher than for other trusts in the region.[1] When toll increases are taken into account, it is clear that in the short space of time between the mid-1790s and 1800-2, traffic over the turnpike doubled, while in the period from about 1810 to the later 1830s, traffic decreased, and moreover, on a rather greater scale than suggested by the decrease in toll income over the period. Viewing the evidence in overall terms, it would seem that traffic in the 1830s was little greater than in the mid-1790s, although, of course, it may have been significantly greater than in the 1760s and 1770s.

The results of examining the toll income records of all 14 individual trusts - to establish the precise extent of traffic increases between the 1750s and 1840 - are summarised in table 7.2. Of the 14, three experienced three to four-fold increases, one experienced a three-fold increase, one experienced a two to three-fold increase, and two experienced two-fold increases. Three trusts experienced what might be termed marginal increases (i.e. less than a two-fold increase, but above the zero increase level), while four experienced no increases at all, or possibly even declines. In some ways, it is surprising to find that traffic on some turnpikes possibly decreased. However, in the case of the Winchester-Stephen's Castle Down and Botley trusts, the explanation almost certainly lies in the existence of competing trusts.[2] It must be emphasised here that in no sense do the results presented in table 7.2 convey the full story concerning the real increases in traffic over these various trusts between the 1750s and 1840. As already mentioned, in several cases, there is no data coverage for the early period (c.1760-90). The result is that a number of the figures given in table 7.2 are almost certainly underestimates. This is particularly true for the Southampton North, the Cosham-Chichester, the Winchester-Andover, the Winchester-

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[1] See this chapter, p. 162

[2] The St. Cross-Park Gate and Bishop's Waltham-Fisher's Pond trusts in respect of the Winchester-Stephen's Castle Down trust, and the Northam and Bursledon Bridge Companies in respect of the Botley trust.

Trust	Gate	1760s	1770s	1780s	1790s	1800s	1810s	1820s	1830s
Winchester Lower	Winnall	-	-	-	-	-	-	-	-
	Shortsledge	-	-	-	-	-	-	-	-
	Matterly	-	-	-	-	-	-	35(7)	-
	Alton	-	-	-	86(14)	80(16)	88(16)	114(14)	-
Andover	Andover	72(8)	82(14)	64(16)	-	-	-	-	-
	Whitchurch	52(8)	50(14)	40(16)	-	-	-	-	-
	Clerkengreen	56(8)	58(14)	48(16)	-	-	-	-	-
	Worting							-	-
	Folly					-	-	-	-
Stockbridge	Stockbridge	-	-	-	61(9)	73(5)	-	79(7)	-
	Kempshott	-	-	-	63(11)	79(7)	-	86(14)	-
Whiteparish-So'ton	Romsey	-	-	-	-	65(13)	65(13)	80(20)	-
	Whiteparish	-	-	-	-	43(7)	-	41(13)	-
Gosport	Brockhurst	42(2)	51(3)	77(9)	59(11)	104(8)	144(8)	81(13)	-
	Fareham	26(2)	26(2)	32(8)	26(10)	51(7)	63(7)	53(9)	-
	Wickham	26(2)	30(2)	32(8)	30(10)	51(7)	63(7)	53(9)	-
	Waltham	12(0)	16(0)	30(2)	32(4)	34(2)	42(2)	32(4)	-
	Warnford	10(2)	14(2)	15(7)	23(7)	30(6)	34(6)	38(6)	-
	Rotherfield	-	-	19(7)	15(7)	30(6)	34(6)	30(6)	-
So'ton North	St. Cross	-	26(10)	58(10)	60(20)	70(14)	90(14)	124(28)	141(37)
So'ton South	Marlbrook Pond	22(2)	18(10)	22(10)	32(20)	30(14)	34(14)	32(28)	45(37)
	So'ton					340(8)	342(8)	458(14)	-
Winchester-Stockbridge	Weeke	-	40(0)	29(1)	23(3)	41(1)	49(1)	42(2)	-
Winchester-S.C. Down	Bar End	-	28(0)	29(1)	32(4)	42(2)	42(2)	40(4)	16(4)
Popham-Winchester	Oxdown	-	-	-	53(5)	74(2)	86(2)	63(12)	78(18)
Romsey-Ringwood	Romsey	-	-	-	-	44(0)	44(0)	-	25(1)
	Picket Post	-	-	-	-	28(0)	32(0)	-	21(1)
Ringwood-Wimborne	Ringwood	-	-	-	-	37(5)	49(5)	43(7)	35(11)
Winchester-Andover	Winchester	-	-	-	-	9(1)	-	22(2)	-
Winchester-Newtown	Swan Lane	-	-	28(0)	-	-	45(1)	50(2)	-
	Whitchurch	-	-	12(0)	-	-	21(1)	22(2)	-
Cosham-Chichester	Bedhampton	-	-	-	49(5)	110(6)	102(6)	82(10)	67(15)
	Nutbourne	-	-	-	29(5)	70(6)	74(6)	54(10)	48(16)
Botley	Botley	-	-	41(1)	42(6)	-	-	34(2)	30(2)
B'stoke-Alton etc.	Basingstoke				-	40(0)	-	33(1)	33(1)
	Alton				-	20(0)	-	21(1)	21(1)
London-So'ton	Curdridge					-	-	14(2)	26(2)
	Northbrook					-	-	1(1)	5(1)
St. Cross-Park Gate	Twyford						25(1)	40(0)	-
	Boorley Green						9(4)	12(0)	-
	Curbridge						13(1)	12(0)	-
Titchfield-Cosham	Blackbrook						51(7)	42(10)	-
	East Cams						46(6)	35(7)	-
	Paulsgrove						66(6)	51(7)	-

TABLE 7.3

Newtown, the Popham-Winchester and the Winchester Lower trusts.

While there can clearly be little doubt about the considerable scale of the expansion in the volume of traffic over many of the region's turnpikes in the period, it might well be asked what this meant in terms of actual traffic - i.e. numbers of vehicles? If information is available about trusts' toll incomes and about levels of tolls, is it not possible to calculate a series of traffic equivalents? The answer is that this is both possible and valuable. Moreover, in some ways it is essential if the traffic expansion of the period is to be placed in proper perspective. In addition, and contrary to expectation, it is not a wholly hypothetical exercise, since one component of actual traffic - that made up by stage-coaches and carriers - can be readily identified and measured.[1] However, there is one important proviso to engaging in an exercise of this kind. It is not always possible to calculate traffic equivalents on the basis of trusts' toll incomes. There is no difficulty where a trust had one gate only, and its toll income therefore provides a direct reflection of traffic movement over the turnpike. But, where a trust had more than one gate, it is clearly essential to distinguish between the incomes from each gate if accurate traffic equivalents are to be obtained. For instance, one gate may have had twice the income of another, but this difference is lost in the trust toll income figure. If, therefore, it is sometimes necessary to distinguish the toll incomes for individual gates in order to calculate traffic equivalents, this clearly means that coverage will be restricted, since breakdowns of trusts' toll incomes along these lines are not always available.[2] Fortunately, sufficient information can be assembled to make the exercise worthwhile and the results are shown in table 7.3. The traffic equivalents given refer to the average number of stage-coaches, carriers and two-horse waggons/carts (broad-wheeled) backwards and forwards per day. As mentioned before, the component made up by stage-coaches and carriers can be readily identified and measured (given by figures in brackets), and thus the only hypothetical part of the traffic equivalent is that made up by the two-horse waggons/carts (broad-wheeled). The reason for

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[1] See chapters eight and nine

[2] In some instances, though, toll income figures are available for an individual gate where the trust toll income figures are not.

choosing this particular class of vehicle for making the calculations is not that it formed the commonest item of traffic, although this is quite possible, but rather that it probably represents the average vehicle toll, at least on the basis of the evidence of the extant turnpike gate-keepers' toll returns.[1] Where an equivalent is underlined, this means that there is the possibility of toll exemptions at the gate in question, and thus the figure is almost certainly an underestimate, though only in respect of the broad-wheeled waggons/carts, and to no great extent.

In examining the data presented in Table 7.3, the first question which arises is the extent to which it confirms or coincides with the conclusions drawn from the examination of the toll income records of certain trusts on an individual basis. With one or two exceptions, and where direct comparisons are possible, the sets of results coincide relatively closely. For instance, examination of the toll income record of the Gosport trust indicated a two to three-fold increase in traffic between the 1760s and the 1830s, and the evidence of the traffic equivalents for the trust's various gates generally confirms this, although admittedly, there are no equivalents for the 1830s. Similarly, examination of the toll income record of the Southampton North trust indicated a three-fold increase in traffic between the 1780s and the 1830s, and once again, this is generally confirmed by the traffic equivalents for the trust's one gate at St. Cross.

Examining the actual traffic equivalents themselves, it is clear that the volume of traffic over some of the region's turnpikes was considerable. For example, the equivalents for the Andover gate on the Andover trust were around 70 as early as the 1760-90 period - i.e. 70 stage-coaches, carriers, and two-horse broad-wheeled waggons/carts backwards and forward each day. If, as the trust's toll income record suggests, traffic over the turnpike doubled between this period and the 1830s, the equivalent for the 1830s would have been around 140. Similarly, the traffic equivalents for the St. Cross gate on the Southampton North trust were around 60 as early as the 1780-1800 period, and by the 1830s the equivalent was some 140. The gate with the highest traffic equivalent value is the Southampton (Four Posts) gate, located just outside Southampton, on the road leading westward towards Romsey, Salisbury, Ringwood and Lyndhurst. This is the gate which could be set

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[1] See chapter two, p. 24

up for up to a maximum of four months a year only. In the 1800s and 1810s, the traffic equivalent values were around 340, and in the 1820s this figure rose to around 460. It is true that tolls were taken at this gate normally in the summer months (June to September), the busiest time of year, but even so, these figures are remarkably high. Moreover, the figure for the 1830s is most certainly an underestimate, since under the 1823 renewal/amending Act for the trust (the Southampton South), a toll was not payable at the Southampton gate if one had already been paid on the Whiteparish-Southampton turnpike via Romsey.[1] The volume of traffic passing through this gate in the early decades of the nineteenth century suggests that Southampton had strong economic ties with the area extending towards the eastern New Forest, Romsey and Salisbury. In particular, the evidence on trusts' toll income data presented earlier indicates that the Southampton-Salisbury link was especially significant (fig. 7.3A). Other gates with high traffic equivalent values were the Brockhurst gate on the Gosport trust (104 in the 1800s and 144 in the 1810s), the Alton gate on the Winchester Lower trust (114 in the 1820s), and the Bedhampton gate on the Cosham-Chichester trust (110 in the 1800s and 102 in the 1810s).

If the results for individual trusts are examined, a number of interesting features emerge, some of which were commented upon earlier in the discussion. The first concerns the Gosport trust where the traffic equivalents for a number of the gates show marked increases in the 1780s, the 1800s and the 1810s. In particular, the figure for the 1810s for the Brockhurst gate is three to four times that for the 1760s and nearly twice that for the 1820s. The increases of the 1780s and the 1800s were due mainly to the toll income peaks of 1781-3 and 1802-3 (fig. 7.5D), and in each case, the intensification of naval and military activity at Gosport, in association with war, seems the most likely explanation.[2] The increase in the 1810s cannot be linked with any toll income peak during that decade, simply because full trust toll income data are not available. However, it is almost certain that a similar explanation applies, with the first five years of the decade up to the Peace of 1815 as probably the most active phase. The manner in which

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[1] 4 Geo. IV c. xc

[2] See chapter four, p. 64-5

the traffic equivalent values for this trust increase in periods of war, and notably in respect of the Brockhurst gate, offers an especially graphic impression of the way the fortunes of parts of the region were often very much geared to national trends and events. A rather similar picture to the Gosport trust is presented by the trust covering the Cosham-Chichester road. In particular, the traffic equivalents for both the Bedhampton and Nutbourne gates more than doubled between the 1790s and the 1800s, and then fell back considerably in the 1820s and 1830s. Once again, the explanation for the high values of the 1800s and 1810s almost certainly lays with the intensification of naval and military activity in association with war, though in this instance at Portsmouth rather than at Gosport.[1]

A second interesting feature to emerge from looking at the results for individual trusts is the way public transport vehicles (i.e. stage-coaches and carriers) sometimes constitute a surprisingly high proportion of the traffic equivalents of certain gates. This is especially so of the Marlbrook Pond gate on the Southampton South trust, where the relevant proportions were some 85 per cent for both the 1820s and the 1830s. Less extreme though still significant examples are provided by the St. Cross gate (Southampton North trust) with proportions of some 25 per cent for the 1820s and 1830s, and by the Bedhampton gate (Cosham-Chichester trust) and Romsey gate (Whiteparish-Southampton trust) with proportions of some 25 per cent, again, for the 1820s and 1830s respectively. Clearly, some trusts depended upon public transport vehicles for a substantial part of their income. Thus, when the railways forced many of these vehicles off the road, the effect upon certain trusts' incomes was considerable.

A final feature to emerge from examining the results of individual trusts concerns the London and Southampton trust. As was stated in chapter six, and as the name suggests, the primary motive behind this trust's establishment was to provide the missing link for an alternative route between London and Southampton via Alton, Bishop's Waltham, Botley and Northam Bridge.[2] However, the evidence of the traffic equivalents

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[1] See chapter four, p. 63-4

[2] See chapter six, p. 113

shows that, in the 1820s and 1830s at least, the trust's road was not functioning as a through route at all. The Botley-Bishop's Waltham section, on which the Curdridge gate was located, apparently carried a fair amount of traffic, but the Bishop's Waltham-Corhampton section, on which the Northbrook gate was located, carried remarkably little. A comparable situation is apparent in the case of the St. Cross-Park Gate trust. This was originally conceived as offering an alternative route between Portsmouth/Gosport and Winchester via Titchfield, Botley and Twyford.[1] But, once again the evidence of the traffic equivalents demonstrates that this was not realised in practice, since the greater part of the trust's income came from the Twyford gate, suggesting that traffic was mainly local in nature.

While the calculation of traffic equivalents clearly forms an important adjunct to using trusts' toll income statistics as an indicator of traffic over the turnpikes, it might be asked if it is possible to establish the extent to which these equivalents are representative of real traffic by comparing them against the extant turnpike gatekeepers' returns for the region. The only instance where this is possible is in the case of the Wickham gate (Gosport trust) in 1831. Over 49 consecutive days in September-October 1831, the average number of toll-paying vehicles backwards and forwards through the gate each day was 48.[2] The nearest traffic equivalent available (for the 1820s) is 53, and represents an encouragingly close correlation. However, this is only one example, and it would obviously be dangerous to make broader inferences from it.

Finally on the question of the traffic equivalents, although it proved possible to calculate equivalents for a fair proportion of the region's trusts, including most of the more important ones, there was, nevertheless, one serious omission - the Portsmouth-Sheet Bridge trust. Unfortunately, none of the trust's documentation for the period has survived. Moreover, the trustees seldom advertised in the principal regional newspaper - the Hampshire Chronicle - so that no information is available about toll income through toll auction announcements. However, the trustees did sometimes advertise toll auctions in the Hampshire Telegraph and Sussex Chronicle (established 1799), and a random search of a number

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[1] See chapter six, p. 113

[2] Hants. R.O., CC. 12 - In addition to the 48 vehicles, there were also a number of saddle horses and livestock passing through the gate, but the tolls from these were fairly insignificant.

of the earlier years' issues revealed that in the early 1810s, the Portsbridge gate had an average annual toll income of around £2,250, the Purbrook gate an average annual toll income of around £900, and the Sheet Bridge gate an average annual toll income of around £800. The corresponding daily traffic equivalents for these figures would be 420 (including 30 stage-coaches and carriers), 180 (including 17 stage-coaches and carriers), and 152 (including 18 stage-coaches and carriers) respectively.[1] As the trust had three gates and could take two full tolls only, the question of exemptions arises, so that all three figures are under-estimates, though, as before, not to any great extent. If the equivalents for the Portsbridge and Sheet Bridge gates are compared with those calculated for the same two gates in the first half of the eighteenth century,[2] it becomes clear that there was a dramatic increase in traffic along this portion of the London-Portsmouth road. The figures for the Portsbridge and Sheet Bridge gates in the earlier period were 28 and 10 respectively,[3] as against 420 and 152 in the early 1810s. In both instances, this represents a fifteen-fold increase in traffic and serves to reinforce the point made previously that the traffic increases on several of the other turnpike trusts in the region were considerably greater than indicated, simply because of the almost complete lack of data for the middle decades of the eighteenth century. When the traffic equivalents for the Portsbridge, Purbrook and Sheet Bridge gates are compared with those for the other trusts (table 7.3), it is readily apparent that these three gates were among the busiest in the region. Indeed, the equivalent for the Portsbridge gate is the highest of all, higher even than the Southampton (Four Posts) gate. In many ways, it is no surprise to find that this particular section of the London-Portsmouth road was among the most important in the region in terms of the volume of traffic passing over it, although it should be remembered once again that in the early 1810s the country was at war. Traffic on this route was always higher than usual in wartime,[4] and it is quite possible, therefore,

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[1] The method of calculation is the same as used earlier.

[2] See chapter five, p.99

[3] There were few regular public transport services in operation at this time.

[4] See chapter five, p. 98

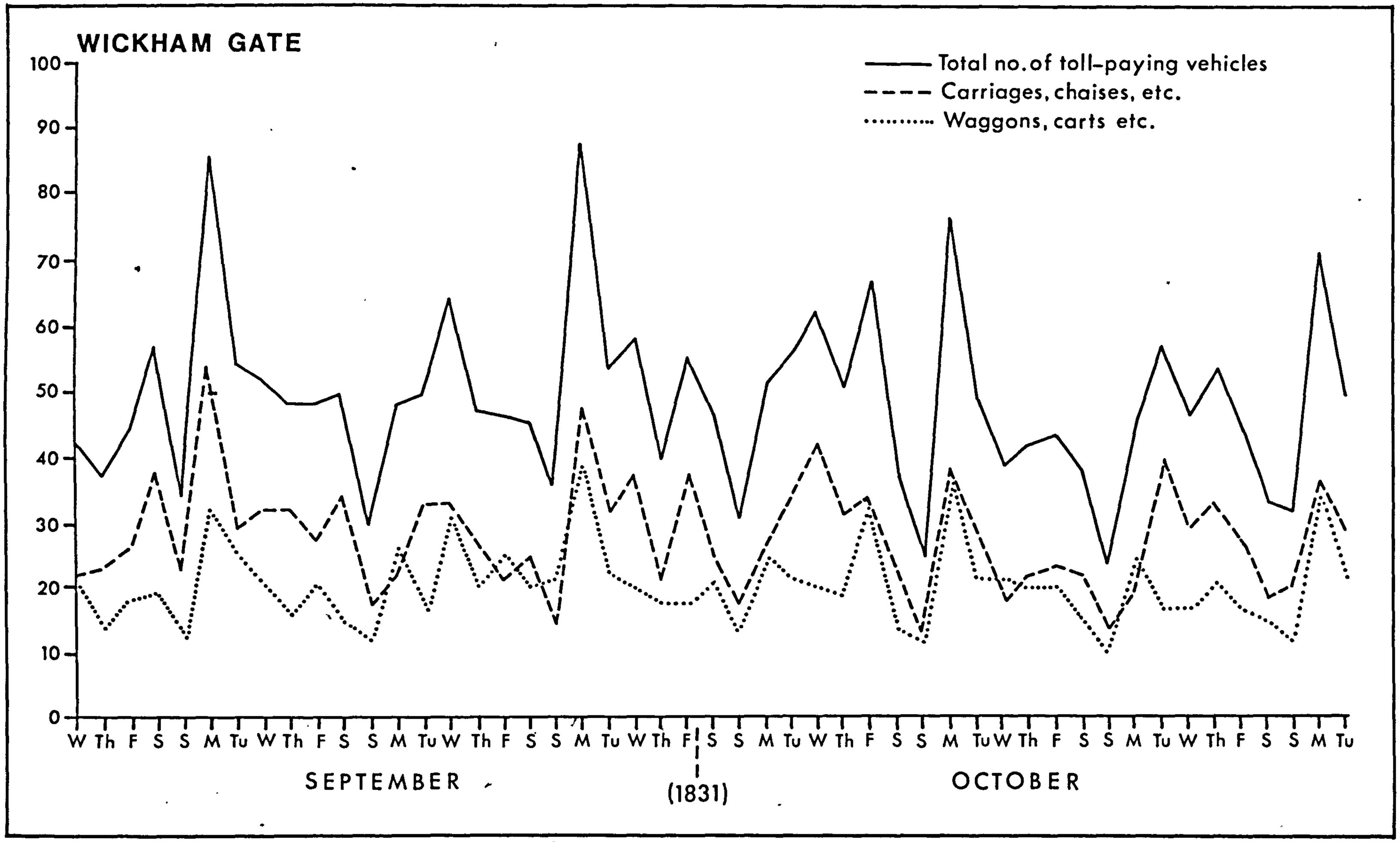
WICKHAM GATE
Total no. of toll-paying vehicles
Carriages, chaises, etc.
Waggons, carts etc.
100
90
80
70
60
50
40
30
20
10
0
W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu
SEPTEMBER
(1831)
OCTOBER

FIGURE 7.8

that the picture presented by the traffic equivalents is somewhat exceptional. One final point on the Portsmouth-Sheet Bridge trust is that, in common with the situation in the first half of the eighteenth century, the volume of traffic through the Portsbridge gate was very much greater than that through the other gates on the turnpike, stressing once more the substantial traffic movement along the coast roads serving Portsmouth.[1]

7.ii) Traffic type

The primary concern of any geographical study of the functional aspects of a transport system is to examine the volume of traffic movement over that system, in terms of numbers of vehicles, numbers of passengers, or some other desired criterion. However, it is frequently useful to amplify such an examination by considering the breakdown of traffic type. In terms of the present study, though, this is extremely difficult, simply because the only possible sources are turnpike gatekeepers' toll returns, and as was shown at the beginning of this chapter, few survive. In examining the volume of traffic, it was possible to steer round the problem by using trusts' toll income statistics, but no such alternative is available here. Clearly, therefore, it is necessary to rely upon the few series of gatekeepers' returns,[2] but even here there are problems, since two out of the four series of extant returns - those for the London-Southampton and Southampton South trusts - are in such a form that it is impossible to differentiate between traffic type in any precise manner. The two remaining series relate to the Wickham gate on the Gosport trust and an unknown gate on the Bishop's Waltham and Fisher's Pond trust. Of these two series, the Wickham gate returns are by far the most comprehensive and it is upon these that attention will be focused first.

As was mentioned earlier, the returns cover 49 consecutive days in September-October 1831, and they are sufficiently detailed to enable one to differentiate between traffic type fairly readily. Figure 7.8 shows the total number of toll-paying vehicles[3] through the gate each day and

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[1] See chapter five, p. 98-9 and this chapter, p. 162

[2] See chapter two, p. 24

[3] It is important to stress this fact, as the exemption question applies at this gate.

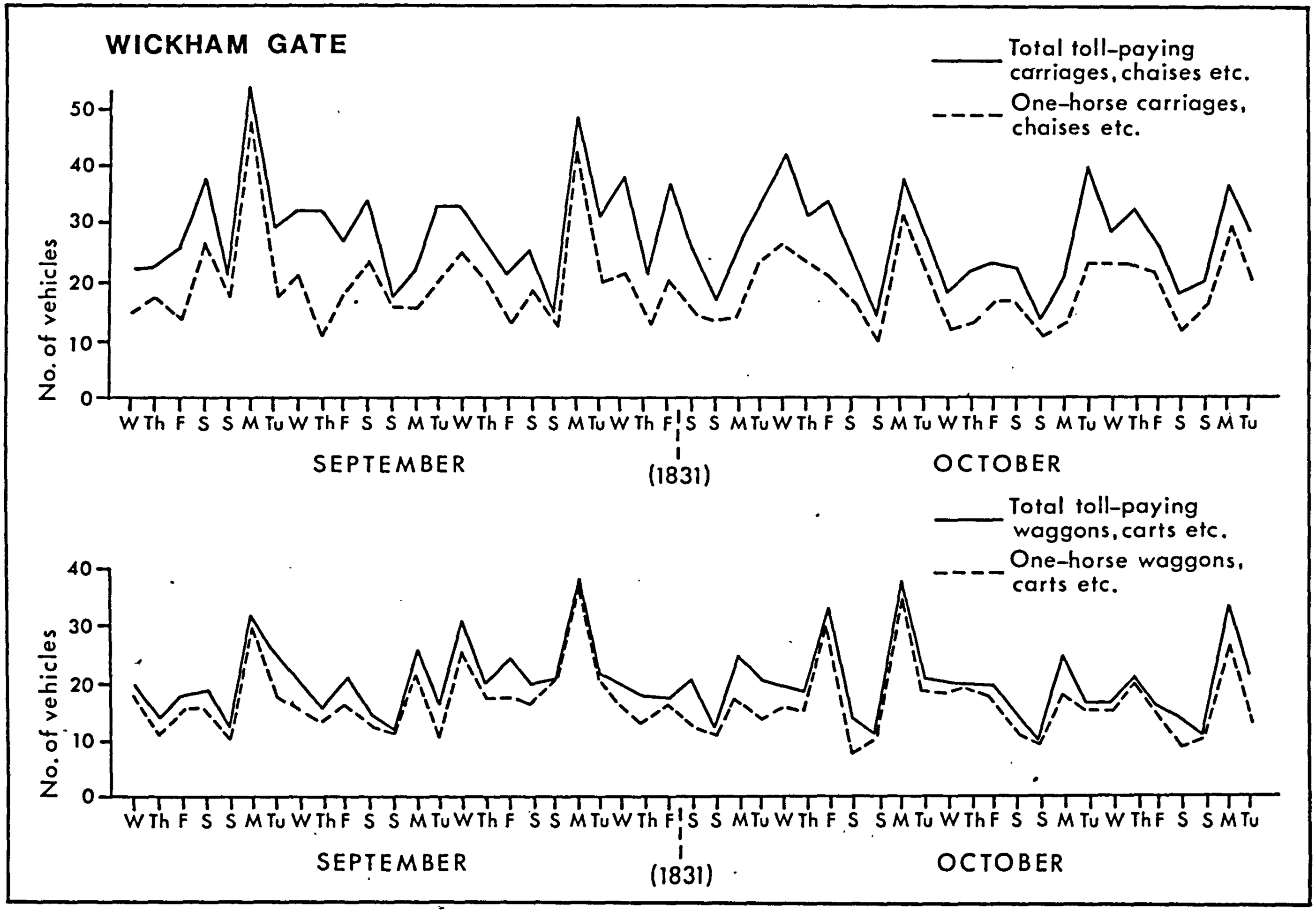
WICKHAM GATE
Total toll-paying carriages, chaises etc.
One-horse carriages, chaises etc.
No. of vehicles
50
40
30
20
10
0
W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu
SEPTEMBER
(1831)
OCTOBER
Total toll-paying waggons, carts etc.
One-horse waggons, carts etc.
No. of vehicles
40
30
20
10
0
W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu W Th F S S M Tu
SEPTEMBER
(1831)
OCTOBER

FIGURE 7.9

the portions of that total made up by passenger vehicles and by goods vehicles.[1] The evidence of the graph shows that, at this particular gate, passenger vehicles were nearly always more important than goods vehicles. This was even true on Fareham market-day (indicated by the traffic peaks every alternate Monday), though admittedly, the October market-day figures were almost equal. Figure 7.9 takes this simple two-fold distinction between passenger and goods a stage further and singles out the dominant traffic type within each of the two categories. In the case of passenger vehicles (fig. 7.9A), the one-horse carriage or chaise was by far the most significant, whilst with goods vehicles (fig. 7.9B), it was the one-horse waggon or cart. The dominance of one-horse vehicles suggests that the greater part of the traffic through the gate at this time was very much local in nature; longer-distance traffic invariably involved two, three and four-horse vehicles, and their relative absence here indicates that such traffic was unimportant at this time. Of course, the situation 20 or 30 years earlier, in wartime, might well have been very different.[2] In addition to vehicle traffic, an average of ten horses[3] per day passed through the gate over the period as a whole, and also a fair amount of livestock,[4] the latter notably on Fareham market-days. On Monday 12th September, for instance, tolls were paid on 112 sheep and lambs, 60 pigs, and 12 oxen and horses, and on Monday 10th October, on 110 sheep and lambs, 80 pigs, and 40 oxen and cows.

The second series of returns relate to one of the gates on the Bishop's Waltham and Fisher's Pond trust,[5] and cover 28 consecutive days in December-January 1834/5. Figure 7.10 shows the total number of toll-paying vehicles[6] through the gate each day, distinguishing the portion

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[1] This distinction is obviously somewhat crude since some waggons and carts were undoubtedly used as passenger vehicles. However, it is certain that carriages and chaises would not have been used for carrying goods of any kind, so that on this count the distinction clearly does have some validity.

[2] See this chapter, p. 172

[3] tollable horses

[4] tollable livestock

[5] The Park Lane gate or the Fisher's Pond gate.

[6] As with the Wickham gate, the exemption question applies here, whichever gate is involved.

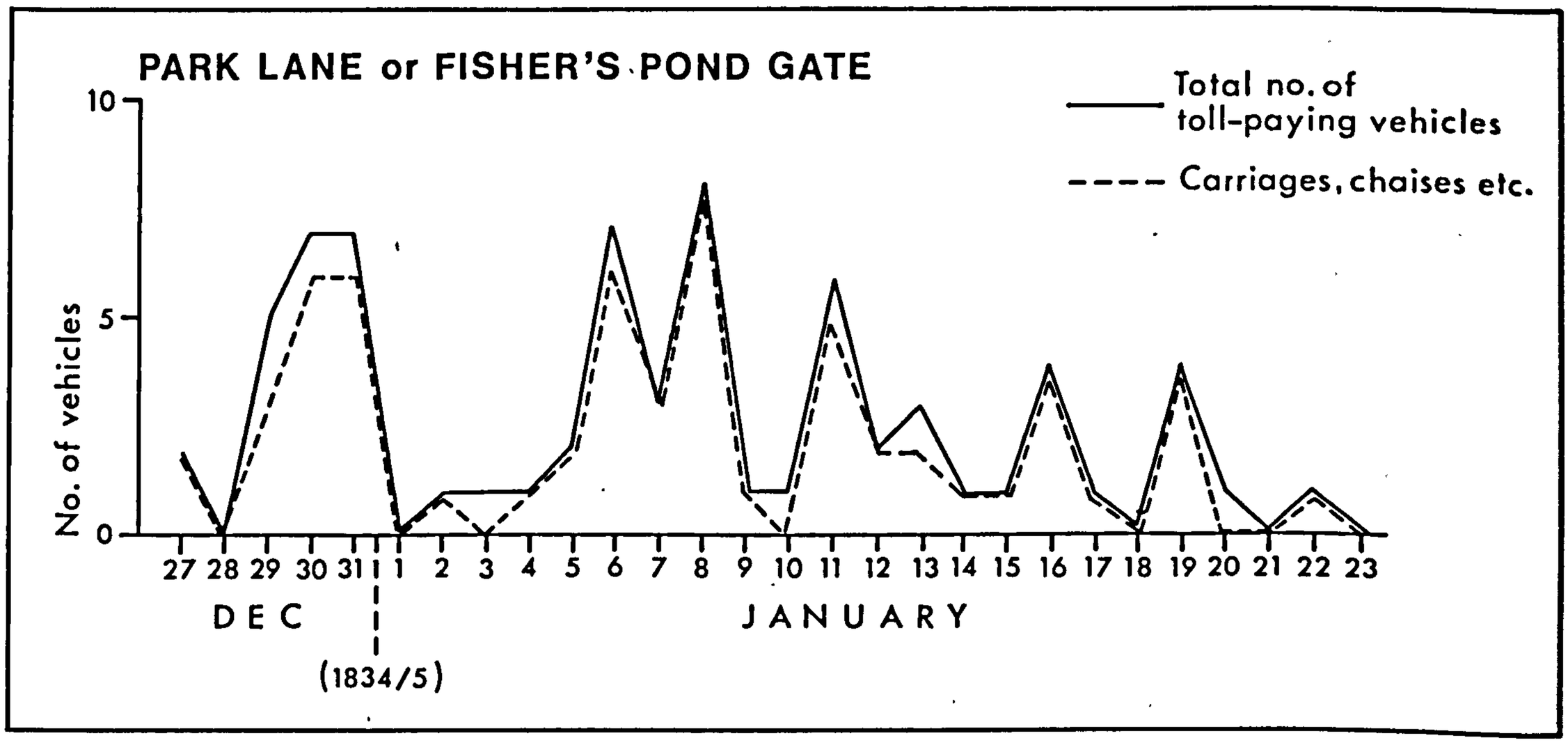
PARK LANE or FISHER'S POND GATE
Total no. of toll-paying vehicles
Carriages, chaises etc.
No. of vehicles
10
5
0
27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
DEC
JANUARY
(1834/5)

FIGURE 7.10

made up by passenger vehicles. The first point to note about the graph is the incredibly small number of vehicles through the gate, which clearly restricts the value of these returns. It is true that the period concerned is in the depth of winter, but on several days no vehicles were recorded at all. The second point to note is the way passenger vehicles are very much predominant, and in common with the Wickham gate evidence, the one-horse vehicle, in particular. Over the whole of the 28-day period, there were but ten toll-paying goods vehicles through the gate.

It would clearly be dangerous to attempt to draw wider conclusions about the type of traffic over the region's turnpikes from these two series of returns, and particularly in respect of the ones for the Bishop's Waltham and Fisher's Pond trust. The Wickham gate returns, however, do relate to what might be legitimately described as a major road, and the features they reveal - the dominance of one-horse vehicles, in particular - are not without significance.

Finally, at the start of the section, it was stated that turnpike gatekeepers' toll returns are the only possible sources for examining traffic type. However, there is one respect in which this statement is untrue, and that is in the realm of public transport vehicles. As was mentioned previously, the component of traffic movement made up by public transport vehicles can be readily identified and measured from a variety of sources, and traffic type easily distinguished. This aspect is dealt with in the two succeeding chapters, which consider the subject of public transport at some length.

7.iii) Seasonal traffic fluctuations

It was stated in chapter five that one of the most characteristic features of the volume of traffic over the region's roads in the later part of the seventeenth and first half of the eighteenth centuries was the way in which it fluctuated in accordance with the seasons.[1] Traffic was generally greatest in the summer months and least in the winter months. The main explanation was the poor state into which many roads fell in the winter season, a situation which resulted directly from the chronic inadequacy and ineffectiveness of the existing repair mechanisms. If due attention could have been paid to foundations, drainage and so on,

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[1] See chapter five, p. 100-101

this feature would undoubtedly have been considerably less significant. The introduction and widespread adoption of the turnpike trust as a mechanism for road repair, especially from 1750 onwards, should in theory have assisted in overcoming the problem of poor road conditions in winter. The transfer of road maintenance to specially-formed bodies and the spending of regular sums on road repairs would be expected to have reduced the destructive potential of unfavourable weather conditions (i.e. rain, frost and snow) considerably. Roads should have remained passable more or less throughout the year, and this should in turn have resulted in a diminution or levelling out of seasonal traffic fluctuations. Clearly, therefore, examination of the significance of seasonal fluctuations in turnpike traffic offers yet another means of evaluating the effectiveness of the region's turnpike trusts as road maintenance mechanisms.[1]

Once again, the most obvious sources here are the toll returns of turnpike gatekeepers, but as noted before, few survive for Southern Hampshire. Fortunately, though, there is another available source in the form of trusts' toll income statistics. Where such statistics are broken down on a monthly interval or less, it is possible to gain a reasonable indication of the significance of seasonal fluctuations in traffic. It might be argued, of course, that fluctuations in toll income, whether according to the seasons or not, cannot really be equated with fluctuations in traffic, simply because the composition of traffic - in terms of tolls payable - may have changed from one week, one month, or one season to the next, hence producing fluctuations in toll income. However, the composition of traffic would have had to change considerably to produce clearly discernible income fluctuations, and it is hard to believe that this happened on any scale. The evidence of the Wickham gate returns confirms this impression; moreover, it suggests that traffic composition remained remarkably consistent from one week to another.

The data that it proved possible to assemble for examining seasonal traffic fluctuations are presented in figures 7.11 - 7.16 and in table 7.4, and cover six different trusts: the Andover, the Southampton North, the Southampton South, the Winchester-Stockbridge, the Winchester-Stephen's Castle Down, and the Gosport. Where full runs of data were available for consecutive decades, only the last three years of each decade were examined. In all six cases, the data refer to the second half

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[1] i.e. additional to those in chapter six.

PAGE

NUMBERING

AS ORIGINAL

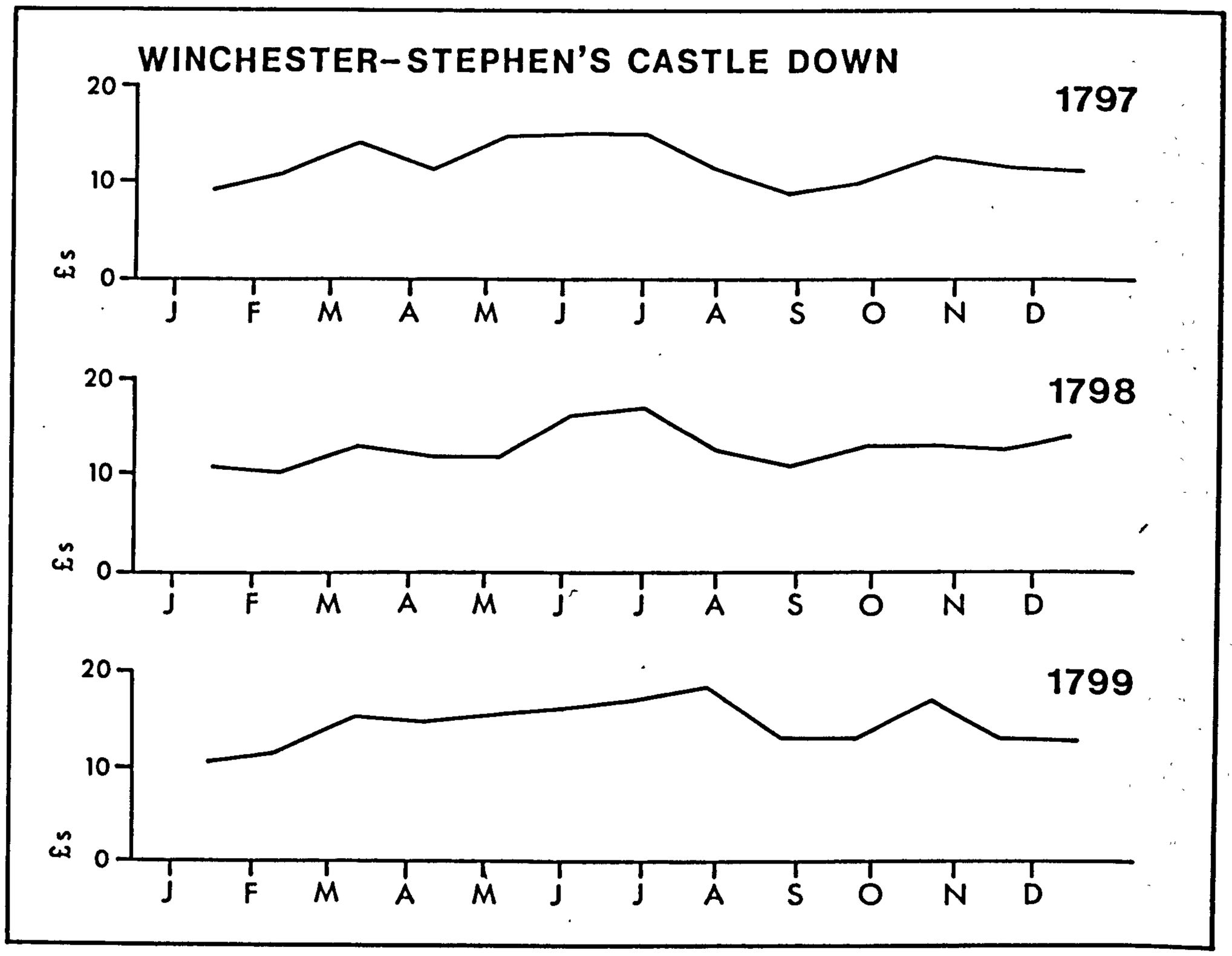

FIGURE 7.16 (cont.)

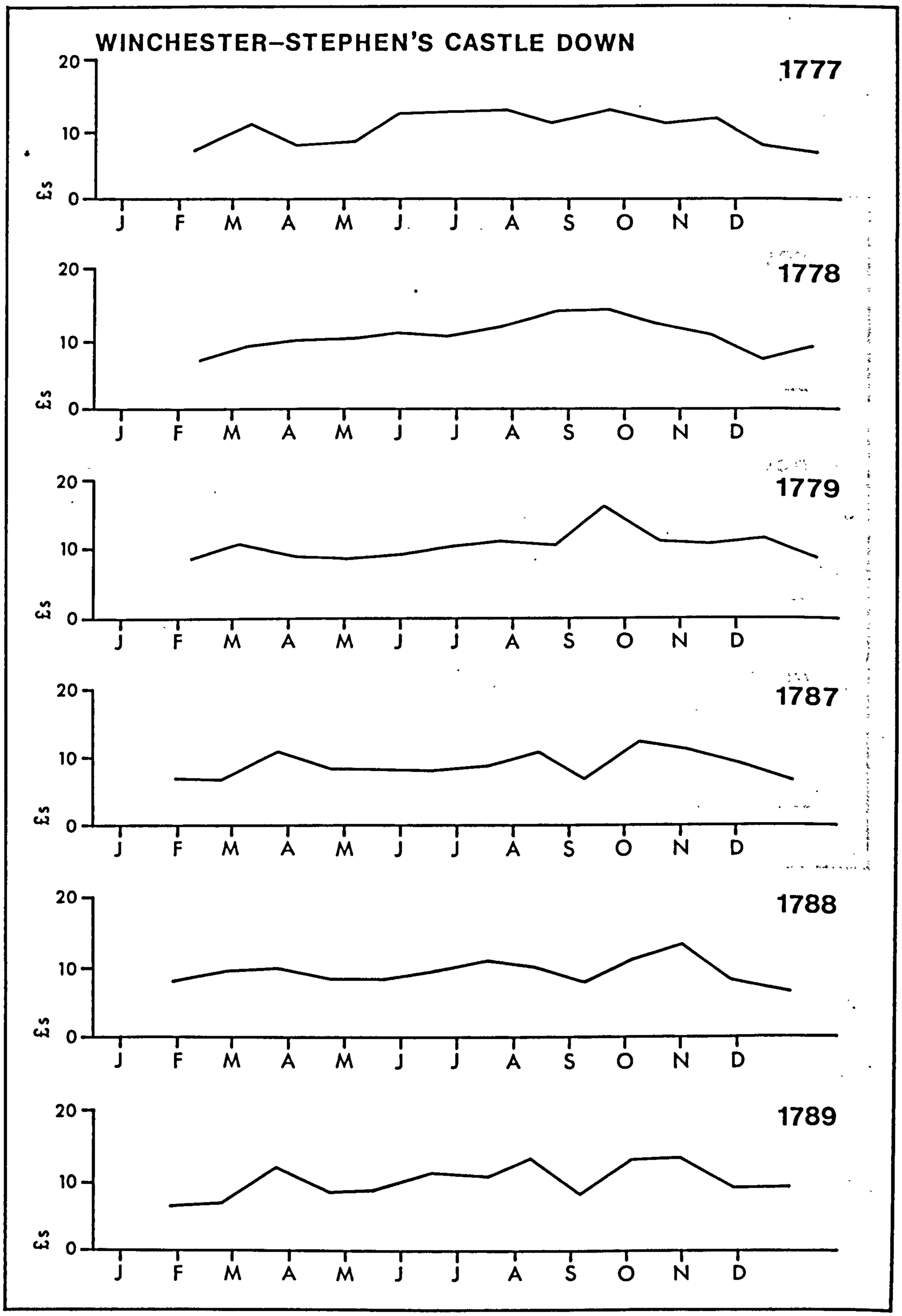
WINCHESTER–STEPHEN'S CASTLE DOWN
1777
1778
1779
1787
1788
1789
£s
20
10
0
J F M A M J J A S O N D

FIGURE 7.16

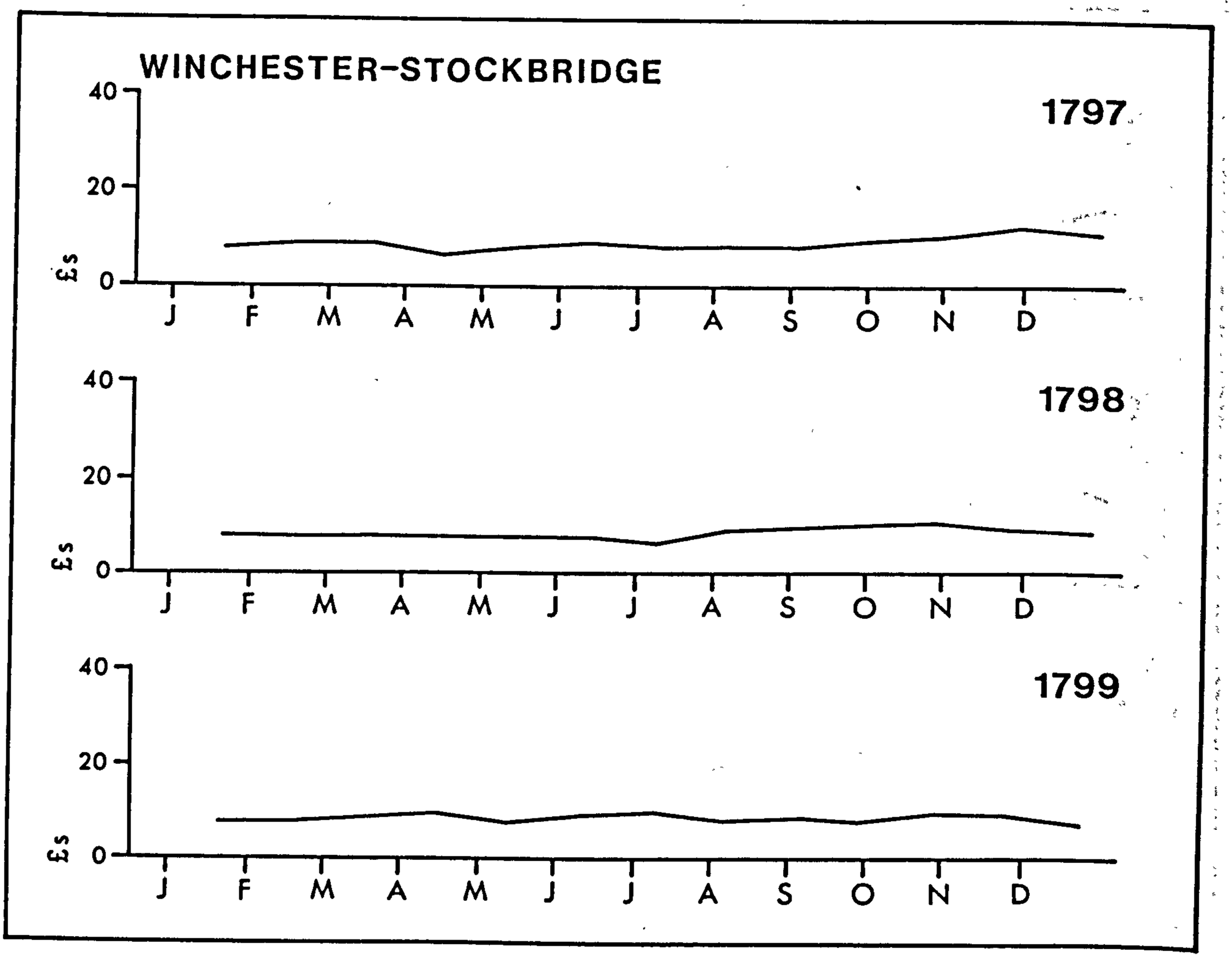

FIGURE 7.15 (cont.)

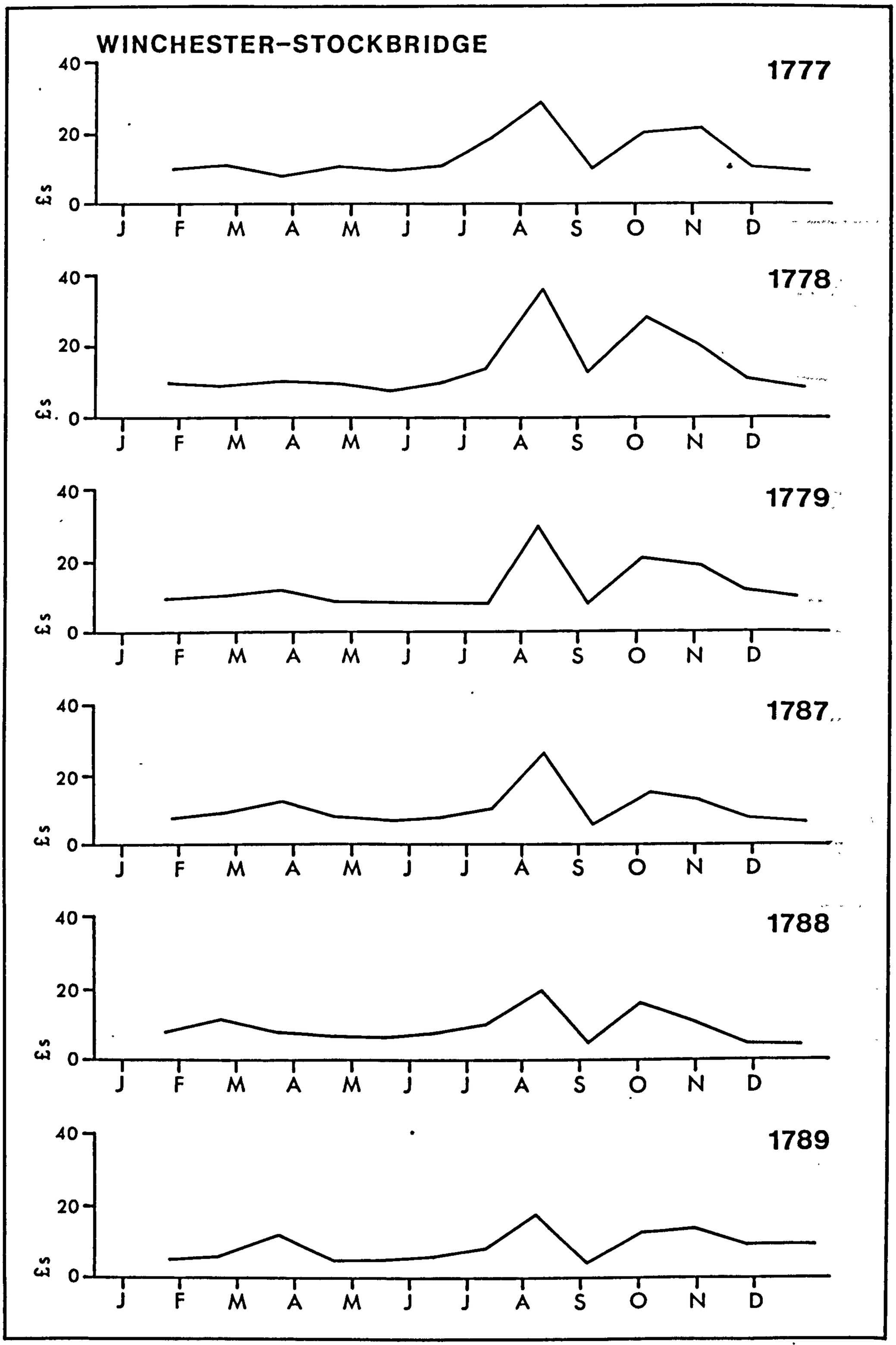
WINCHESTER–STOCKBRIDGE
1777
1778
1779
1787
1788
1789
£s
40
20
0
J F M A M J J A S O N D

FIGURE 7.15

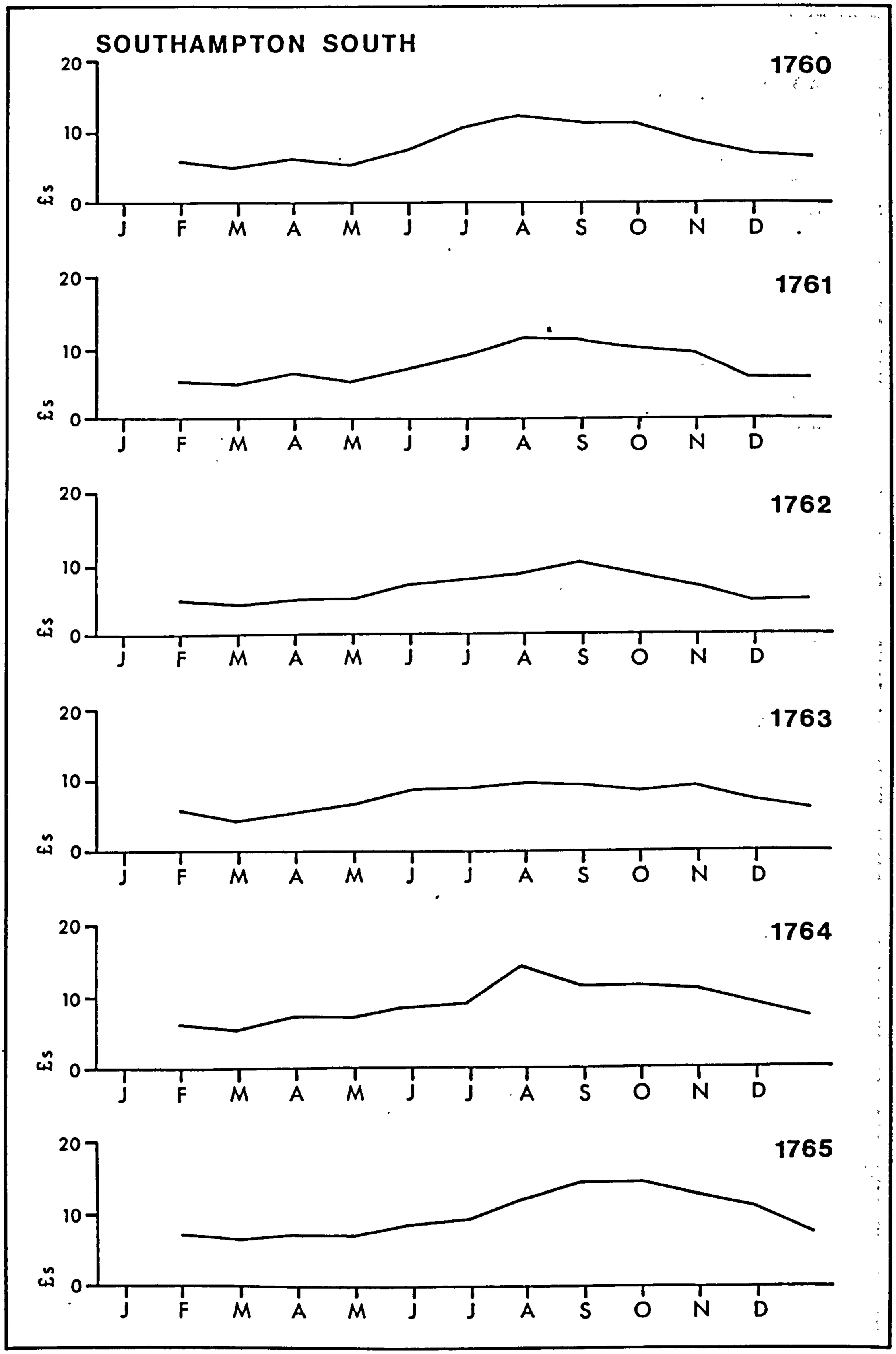
SOUTHAMPTON SOUTH
1760
1761
1762
1763
1764
1765
£s
20
10
0
J F M A M J J A S O N D

FIGURE 7.14

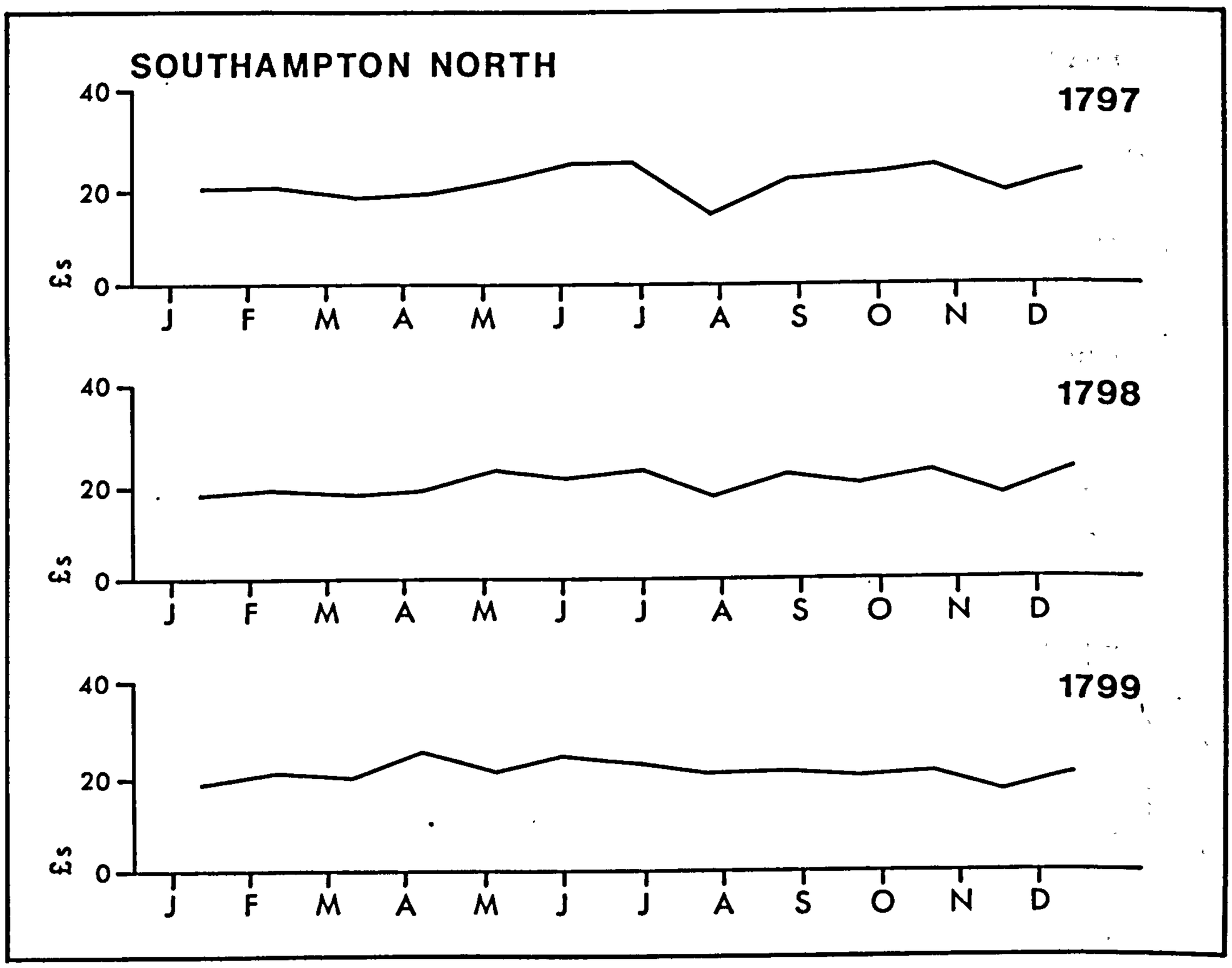

FIGURE 7.13 (cont.)

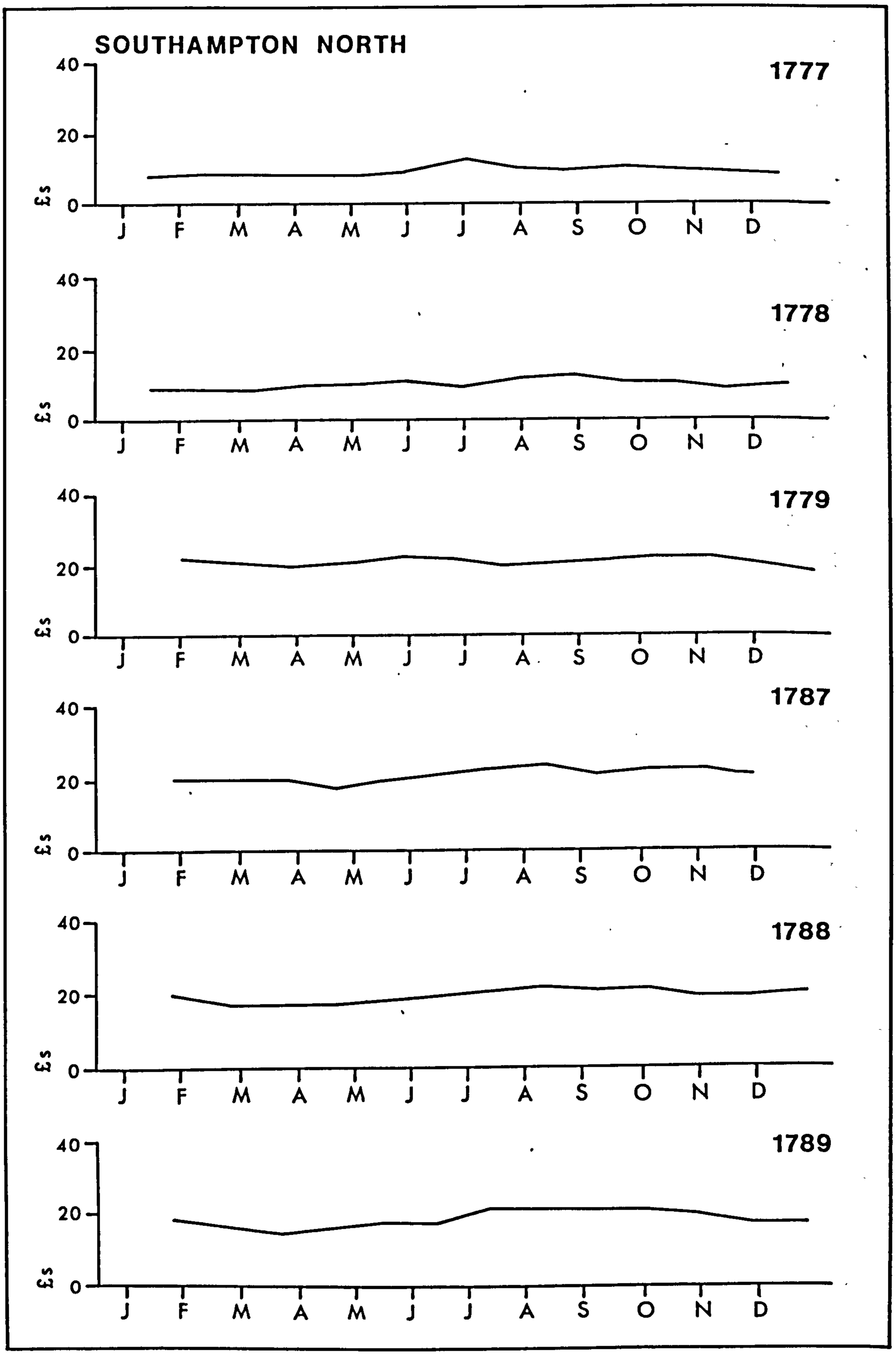
SOUTHAMPTON NORTH
1777
1778
1779
1787
1788
1789
£s
40
20
0
J F M A M J J A S O N D

FIGURE 7.13

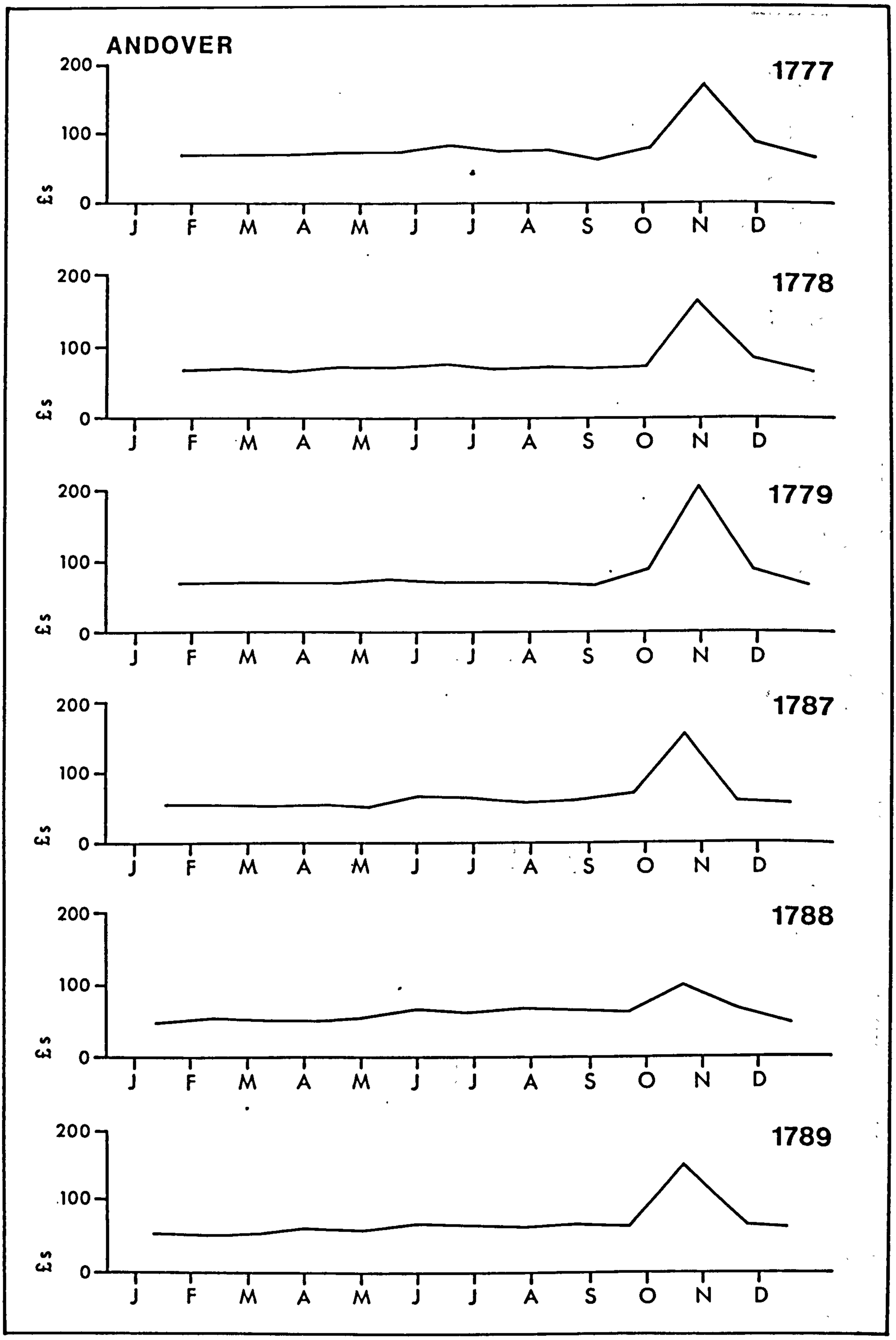
ANDOVER
1777
1778
1779
1787
1788
1789
200
100
0
£s
J F M A M J J A S O N D

FIGURE 7.12

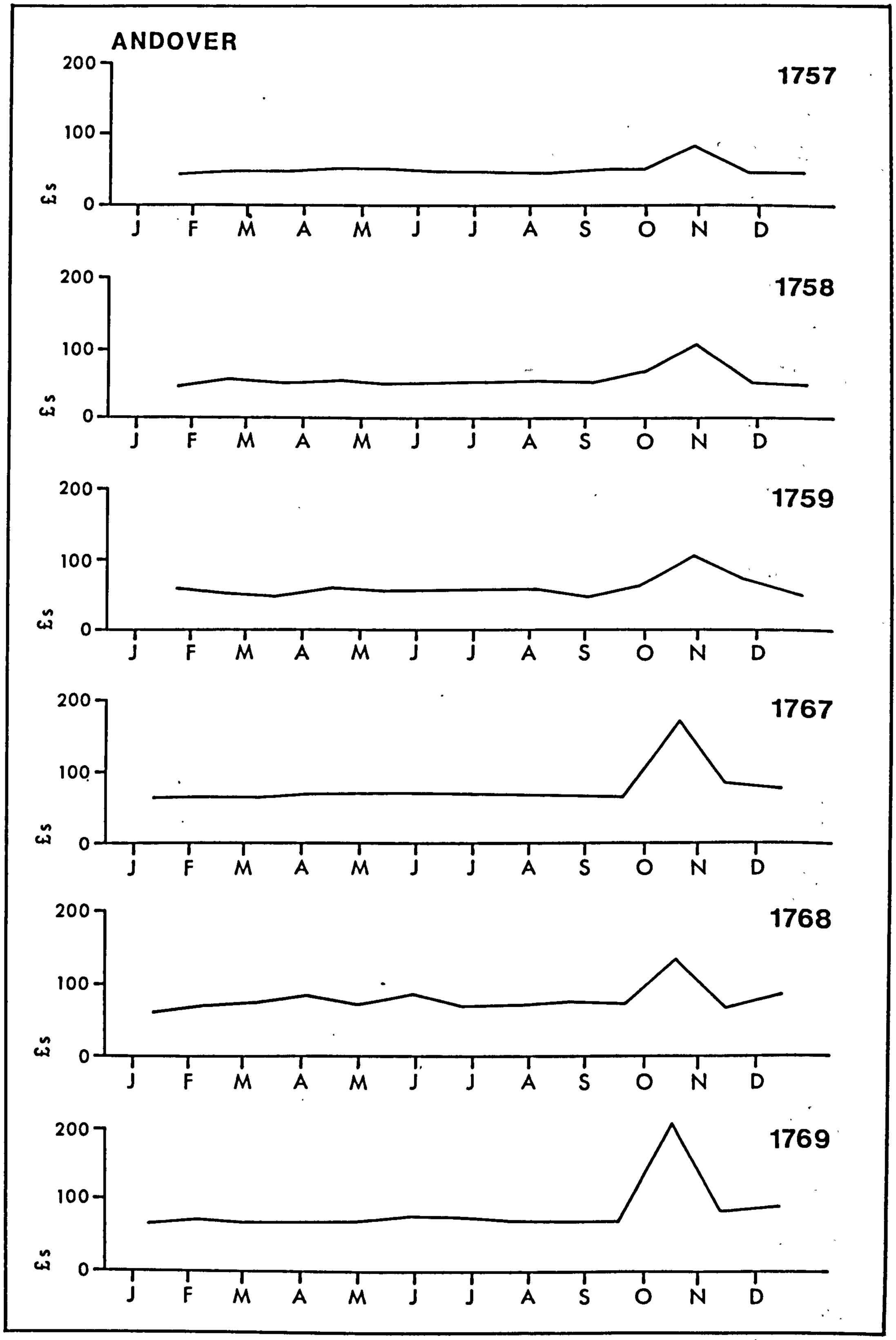
ANDOVER
1757
1758
1759
1767
1768
1769
200
100
0
£s
J F M A M J J A S O N D

FIGURE 7.11

of the eighteenth century; none could be assembled for the first half of the nineteenth century. The reason is that in the second half of the eighteenth century most trusts were collecting tolls themselves, and thus detailed breakdowns of toll income are often available if the relevant trust documentation survives. In the first half of the nineteenth century, on the other hand, most trusts were leasing tolls and the only record in the trust documentation is of lump rent payments. At first, the absence of data for the nineteenth century might seem a distinct drawback, but on reflection, it is fairly certain that if trusts went any way towards fulfilling their intended objective - i.e. improving the basic condition of the roads, as distinct from road surfaces - this would have become apparent within the first 20 or 30 years of their establishment. Thus, the second half of the eighteenth century is perhaps the best period for looking at the significance of seasonal traffic fluctuations.

Close examination of the evidence of the six trusts in question reveals comparatively little seasonal fluctuation in traffic. The only trusts to exhibit any clearly identifiable seasonal trend were the Southampton South (fig. 7.14) and the Gosport (table 7.4). The data for the Southampton South trust cover a six-year period very early on in its life, and on this account, the presence of a clear seasonal fluctuation is not unexpected. It was usually several years before trusts' repair activities started to have any real effect on the overall condition of their roads, and the fact that much of the Southampton South trust's road was on clay would have slowed the process considerably. The data for the Gosport trust cover the years 1764 to 1796 and take a rather different form to the rest of the evidence. With the other five trusts, data are available on a monthly basis, but with the Gosport trust, only six-monthly figures are available. Fortunately, the six-monthly divisions fall in spring and in autumn, so that it is clearly possible to gain at least some idea of the significance of seasonal traffic fluctuations. In the first half of the period (1764-78), when the six-month cycles ran from November to April and from May to October, the mean percentage traffic increase for the summer months over the winter months was 28.3. This represents clear evidence of a seasonal traffic fluctuation. However, in the second half of the period (1778-96), when the six-month cycles ran from October to March and from April to September, the mean percentage increase was only 11.7. This decline in the significance of the seasonal fluctuation suggests the trust made valuable improvements in the condition of its road over the years 1778-96, and particularly from 1790. It must be

Toll Income (£s)

	(Nov.-Apr.)	(May-Oct.)	% incr. in summer	
1764/5	245	254	3.7	
1765/6	231	279	20.8	
1766/7	267	289	8.2	
1767/8	239	304	27.2	
1768/9	281	313	11.4	-
1769/1770	287	303	5.6	
1770/1	290	317	9.3	Mean percentage
1771/2	276	313	13.4	increase: 28.3
1772/3	229	391	70.7	
1773/4	232	345	48.7	
1774/5	242	371	53.3	
1775/6	289	420	45.3	
1776/7	303	456	50.5	
1777/8	-	-	-	

	(Oct.-Mar.)	(Apr.-Sept.)	% incr. in summer	
1778/9	466	474	1.7	
1779-1780	-	-	-	
1780/1	912	1026	12.5	
1781/2	973	1125	15.6	
1782/3	936	1051	12.3	
1783/4	581	667	14.8	
1784/5	502	513	2.2	
1785/6	403	491	21.8	
1786/7	375	449	19.7	Mean percentage
1787/8	383	461	20.4	increase: 11.7
1788/9	354	464	31.1	
1789/1790	408	443	8.6	
1790/1	469	502	7.0	
1791/2	445	471	5.8	
1792/3	444	505	3.7	
1793/4	581	608	4.6	
1794/5	625	710	13.6	
1795/6	776	747	-3.9	

TABLE 7.4

stressed, however, that this conclusion can only be a tentative one, since the mean percentage increases for the two periods disguise a series of fairly wide-ranging individual values, especially during the mid-1770s. Of the evidence for the remaining trusts, the only features worthy of note are the consistent peaks in toll income in particular months of the year. In most cases, these can be explained by examining the timetable of annual fairs or other similarly important events affecting the region. For instance, the consistent peak in toll income in October recorded by the Andover trust (figs. 7.11 - 7.12) is unquestionably linked to Weyhill Fair,[1] which was held usually about the second week of October. Similarly, the consistent toll income peaks in July-August and September-October recorded by the Winchester-Stockbridge trust (fig. 7.15) are connected with the holding of the Winchester Races and the Magdalen Hill and Giles Hill Fairs, when the trust levied double tolls.[2]

The preceding evidence clearly offers substantial vindication of the conclusions drawn in chapter six about the effectiveness of the region's trusts as road maintenance mechanisms. Only two out of the six trusts exhibited any significant seasonal fluctuation in traffic, and all the signs are that in both these cases, the seasonal fluctuation declined in importance over the passage of time.

The remarkable expansion in the volume of traffic over the region's roads between the 1750s and 1840, charted in this chapter, undoubtedly provides strong evidence of the significance of the changes which accompanied the introduction and widespread adoption of the turnpike concept in Southern Hampshire; the available data on seasonal traffic fluctuations reinforce this further. However, yet stronger evidence of the significance of these changes is provided by the way in which one component of road traffic - the public transport component - developed over the period. Indeed, it is perhaps here, more than in any other sphere, that the activities of the region's turnpike trusts had greatest effect. Thus, it is to the development of public road transport facilities in the region, both passenger and goods, that attention now turns in the two succeeding chapters.

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[1] Weyhill is located approximately five kms W.N.W. of Andover.

[2] The reason why the peaks are not evident in 1797-9 is that the practice of levying double tolls during these events had been discontinued - Hampshire Chronicle, 7/9/1795

CHAPTER EIGHT

THE STAGE-COACH SYSTEM, 1750-1850

8.i) Spatial and chronological development

Although stage-coach services are known to have been operating in the region as early as the later part of the seventeenth century,[1] the range of these services was limited and confined mainly to the principal towns; moreover, in the winter months, services sometimes ceased altogether.[2] Contrary to what might have been expected, there was virtually no expansion in coach service provision over the succeeding era; as was demonstrated in an earlier chapter, the services of the mid-eighteenth century were little different from those of sixty or seventy years previously.[3]

From the mid-eighteenth century, however, the situation began to change. The period from the 1760s to the 1780s, in particular, witnessed the establishment of a remarkable number of new public conveyances, especially prominent amongst them the 'diligences' (fast post-chaises), which normally carried three or four passengers only, and where emphasis was placed on speed and comfort, achieved by means of frequent horse changes and through carrying a light load. By 1784, for instance, there were five such diligences operating between London and Portsmouth (in addition to conventional stage-coaches),[4] and few routes in the region were without at least one diligence service by this date.[5]

The precise explanation for the remarkable expansion of stage-coach services at this time is not absolutely clear. Obviously, there must have been an increasing demand for public transport facilities of this kind, but it is unlikely that such an increased demand could have

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[1] For instance, there is evidence that a stage-coach service was operating between London and Southampton as early as 1648 - C.G. Harper, Stage-coach and Mail in days of yore, I, (London, 1903), 58-60

[2] See chapter five, p.102

[3] See chapter five, p.104

[4] J. Sadler, Hampshire Directory, (Winchester, 1784), 114

[5] See for example, Southampton Guide for 1781

materialised in so short a space of time. Instead, it seems probable that demand was increasing throughout the middle of the eighteenth century, but it was not until the widespread adoption of the turnpike trust as a road maintenance mechanism that the condition of roads permitted any expansion of stage-coach facilities. This comes out very clearly in the case of the London-Portsmouth and London-Southampton routes. Although sections of the London-Portsmouth road were turnpiked by 1720,[1] the complete road did not come under trust administration until 1749, with the passage of the Act covering the section from Kingston to Sheet Bridge. Up to this time, there was but one twice-weekly coach service on the route, but by the early 1760s, according to a contemporary traveller, there were four 'flying machines' up and down daily.[2] This represents a remarkable increase in service provision and trust road improvements were almost certainly a significant factor. The London-Southampton route was not turnpiked throughout until the late 1750s. Up to this date, there was generally one thrice-weekly coach service in operation, but within little more than ten years, there were two daily stage-coaches and two daily diligences working the route.[3] An especially significant factor in this expansion was undoubtedly the construction of a brick carriage bridge over the river at Chandler's Ford (approximately mid-way between Southampton and Winchester) in 1772.[4] Up to this time, apparently, there was no carriage bridge of any description, and wheeled traffic had to cross the river at the ford.[5] After heavy rains, of course, this was often impossible, and it is highly likely, therefore, that the lack of a suitable carriage bridge at this point up to 1772 was a major inhibiting factor in coach service expansion.

Whilst the period from the 1760s to the 1780s might well be described as the age of the diligence, the popularity of these particular conveyances was comparatively short-lived and by the 1790s, the majority had disappeared from the region altogether. Their eclipse was largely the

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[1] Southwark to Kingston (1718) and Sheet Bridge to Portsmouth (1710)

[2] F. Kielmansegge, Diary of a journey in England in the years 1761-1762, (London, 1902), 253

[3] Hampshire Chronicle, 1772-5 - numerous advertisements

[4] Hants. R.O., Minutes of the Southampton North trust, 4M30/1

[5] Hants. R.O., Minutes of the Southampton North trust, op. cit. - There was some kind of bridge over the river, but it seems to have been for foot passengers only.

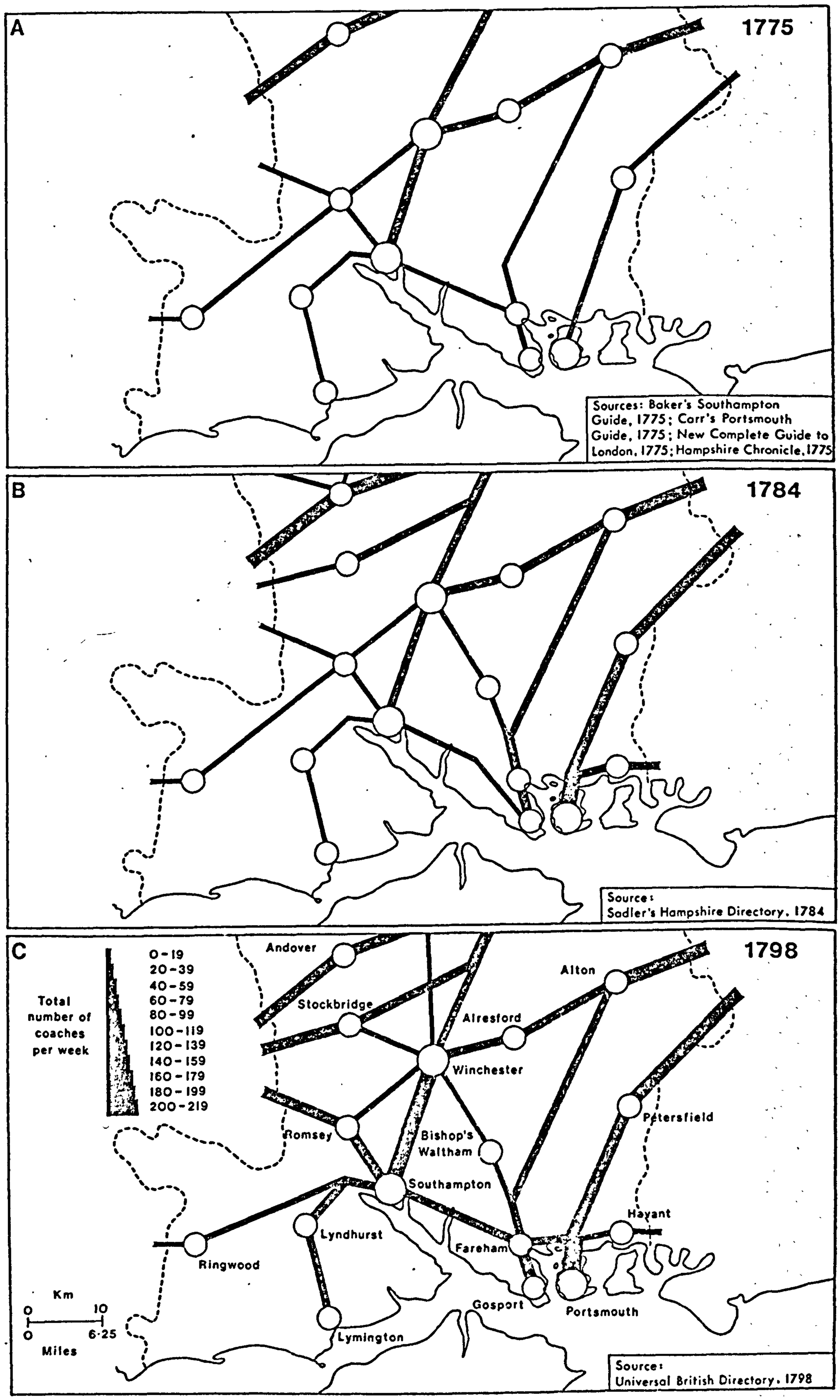
A
1775
Sources: Baker's Southampton Guide, 1775; Carr's Portsmouth Guide, 1775; New Complete Guide to London, 1775; Hampshire Chronicle, 1775
B
1784
Source: Sadler's Hampshire Directory, 1784
C
1798
Total number of coaches per week
0-19
20-39
40-59
60-79
80-99
100-119
120-139
140-159
160-179
180-199
200-219
Andover
Stockbridge
Alton
Alresford
Winchester
Romsey
Bishop's Waltham
Petersfield
Southampton
Hayant
Lyndhurst
Fareham
Ringwood
Gosport
Portsmouth
Lymington
Km
0
10
0
6·25
Miles
Source: Universal British Directory, 1798

FIGURE 8.1

result of the establishment of mail-coaches in the region from 1785 onwards.[1] Not only could the mail-coaches match the speed of the diligences, but carrying an armed guard, they were guaranteed comparative freedom from highway robbery - a particularly important consideration in view of the frequency with which such incidents were reported in the Hampshire Chronicle in the period. The establishment of mail-coaches, in turn, encouraged other coach proprietors to place new conveyances on the road, operating to significantly improved schedules. Featured amongst some of the new conveyances were the 'double' or 'long' coaches - somewhat cumbrous vehicles, often drawn by six horses, and capable of carrying up to 25 passengers each. In the early 1790s, there were three such coaches operating between London and Southampton,[2] and by about the turn of the century, 'long' coaches were established on quite a number of routes in the region.

The combined result of all these various developments in stage-coach activity was that between the 1760s and the end of the eighteenth century, there was a very significant expansion of stage-coach service provision in the region. This is readily apparent from a comparison of figures 8.1A, 8.1B and 8.1C, which show the extent of development for three dates in the later eighteenth century.[3] The period witnessed the emergence of a number of major coach routes in the area: London to Portsmouth, London to Gosport (via Alton), London to Southampton (via Alresford and via Basingstoke), London to the West of England (via Andover and via Stockbridge); and by 1798, towns like Southampton and Winchester had become important centres in this expanding coach system, each with close on 200 inward and outward coach movements per week.

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[1] The London-Exeter, London-Portsmouth and Bristol-Portsmouth Mails were established in this year - E. Vale, The Mail-coach Men of the late Eighteenth Century, (London, 1960), 19

[2] Hampshire Chronicle, 1791-3 - numerous advertisements. The one operated by Boulton and Co. and later Rogers and Co. was an eight-wheel coach designed by John Besant, the designer of the first mail-coaches. When fully loaded, these coaches often weighed three tons or more and their use caused great anxiety among turnpike trustees on account of the great wear and tear on roads to which they gave rise. In this context, see for example, memorial submitted by a group of local trustees to H.M. Postmaster-General in 1803 - Soton. R.O., D/PM 8/10/7

[3] For details of how these and all the other flow maps included in this chapter have been compiled, see chapter three, p.53-4

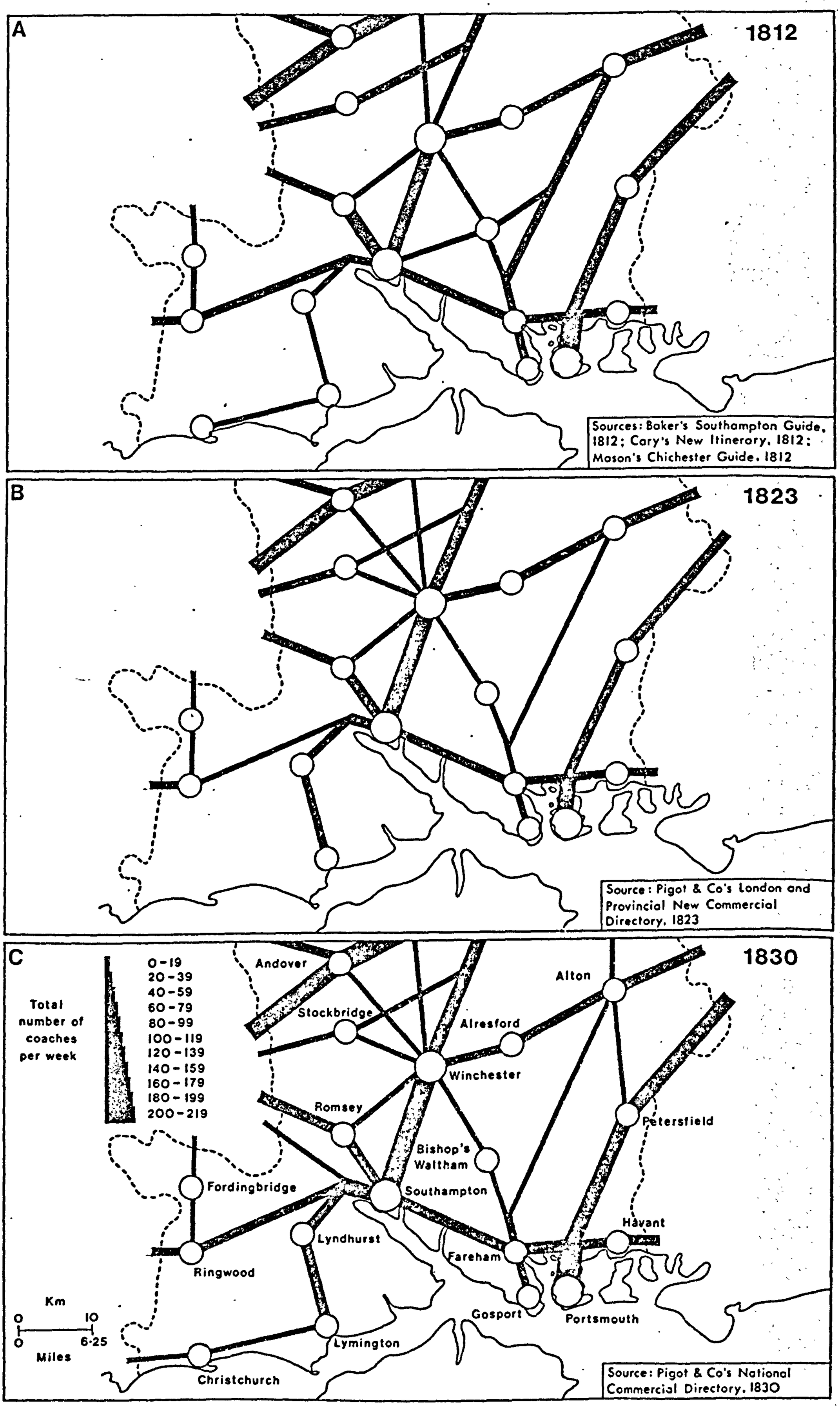
A
1812
Sources: Baker's Southampton Guide, 1812; Cary's New Itinerary, 1812; Mason's Chichester Guide, 1812
B
1823
Source: Pigot & Co's London and Provincial New Commercial Directory, 1823
C
1830
Total number of coaches per week
0-19
20-39
40-59
60-79
80-99
100-119
120-139
140-159
160-179
180-199
200-219
Andover
Alton
Stockbridge
Alresford
Winchester
Romsey
Petersfield
Bishop's Waltham
Fordingbridge
Southampton
Havant
Lyndhurst
Fareham
Ringwood
Gosport
Portsmouth
Lymington
Christchurch
Km
0
10
0
6·25
Miles
Source: Pigot & Co's National Commercial Directory, 1830

FIGURE 8.2

The dramatic expansion of stage-coach facilities in the later part of the eighteenth century was not sustained into the early part of the nineteenth. Indeed, the period from about the turn of the century to the early 1820s was one of relative stagnation. This is clearly evident from a comparison of figures 8.1C, 8.2A and 8.2B, showing the state of development in 1798, 1812 and 1823. It is reflected also in the results of the frequency count of coaching notices and advertisements in the Hampshire Chronicle (fig. 2.8), which shows the period of the French Wars (1793-1815), in particular, as surprisingly inactive. Although changes in stage-coach services were by no means absent,[1] in overall terms, the regional pattern of stage-coach activity altered very little between the turn of the century and the early 1820s.

The available contemporary evidence suggests that the French Wars, and their aftermath, were an important factor inhibiting expansion during the period, despite the fact that the exigencies of war undoubtedly gave rise to an increased demand for stage-coach facilities. During the period of the wars, a constant supply of horses was required by the armed forces at home and abroad, and as a result, horses became scarce and in consequence expensive.[2] To the stage-coach proprietor, whose business depended upon the horse, this inevitably meant a significant increase in long-term operating costs, since the average working life of a coach-horse was no more than four or five years. More important than the increasing price of horses, though, was the increasing price of horse provender, especially from the late 1790s onwards. This was due to a variety of factors, although the succession of poor harvests in the periods 1795-1800 and 1808-12 was probably the principal among them. The rising price of horse provender brought almost immediate response from local carriers in the form of notices inserted in the Hampshire Chronicle announcing increased carriage rates.[3] If carriers were experiencing difficulties on account of such price increases, it is clear that stage-coach proprietors would have been far more seriously affected in

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[1] For instance, in 1802 a new coach was established between London and Southampton via Botley and Bishop's Waltham, making use of the new London and Southampton turnpike established the year previously - Hampshire Chronicle, 12/7/1802

[2] This is well borne out in the reports in the Hampshire Chronicle of markets and fairs held in the region at the time.

[3] See chapter nine, p. 205.

view of the frequent horse changes,[1] and therefore greater numbers of horses involved in their operations. However, it should be added that this did not manifest itself in the newspapers in the same way. In many respects, this is not surprising since stage-coach fares were already high,[2] and further increases - and they would had to have been considerable if the increased operating costs were to be fully covered - would almost certainly have been self-defeating. Instead, the more logical course, and the one that seems most likely to have been adopted, would have been to consolidate the status quo and perhaps even cut down on less profitable operations.

After the Peace of 1815, there was a general collapse of agricultural prices and the major constraint to the expansion of stage-coach facilities would have been removed. However, the general economic depression of the immediate post-war period is unlikely to have been conducive to any significant expansion of stage-coach facilities, and this perhaps explains why the state of development of 1823 showed little change over that of 25 years earlier. Clearly, stage-coach proprietors were in something of a vicious circle during these first decades of the nineteenth century: in the war years, there was an increasing demand for stage-coach facilities, but the high price of horses and horse provender prevented proprietors from expanding their range of operations to meet that demand; in the years following the Peace, in contrast, the price of horses and horse provender were much lower, but demand had fallen back too, so that there was little scope for expansion.

Whilst the first two decades of the nineteenth century witnessed surprisingly little alteration in the pattern of stage-coach activity in the region, this was certainly not true of the two that followed. In Britain, the period from the early 1820s to the late 1830s is often described as the 'Golden Age of Coaching', and Southern Hampshire forms no exception. From the early 1820s, there was a remarkable expansion of stage-coach facilities in the region, continuing well into the 1830s (figs. 8.2B, 8.2C and 8.3A), and mainly comprising increased services on established routes. The heavy and often cumbrous vehicles of the previous decades gave way to fast, light 'safety coaches', which usually carried no more than four inside and eleven outside passengers. By 1839,

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[1] At this time, it was the exception rather than the rule for carrier operators to change horses in the course of a journey.

[2] See this chapter, p. 199

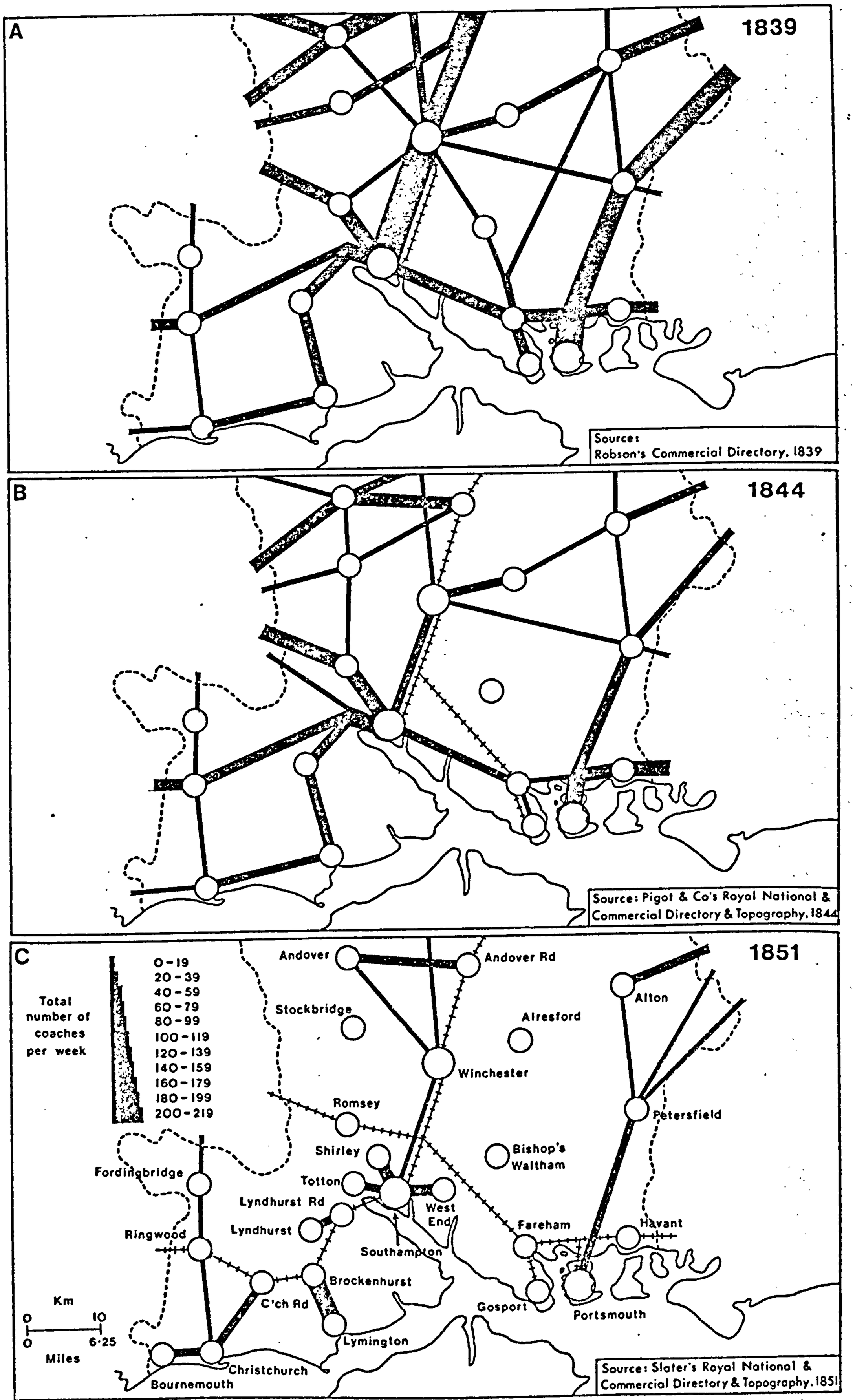
A
1839
Source:
Robson's Commercial Directory, 1839
B
1844
Source: Pigot & Co's Royal National & Commercial Directory & Topography, 1844
C
1851
Total number of coaches per week
0-19
20-39
40-59
60-79
80-99
100-119
120-139
140-159
160-179
180-199
200-219
Andover
Andover Rd
Stockbridge
Alresford
Alton
Winchester
Romsey
Petersfield
Shirley
Bishop's Waltham
Fordingbridge
Totton
Lyndhurst Rd
West End
Lyndhurst
Fareham
Havant
Ringwood
Southampton
Brockenhurst
C'ch Rd
Gosport
Portsmouth
Km
0
10
0
6·25
Miles
Lymington
Christchurch
Bournemouth
Source: Slater's Royal National & Commercial Directory & Topography, 1851

FIGURE 8.3

Southampton, for example, had 13 daily services to London, leaving at fairly regular intervals from seven o'clock in the morning until eleven at night.[1] In addition, there were direct services to Bath and Bristol, Birmingham, Brighton, Cheltenham, Christchurch, Exeter, Gosport, Lymington, Newbury, Oxford, Poole, Portsmouth, Reading, Salisbury and Weymouth,[2] giving Southampton a potential inflow/outflow of a 1,000 passengers a day by stage-coach. As in the 1790s, Southampton and Winchester were two of the most important centres in the region's stage-coach system, and by 1839, each could boast some 450 inward and outward coach movements per week.

Whereas in the earlier days, the business of stage-coach operations was generally in the hands of many different individuals, the trend in the 1820s and 1830s was towards larger operating units with certain individuals or firms dominating activity in particular areas or on particular routes. In the Southampton area, for instance, the 1820s saw the emergence of the Rogers family as the principal local coach operator,[3] working from the Coach and Horses Inn, Above Bar, Southampton.[4] When the principal member of the family, George Rogers, died in June 1828,[5] the business was taken over by Wiliam Caiger and Henry Wells,[6] who proceeded to expand it further.[7] Another important coaching concern in the Southampton area was that run by William Forder, and from mid-1836 by William Spurrier.[8] The concentration of business into larger operating units was of considerable benefit to the traveller, since it permitted a

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[1] W. Robson, Commercial Directory, (London, 1839), 131-2

[2] W. Robson, op. cit.

[3] The family had been involved in the local stage-coach business since about 1770, but it was only after about 1820 that they came to dominate operations.

[4] For an indication of the range of their interests, see the Southampton Guides for the period, and also the relevant advertisements in the local newspapers - e.g. Hampshire Chronicle, 16/1/1826

[5] Hampshire Chronicle, 9/6/1828

[6] Hampshire Chronicle, 23/6/1828

[7] See for example, Hampshire Advertiser, 8/6/1833 - By this time, Wells had retired, and the business was being run by Caiger alone.

[8] Hampshire Advertiser, 9/5/1835

far greater degree of integration between services, a feature often very much lacking in the earlier days. The region's stage-coach system was in fact at its peak of development in 1839 (fig. 8.3A), for in the following year, the London and Southampton railway was opened throughout,[1] heralding the beginning of the end for coaching in the region.

The immediate effect of the opening of the London and Southampton railway line was to force off the road all those coaches that directly followed its route. Coaches which linked Southampton with London by way of Alresford and Alton, however, were granted some initial respite, and one, the 'Red Rover', continued running until 1845.[2] However, as was noted in chapter seven, the effects of the opening of this railway line went considerably beyond the bounds of the London-Southampton route itself.[3] Stage-coach services between London and Portsmouth, for instance, were greatly affected. In a letter to a local newspaper written shortly after the opening of the line, a Portsmouth citizen noted that 'Our eight coaches to London have scarcely carried two passengers apiece - persons have been flocking to the Isle of Wight by way of Southampton'.[4] The final blow to London-Portsmouth coach services, however, came in 1842, when a branch railway line was opened between Gosport and Bishopstoke (later Eastleigh) on the London-Southampton line (fig. 8.3B). This meant that Portsmouth possessed a virtually direct rail link with the metropolis,[5] and coaching activity on the London-Portsmouth route effectively ceased.

Contraction, on the other hand, was by no means universal in this transitional phase. Expansion was also clearly evident, notably in the form of the establishment of feeder services to railway stations - the

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[1] See chapter four, p. 82

[2] Soton. R.O., Daily tollgate summaries - Southampton South trust, D/PM 8/8/1-6 - This coach continued operating on the Winchester-Alton-Farnborough section of the route for several years after 1845 - Hampshire Advertiser, 24/5/1845; F. Kelly, Post Office Directory, (London, 1847), 1089, 1091

[3] See chapter seven, p. 165

[4] Hampshire Telegraph and Sussex Chronicle, 18/5/1840

[5] The passage across Portsmouth Harbour had been very much facilitated by the establishment of a steam-driven floating bridge between Portsmouth and Gosport in 1840.

Andover to Andover Road station link provides one such example.[1] Figure 8.3B illustrates the state of the region's stage-coach system in 1844. The contraction on the two major trunk routes is clearly evident, while in the western half, services remain comparatively unaltered. The later 1840s witnessed the further expansion of the railnet in Southern Hampshire with the opening of lines from Southampton to Dorchester (Dorset), Bishopstoke to Salisbury (Wiltshire), and Portsmouth to Chichester (Sussex), and resulted in the almost complete disintegration of the stage-coach system (fig. 8.3C). By 1851, the pattern of activity mainly consisted of a series of short railway station feeders, with suburban services making their first appearance around Southampton. Long-distance stage-coaches continued in operation only where railways were unable to offer a practical alternative: the Christchurch-Salisbury route provides one such example.

The principal explanation for the decline of stage-coach activity in the face of railway competition was the much faster rate of travel that railways could sustain - in the 1840s, 30-50 kms per hour, as against 13-16 kms per hour for stage-coaches. In addition, rail travel was cheaper, although not substantially so, and comparison of inside coach fares and first-class rail fares sometimes reveals surprisingly little cost difference at all.[2] While there can be no doubt about the superior technological merits of the railways over the stage-coaches, it does not necessarily follow that the range of facilities that they offered was equally superior. In fact, on some routes it seems that rather the reverse was sometimes the case. The Hampshire Advertiser for the later 1840s, for instance, contains numerous complaints about the poor range of railway facilities. Among these is a letter from a Salisbury inhabitant of June 1849 about the lamentable frequency of services on the Salisbury-Bishopstoke-Southampton and Southampton-Dorchester lines. The position was such that one could leave Salisbury by the 8.15 a.m. train and yet have to wait at Southampton until 1.45 p.m. for a Dorchester line

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[1] A new turnpike road was opened between these two places in 1840, primarily with this purpose in mind.

[2] For example, in 1840, the rail fare between London and Southampton by first class train was 20/-, while the average inside coach fare for the years immediately preceding was only two to three shillings more - Hampshire Advertiser, 1837-40 - numerous advertisements.

train.[1] Moreover, not only was the range of facilities poor, but the facilities themselves left much to be desired. For example, the Hampshire Advertiser, throughout the 1840s, contains countless complaints about high fares, bad time-keeping records (usually due to accidents), and slow rates of travel. The Bishopstoke-Salisbury line was one of the primary targets for criticism, and particularly in respect of slow running. The slow travelling rates on the line, coupled with the poor service frequency mentioned earlier, was considered by the editor of the Hampshire Advertiser to be disgraceful. In an editorial in May 1849, he wrote: 'The railway obtains a monopoly, drives every coach off the road, and then reduces travelling time to such wide distances between (to say nothing of long distance round), that the Romsey, Salisbury and Southampton public, are infinitely worse off than under the old coach system'.[2] The reality of the whole position is brought home very clearly by the fact that in mid-1849, a daily stage-coach service was re-introduced between Southampton, Romsey and Salisbury.[3] In the following year, 1850, the L.S.W.R. attempted to remedy the poor frequency of services on the Bishopstoke-Salisbury line by introducing extra trains.[4] However, this did not improve the situation greatly, since Romsey, for example, was still as far from London (in terms of travel time) as in coaching days.[5] Clearly, the overall impression that is gained of the stage-coach/railway transition in Southern Hampshire is not a particularly favourable one. Whilst the introduction of railways to the region proved of considerable benefit to some towns, Southampton being perhaps the prime example, others benefited very little, and a number were in a decidedly worse position than in coaching days in terms of public passenger transport provision.

8.ii) Spatial and chronological development: analysis

The preceding discussion has outlined the main characteristics of the rise and decline of the stage-coach system of Southern Hampshire

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1 Hampshire Advertiser, 9/6/1849

2 Hampshire Advertiser, 19/5/1849

3 Hampshire Advertiser, op. cit.

4 Hampshire Advertiser, 11/5/1850

5 Hampshire Advertiser, op. cit.

	1775	1784	1798	1812	1823	1830	1839	1844	1851
Alresford	60	48	72	60	48	72	72	36	-
Alton	84	120	120	126	78	114	120	48	26
Andover	104	156	96	216	216	264	276	178	40
Bishop's Waltham	-	12	24	24	12	24	24	-	-
Christchurch	-	-	-	2	-	24	48	48	72
Fareham	32	84	144	132	108	156	204	60	-
Fordingbridge	-	-	-	12	12	12	36	24	24
Gosport	16	48	42	36	18	24	48	12	-
Havant	-	48	24	48	72	84	96	168	-
Lymington	6	6	24	16	36	60	72	78	108
Lyndhurst	12	12	48	28	72	96	96	108	36
Petersfield	24	144	120	144	108	180	276	96	40
Portsmouth	12	96	102	126	108	156	192	102	20
Ringwood	12	24	24	56	48	72	108	108	24
Romsey	28	36	98	108	90	96	180	188	-
Southampton	66	54	198	198	246	312	456	256	162
Stockbridge	-	36	84	48	48	36	48	32	-
Winchester	108	102	192	126	240	282	450	78	16
Andover Rd.	-	-	-	-	-	-	-	84	36
Bournemouth	-	-	-	-	-	-	-	-	24
Christchurch Rd.	-	-	-	-	-	-	-	-	36
Brockenhurst	-	-	-	-	-	-	-	-	108
Lyndhurst Rd.	-	-	-	-	-	-	-	-	36
Shirley	-	-	-	-	-	-	-	-	72
Totton	-	-	-	-	-	-	-	-	36
West End	-	-	-	-	-	-	-	-	48
Gross vertex connectivity	564	1026	1412	1506	1560	2064	2802	1704	964

TABLE 8.1

during the 70 or so years of its existence. However, if any substantial conclusions are to emerge from this discussion, for the purposes of comparison with similar systems in other regions, for instance, it is clearly necessary to formulate some means by which systems at different dates and in different regions may be objectively compared. The following analysis offers two ways of achieving a more rigorous methodological base of this kind, and at the same time, allows further insight to be gained into the rise and decline of the system itself.

One of the simplest ways of comparing sets of transport systems which incorporate flow information is to examine vertex connectivity,[1] how it varied over space and how it changed through time. Table 8.1 gives the vertex connectivity values for all settlements linked to the Southern Hampshire stage-coach system during the period. If the values for each date are summed, a series of measures of gross vertex connectivity are obtained - i.e. representative of the system as a whole. These measures are graphed in figure 8.4A and serve to clarify some of the more intuitive assumptions made earlier about the system's overall development. The two expansion phases are clearly distinguishable, although the second is considerably more significant than the first, thereby justifying its title as the 'Golden Age'. The period of stagnation associated with the war years is also clearly evident, while the contraction phase of the 1840s is revealed as being rather more dramatic than was first suggested, despite the development of railway station feeder services at this time.

In focusing attention on gross vertex connectivity, it should be emphasised that no account is taken of variations in expansion and contraction at individual settlements in the region. To what extent did individual settlements conform to the pattern indicated in figure 8.4A? This can be established by calculating the correlation coefficients[2] for vertex connectivity for successive time intervals (i.e. 1775/1784, 1784/1798 etc.). If the stage-coach system was changing in a strictly uniform way both spatially and through time, coefficients of plus one would be consistently attained - i.e. direct positive correlation.

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[1] For the exact definition of this term, see chapter three, p. 54

[2] For details of the type of coefficient used and other related points, see chapter three, p. 55

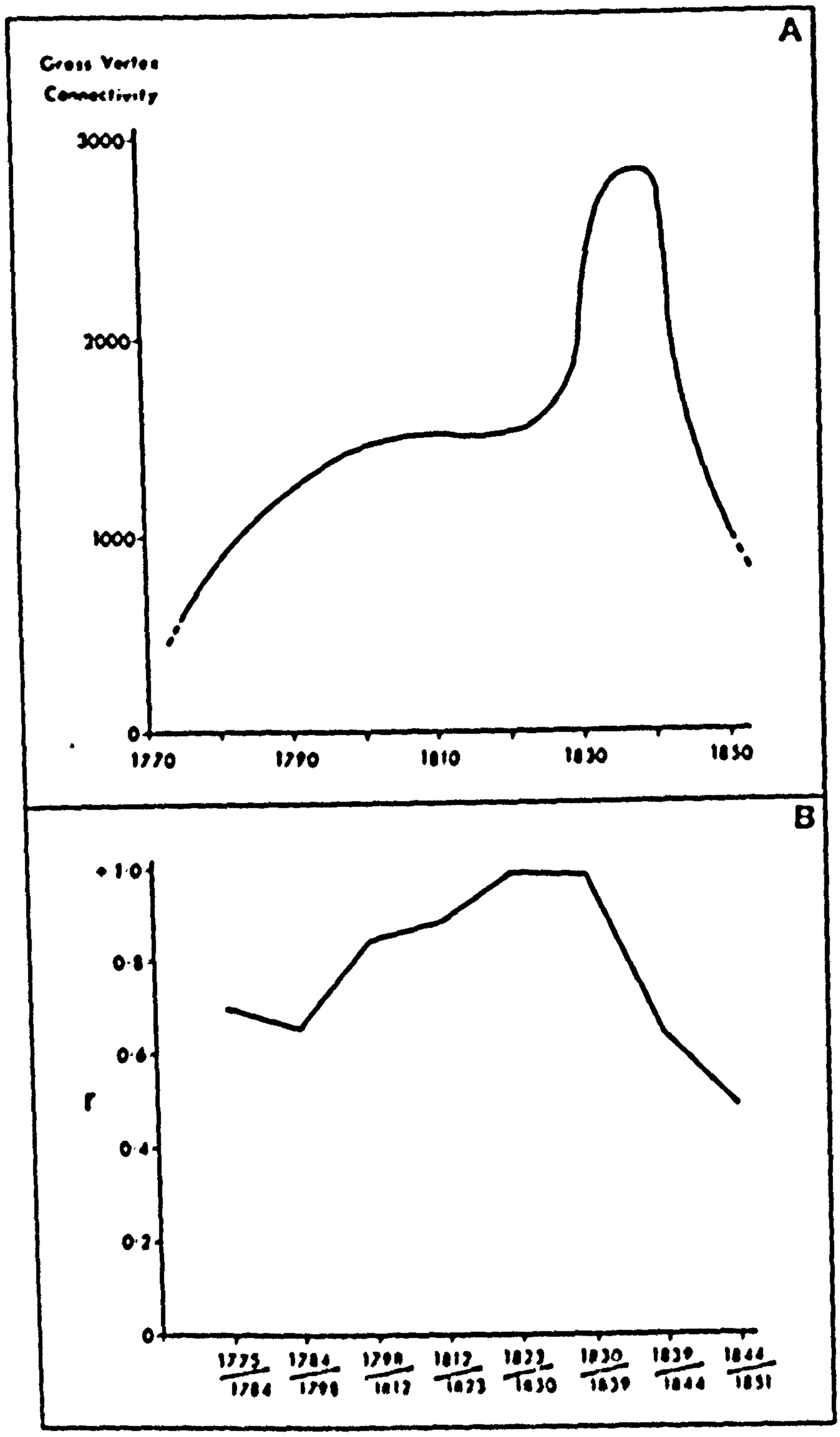
A
Gross Vertex
Connectivity
3000
2000
1000
0
1770
1790
1810
1830
1850
B
1·0
0·8
0·6
r
0·4
0·2
0
1775/1784
1784/1798
1798/1812
1812/1823
1823/1830
1830/1839
1839/1844
1844/1851

FIGURE 8.4

Values of zero, in contrast, would be indicative of completely haphazard change. The results of the calculations are graphed in figure 8.4B. During the middle development period, the region's stage-coach system did in fact change in a fairly uniform way (indicated by R values of +0.9 and above), while the early development phase and the railway transition period were characterised by rather more haphazard change (indicated by R values of +0.75 and below), notably so between 1844 and 1851.[1] In the early development phase, fair numbers of adjustments would clearly have been necessary in both the route network and in the relative frequency of service provision, before the pattern of demand was in any way met: this would explain the somewhat mediocre degree of correlation recorded for the period. Once the basic pattern had been established, though, expansion took on a much more uniform character, and this is reflected in the very high correlation levels of the 1820s and 1830s. The advent of railways, on the other hand, set in motion a complex series of changes and these are highlighted in the much lower levels of correlation for the time.

A second method of comparing sets of transport systems, whether incorporating flow information or not, is provided by the technique of graph theory. This technique proved of considerable value in examining the development of the region's turnpike system,[2] and it is equally valuable in the context of examining stage-coach activity in the region.[3] The results are shown in figure 8.5, which includes graphs for the beta, alpha and theta indices, and also a graph of changes in network length over the period. Examining the actual levels of network connectivity first, as indicated by the beta and alpha indices (figs. 8.5C and 8.5B), the value of the beta index rose steadily from around 1.0 in 1775 to slightly over 1.3 in the 1830s and then fell back to around 0.8 in 1851. Similarly, the value of the alpha index rose steadily from about six per cent in 1775 to approximately 20 per cent in the 1830s, falling back to about two per cent in 1851. The attainment of beta and alpha values of around 1.3 and 20 per cent respectively by the 1830s is indicative of a

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[1] All the values of R, excepting that for 1844/1851 are statistically significant at the 0.1 per cent level

[2] See chapter six, p. 122-4

[3] For explanatory information, see chapter three, p. 45-6

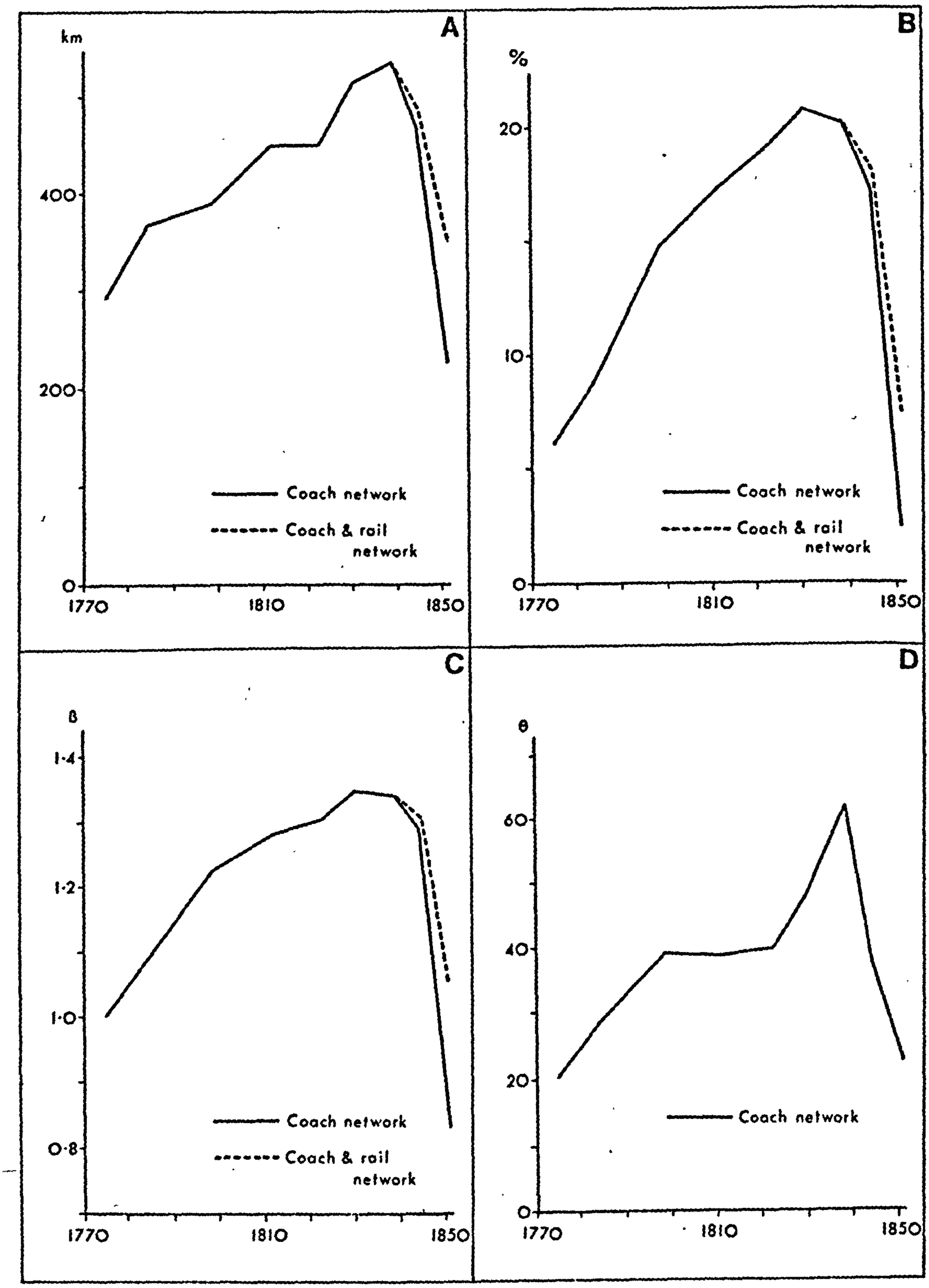
A
km
400
200
0
1770
1810
1850
Coach network
Coach & rail network
B
%
20
10
0
1770
1810
1850
Coach network
Coach & rail network
C
β
1·4
1·2
1·0
0·8
1770
1810
1850
Coach network
Coach & rail network
D
θ
60
40
20
0
1770
1810
1850
Coach network

FIGURE 8.5

relatively well-developed transport system. In other words, the stage-coach system was fairly effective in linking the towns of the region by this time.

Examining the general trends exhibited by the four graphs, the characteristic expansion/contraction sequence is readily apparent in all of them. On closer examination, however, certain differences may be discerned. Whilst the peaks in network length and service provision occurred around 1839 (figs. 8.5A and 8.5D), the peak in network connectivity (figs. 8.5B and 8.5C) occurred around 1830. Between 1830 and 1839, there was a slight fall-off in the degree of connectivity. It would be foolish to attach much importance to such a movement, although it might safely be said that the level of connectivity remained stagnant, with the implication that there was no improvement in the degree to which the region's towns were linked with one another by stage-coach routes over the decade. This would perhaps suggest that some kind of optimum level of development had been reached. Similarly, while the period of stagnation associated with the war years is clearly evident in figure 8.5D and to a lesser extent in figure 8.5A, the graphs for the beta and alpha indices show the period as one of continuing expansion; although the years from the turn of the century to the early 1820s certainly witnessed remarkably little growth in stage-coach facilities, the network of stage-coach routes itself clearly continued to develop, reflecting an increased level of connectivity. The final, and possibly the most significant point to arise from the graphs, though, is the way the railways failed so abysmally in the task of filling the gaps left by the contracting stage-coach system. The dotted lines shown in figures 8.5A, 8.5B and 8.5C represent the stage-coach and rail networks combined, and it is readily apparent that connectivity levels continued to fall rapidly, as did network length. In no sense were the railways acting as an effective substitute for stage-coaches, and the result was that several inland towns - Bishop's Waltham and Stockbridge to name two - lost virtually all regular public means of passenger communication with adjacent centres.[1] Admittedly, this feature is apparent to a certain extent in figures 8.3B and 8.3C, but the graph-theoretic indices highlight it more clearly. When this almost total decline in the provision of public transport facilities for a number of the

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[1] Carrier services, where they continued, may have acted as a partial substitute, although it seems unlikely that many of the former stage-coach clientele would have lowered themselves to travel by a form of transport normally used only by the poor.

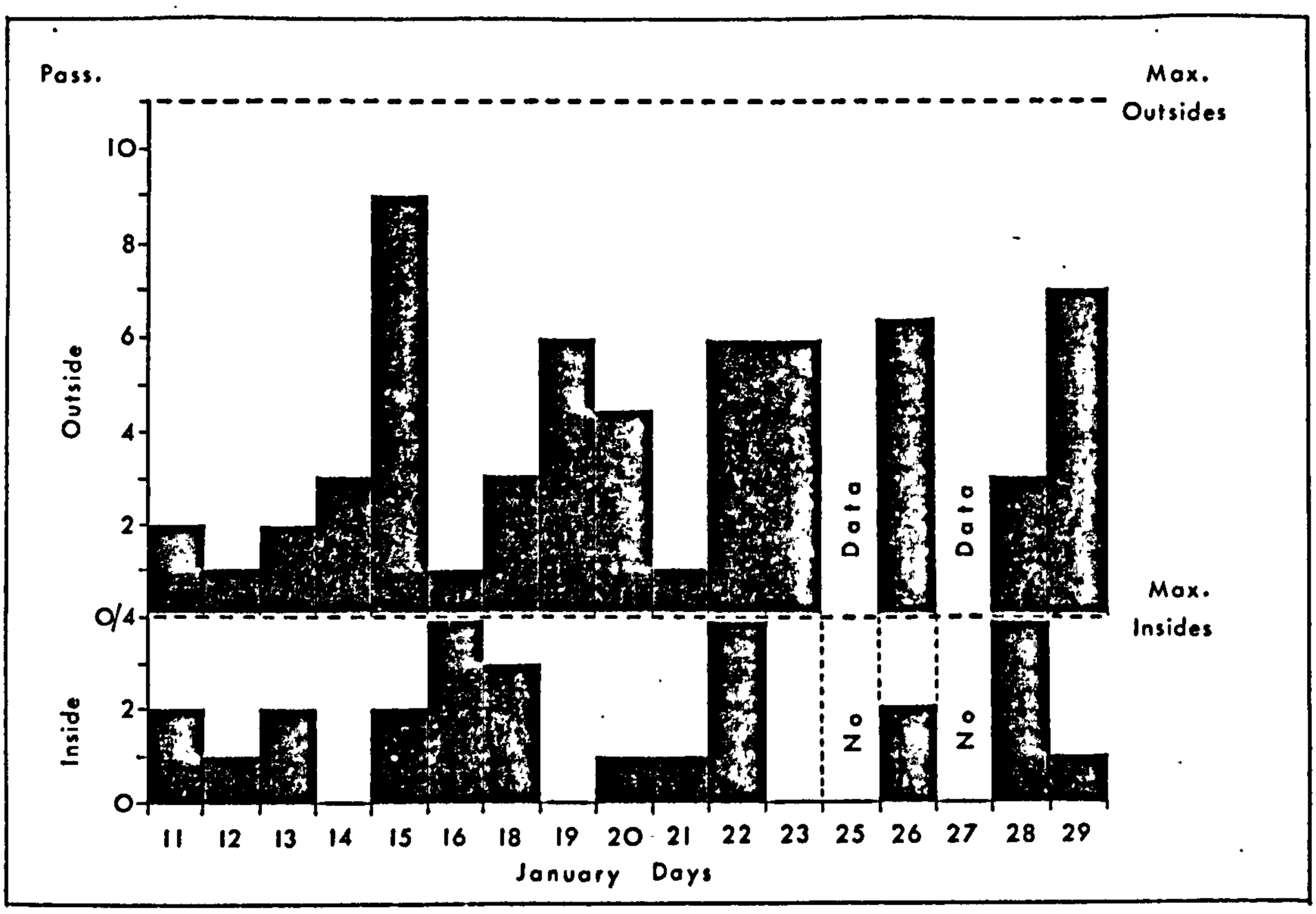
Pass.
Max.
Outsides
10
8
6
4
2
Outside
Data
Data
Max.
Insides
0/4
2
0
Inside
No
No
11
12
13
14
15
16
18
19
20
21
22
23
25
26
27
28
29
January Days

FIGURE 8.6

region's towns is coupled with the distinctly unfavourable nature of those few railway facilities that the region possessed,[1] it becomes clear that the traditional view of the railway as the 'Great Connector',[2] does not really apply in the case of Southern Hampshire. Whilst it is true that the second half of the nineteenth century saw substantial extensions to the region's railnet, there were still a number of towns that escaped attention and service provision on some routes was poor.[3] There is no doubt that the introduction and widespread growth of railways in Britain in the second half of the nineteenth century represented a highly significant advance in transport technology and thereby made an important contribution to the country's developing economy. However, the example of Southern Hampshire strongly suggests that the benefits of railways at the regional level were considerably less significant, and moreover, for some areas, the advent of the 'Railway Age' was accompanied by a decline in public passenger transport provision, a situation not fully remedied until the 'Motor-bus Age'.

8.iii) Coach loadings

By the 1820s and 1830s, stage-coaches were clearly providing Southern Hampshire with a comprehensive and integrated system of public passenger transport. Having established this, however, it is obviously important to try to discover how many people travelled on the stage-coaches. Unfortunately, evidence on coach loadings is limited and it is necessary to rely upon the information provided by a few selected sources. Potentially one of the most useful sources is the stage-coach waybill, but as noted in chapter two, the local record offices yielded only one set - relating to a stage-coach running from London to Salisbury via Basingstoke and Andover, and covering a three-week period in January 1836.[4] Figure 8.6 indicates the number of passengers aboard this coach at the eastern entrance to Andover, and represents a daily average of about six. As the coach was licensed to carry 15 passengers,[5] it was obviously running well below

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[1] See this chapter, p. 189-90

[2] See for example, H. Perkin, The Age of the Railway, (London, 1970), 101

[3] See H.P. White, A Regional History of the Railways of Great Britain - Volume 2 - Southern England, (Dawlish, 1961)

[4] Hants. R.O., 10M57/TR4

[5] W. Robson, London Directory, (London, 1836)

	Dates of census	Ave. coach Loading
Basingstoke	3/11/1833-10/11/1833	5.6 (1.0)
Farnborough	26/11/1833-30/11/1833	4.3 (1.2)
Kingston	4/12/1833-12/12/1833	6.1 (1.6)

(Standard deviations in brackets)

TABLE 8.2

capacity. However, this was the depth of the winter season when travel demand was probably at its lowest; summer loadings were almost certainly higher. As well as offering useful information about coach loadings, this particular set of waybills also offers valuable evidence on the related question of the journey lengths of coach passengers. Of the total number of passengers using the coach over the three-week period, some 48 per cent travelled the full journey of 131 kms, some 27 per cent travelled between 65 and 131 kms, some eight per cent between 32 and 65 kms, and the remaining 17 per cent travelled distances of less than 32 kms. Although the greater majority of passengers were clearly in the long-distance category (approximately 75 per cent), it is interesting to note the substantial number of so-called 'short-stage' journeys that were made.

A more comprehensive body of evidence about coach loadings comes from the Parliamentary Committee Report on the London and Southampton Railway bill of 1834, in the form of road traffic censuses taken at strategic points along the route of the proposed line - at Basingstoke, Farnborough and Kingston-upon-Thames.[1] The majority of stage-coaches passing through these towns were travelling either to or from Southern Hampshire. The censuses were taken 24 hours a day, for periods of between four and nine days, and in fact covered all forms of road traffic. The average coach loadings recorded at these census points are given in table 8.2. As the average maximum capacity for stage-coaches in the region at the time was 13,[2] these figures are surprisingly low. However, it should be noted that this is the winter season again, and summer loadings were almost certainly higher. This is confirmed by verbal evidence presented to the same committee. James Deal, a book-keeper at one of the Southampton coach offices, for instance, stated that passenger loadings on the Southampton to London coaches were normally highest in summer and he gave the average annual loading on this particular route as nine.[3] In addition, a local newspaper report of almost exactly similar date gives the average annual loading for Southampton-London stage-coaches as 75 per cent of the licensed capacity,[4] which would mean a figure of ten to eleven.

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[1] B.P.P., Report of the Lords Committees on the London and Southampton Railway bill, 1834, (H.O.L. 106), XXIII, 35-8

[2] W. Robson, London Directory, (London, 1833)

[3] B.P.P., Report of the Lords Committees on the London and Southampton Railway bill ..., op. cit., 40-1

[4] Hampshire Advertiser, 20/9/1834

The Parliamentary Committee Report on the London and Southampton Railway bill is not the only one of its kind to offer evidence about coach loadings. Information on this particular subject featured in most traffic estimates commissioned by railway promoters of the time, and these estimates often appear in the committee reports. Unfortunately, it was unusual for them to be expounded in anything like as much detail as was the case with the London and Southampton bill. Nevertheless, the detail that is available adds a useful sidelight to the evidence presented by that particular collection of material. For example, the Committee Report on the Brighton and Chichester Railway bill Portsmouth Extension of 1845 gives the average annual loading for stage-coaches along the route in question as 6.5,[1] while the comparable figure for the Southampton and Dorchester Railway bill given in a committee report of the same year was 5.3.[2] Both these annual averages are lower than that given for the Southampton-London route above. However, this is not entirely unexpected since neither of the routes involved were trunk lines. In contrast, the average annual coach loading given in the Committee Report on the Direct London and Portsmouth Railway bill of 1845 was nine,[3] and one of the witnesses examined at a later sitting stated the annual average as ten to eleven.[4] Both these figures fall well in line with those for the Southampton-London route.

Further information about coach loadings comes from a series of four weekly account bills relating to the London, Southampton and Poole mail-coach for the winter of 1790-1.[5] A close examination of the waybill receipts shows that this coach was operating at an average 80 per cent

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[1] H.L.R.O., Minutes of Evidence, H.C., 1845, Vol. 7, Brighton and Chichester Railway bill Portsmouth Extension, table 1 - this covered four different coaches.

[2] H.L.R.O., Minutes of Evidence, H.C., 1845, Vol. 76, Southampton and Dorchester Railway, table 1 - this covered nine different coaches.

[3] H.L.R.O., Minutes of Evidence, H.L., 1845, Vol. 13, Direct London and Portsmouth Railway, 131-4 - this does not apply to the position in 1845, but to that prevailing in the years prior to the opening of the London and Southampton Railway in 1840.

[4] H.L.R.O., Minutes of Evidence, H.L., 1846, Vol. 12, Direct London and Portsmouth Railway, 52 - this particular figure is confirmed in the report in the Hampshire Advertiser (20/9/1834) referred to earlier.

[5] Winch. R.O., Winchester Corporation lease - reverse side: three messuages, stable etc., in Colebrook St. to William Thomas Foster, May 1822 - the four weeks covered were 10/10/1790-17/10/1790, 21/11/1790-28/11/1790, 9/1/1791-16/1/1791, 23/1/1791-30/1/1791

	Av. winter loading	Av. summer loading
1772-1799	6.7 (7.5)	13.3 (8.5)
1800-1820	9.7 (6.0)	14.0 (8.7)
1821-1839	6.4 (5.6)	10.5 (7.1)

(Standard deviations in brackets)

TABLE 8.3

capacity over the period. However, the maximum capacity of a mail-coach at the time was only five,[1] less than half that of ordinary stage-coaches, and this clearly constitutes a rather special case. On the other hand, mail-coaches operated at a considerable disadvantage compared to the ordinary stage-coaches: fares were some 25 per cent higher and travel was by night.[2] The fact that this particular coach was operating at such a high capacity in winter is obviously not without significance.

The last and possibly the most valuable source on coach loadings is provided by accident reports in the contemporary newspapers. Although the reliability of reports of this kind must obviously be open to suspicion,[3] they have the distinct advantage over the other available sources of covering both a wide area and a wide time-span, and might conceivably represent the ideal random sample. However, it could be argued that coach accidents were often caused by overloading, thus invalidating the use of this material for the purpose in question. In this particular instance, though,overloading was not the major cause of coach accidents. Between 1772 and 1839, the newspapers[4] yielded some 50 accident reports giving full details of coach loadings,[5] and of these, only seven were recorded, by the newspapers, as being caused by overloading; mechanical failures, bad roads, furious driving also figured prominently. The average loading per coach for the whole of the period covered by these reports was 10.2 (st. dev. 7.6). If a distinction is made between winter (October-March) and summer (April-September), average loadings were 7.2 (st. dev. 6.2) and 12.6 (st. dev. 7.9) respectively. This information may be broken down still further by examining average loadings during the different development phases recognised earlier in the discussion (table 8.3). Average loadings during the two expansion phases exhibit a fair degree of similarity, while those for the stagnatory phase were significantly higher, both for winter and for summer. This fits in rather well with the idea that the war period was one of increasing travel demand,

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[1] Four inside the coach and one on the box next to the coachman.

[2] Night travelling was the exception rather than the rule at this time.

[3] See chapter two, p. 38

[4] Hampshire Chronicle, 1772-1830 and Hampshire Advertiser, 1823-39

[5] The total number of accident reports is roughly double this figure, but many give only partial information about the numbers of passengers aboard at the time of the accident.

as suggested earlier:[1] contemporary economic constraints prevented the expansion of coach facilities to meet this demand, with the result that it saw expression in the form of increased loadings. Comparing the results with those for the previous groups of evidence examined, it is reassuring to find that the figures for the 1821-39 period, in particular, generally correspond with the ones given by the waybill and census material. Perhaps the clearest fact to emerge from this analysis, though, is that there was a distinct seasonal fluctuation in the numbers of people travelling by stage-coach and this was present throughout the period. Finally, one point that it is very important to emphasise in connection with the evidence of these accident reports is that the conclusions drawn from them can only be tentative ones. While such material undoubtedly constitutes one of the most valuable sources for information on coach loadings, the small size of the sample in this particular instance is restrictive; moreover, it is clear from the standard deviations that the average loading figures hide some fairly wide-ranging sets of values.

Having examined in some detail the few surviving pieces of evidence on coach loadings, what general conclusions can be drawn about the numbers of people travelling on stage-coaches in the region? The feature that comes out most strongly is the fluctuation in accordance with the seasons: the numbers of travellers were always highest in the summer months and the typical summer loading during the 1820s and 1830s - the period for which the greatest information coverage is available - seems to have been ten. This means that in the summer of 1830, for example, there would have been some 3,000 people travelling in and out of Southampton by stage-coach each week, whilst the corresponding figures for Portsmouth and Winchester would have been approximately 1,500 and 2,800 respectively. This provides a marked contrast to the position in 1775 when (still allowing ten as the average coach loading) the figures would have been approximately 650 for Southampton, 120 for Portsmouth, and 1,000 for Winchester. Between 1775 and 1830, therefore, the numbers of people travelling in and out of these three towns by stage-coach increased roughly five-fold in the case of Southampton, roughly twelve-fold in the case of Portsmouth, and roughly three-fold in the case of Winchester.

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[1] See this chapter, p. 185-6

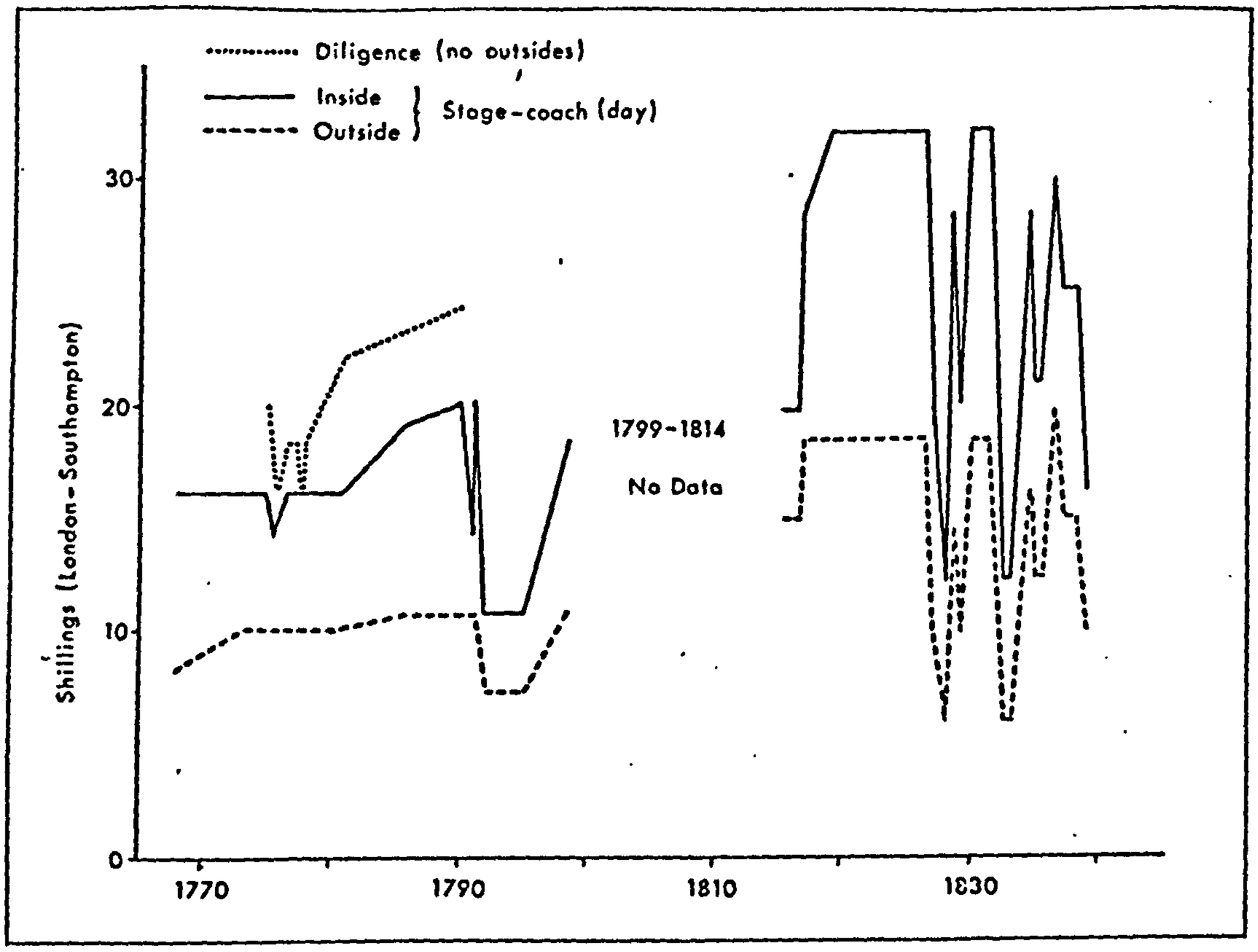
Diligence (no outsides)
Inside
Outside
Stage-coach (day)
Shillings (London-Southampton)
30
20
10
0
1770
1790
1810
1830
1799-1814
No Data

FIGURE 8.7

Finally, it will have been noticed that nothing has been mentioned during the course of this discussion about the kinds of people who travelled on stage-coaches in the region. The explanation is simply that there is virtually no available evidence. However, a series of scattered references in coach accidents reports indicates that farmers, tradesmen, sailors and domestic servants were probably among the more common patrons.

8.iv) Fares and journey times

In overall terms, stage-coach travelling was expensive and on that account generally not available to the majority lower class element of the population. Average fare rates for the region in the 1820s and 1830s were 3½d per mile inside and 2½d per mile outside, and these generally fell in line with those prevailing in other parts of the country at the time.[1] Actual fares, however, varied enormously throughout the whole period. This was largely due to competition between stage-coach proprietors, which, more often than not, manifested itself in the frequent 'fare wars' that became such a universal feature of the coaching period. This is well illustrated in the case of the London-Southampton route. Figure 8.7 shows known changes in fares on stage-coaches operating between London and Southampton during the period 1768-1840.[2] In nearly all cases, these are minimum fares by day coach; fares on the night coaches were usually some 25 per cent less, the major exception being in the case of the mail-coaches where they were normally some 25 per cent higher. The competition phases or 'fare wars' are clearly evident in the graph. The first, in the later 1770s, was confined mainly to the diligences; the second, in the early 1790s, saw the inside coach fare fall from 20/- to 10/6d, remaining at that level for several years - this was the period of the 'long coaches'; the third and final phase covered a much longer time-span, from the late 1820s up until 1840, and witnessed some even more dramatic fluctuations in fare levels. In 1828, for instance, the inside coach fare fell from a record 32/- down to 12/-, and this happened again in 1832. If these various competition phases or 'fare wars' are ignored,

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[1] W.T. Jackman, The Development of Transportation in Modern England, (2nd edition, London, 1962), Appendix 6

[2] This information is drawn mainly from the two principal local newspapers - viz. Hampshire Chronicle and Hampshire Advertiser - and from local guide-books

however, it is clear from the graph that the overall trend was one of increase: fares on the route in the 1820s and 1830s were nearly double those for the later eighteenth century.

The example provided by the London-Southampton route is fairly representative of the picture presented by other routes in the region. On the London-Portsmouth route, although competition phases or 'fare wars' were rather less frequent, there were still some marked fluctuations in fare levels. In 1830, for instance, the inside coach fare was 28/-, while three years later it was only 18/-.[1] If these fluctuations are ignored, it is clear that the general trend of fares on the route was upward, though not on quite the same scale as in the case of the London-Southampton route. On the Southampton-Bath route, the picture was similar again. Indeed, few routes in the region went completely unaffected by competition and the associated 'fare wars', and virtually all recorded significant fare increases over the course of the period. The reason for the consistently upward trend of stage-coach fares was simply the continually rising costs of stage-coach operations. Principal amongst these was the ever-increasing level of taxation to which proprietors of stage-coaches were subjected from the late eighteenth century onwards. The most crippling aspect here was undoubtedly the mileage duty. When first introduced in the late 1770s, it consisted of a halfpenny levy on every mile travelled.[2] By the 1830s, however, after a succession of increases and adjustments, it had risen to a three-penny levy on every mile travelled.[3]

The general increase in the levels of stage-coach fares over the course of the period was in some degree offset by the reductions in journey times that travellers were afforded. Figure 8.8 shows known changes in journey times for stage-coaches operating between London and Southampton during the period 1768-1840.[4] As with fares, these refer to day coaches only; night coaches were nearly always slower, excepting the

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[1] Hampshire Advertiser, 6/3/1830, 30/11/1833

[2] S. Dowell, A History of Taxation and Taxes in England from the earliest times to the year 1885, (London, 1885), III, 42

[3] S. Dowell, op. cit., III, 48 - By this time, the rate levied was graduated according to a coach's passenger capacity, but the three-penny rate was the one for the normal stage-coach in use at the time.

[4] Again, this information is drawn mainly from the two principal local newspapers and from local guide-books.

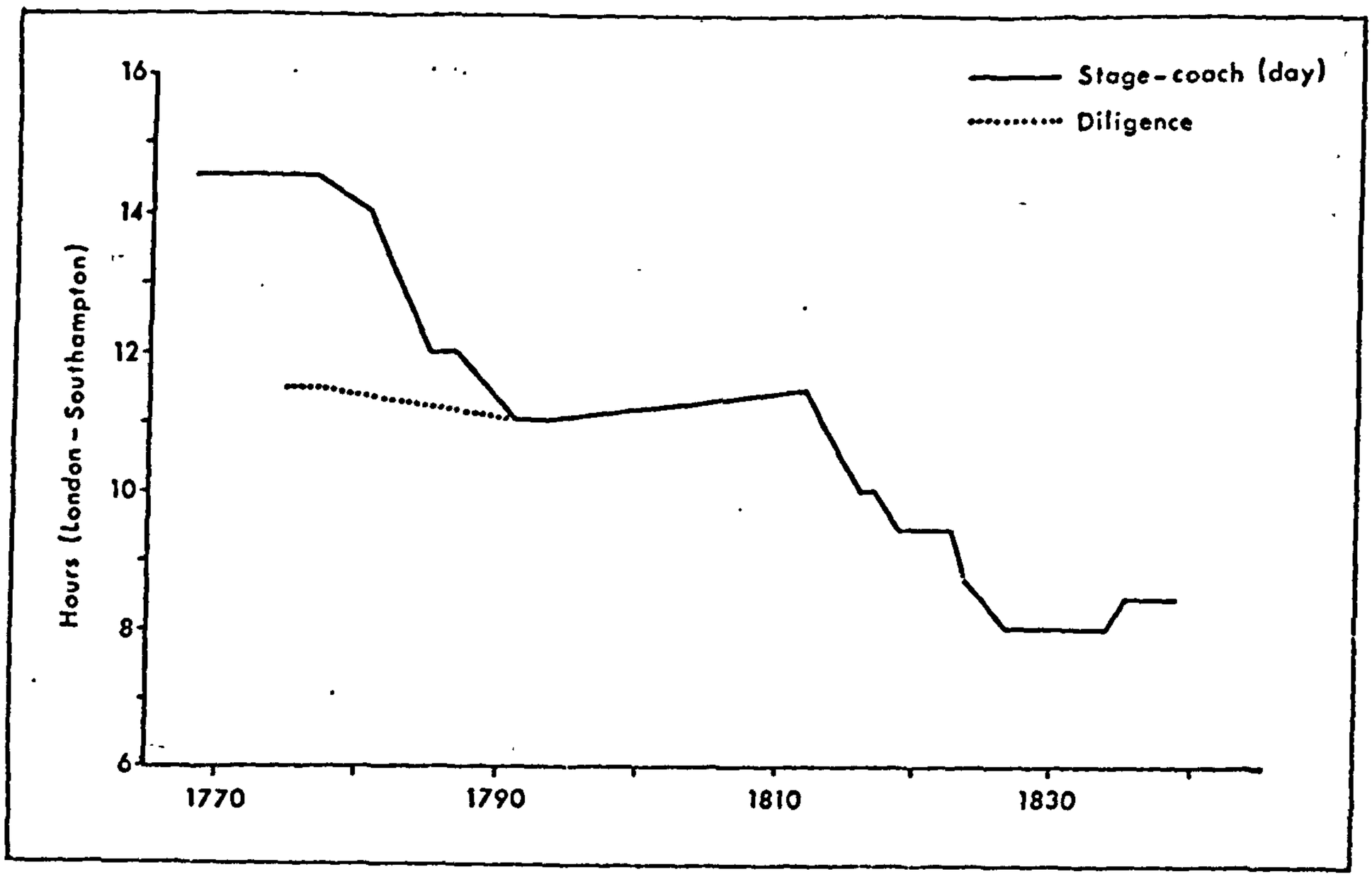
Stage-coach (day)
Diligence
Hours (London - Southampton)
16
14
12
10
8
6
1770
1790
1810
1830

FIGURE 8.8

mail-coaches, which normally travelled at similar speeds to the day coaches. In the 1770s, the journey took 14 to 15 hours and could just be accomplished in a day. By the late 1820s, this time had been reduced to some eight hours. However, as the graph clearly shows, the trend was by no means uniformly downward. The major reductions were made in two distinct phases. The first phase, from about 1780 to 1790, saw journey times cut by some three hours, and was achieved as a direct result of the road improvements following the establishment of the turnpike trusts in the area,[1] and the increasingly widespread adoption of the practice of changing horses at intervals along the route. The second phase, from about 1815 to the late 1820s, witnessed yet a further three-hour reduction. In this instance, the explanation is not quite as clear. Road surface improvements arising from the adoption of McAdamisation principles by local turnpike trusts were certainly a contributory factor. In addition, the change-over from the heavier 'six-inside' stage-coaches to the 'light four-inside safety coaches', so characteristic of the later coaching period, would also have been conducive to increased rates of travel. The introduction of superior breeds of coach horses may also have been important. Unfortunately, the available evidence does not permit a more precise interpretation. An especially interesting feature to emerge from the graph is the way reductions in journey times ceased after 1827; indeed, some stage-coaches were in fact re-timed to take eight and a half hours. The implication is clear: the ceiling in horse technology was reached on this route as early as the 1820s and the re-timings of the 1830s were probably aimed at achieving greater safety, in order to attract greater public support.

As was the case with stage-coach fares, the example provided by the London-Southampton route is fairly representative of other routes in the region. On the London-Portsmouth route, for instance, the stage-coach journey time fell from some 14 hours in the 1770s to some nine hours in the mid-1820s, with the major reductions occurring in the 1780s and the 1810s/1820s.[2] In contrast to the London-Southampton route, though, further reductions were made after this date, and by the late 1830s, the journey time was down to approximately seven hours.[3] On the Southampton-Bath route, the stage-coach journey time was cut from around twelve hours

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[1] See chapter six, p. 109-111

[2] Hampshire Chronicle, Hampshire Advertiser - various advertisements

[3] Hampshire Chronicle, Hampshire Advertiser, op. cit.

in the 1770s to eight to nine hours in the 1820s,[1] while on the Southampton-Oxford route it fell from some twelve hours in the 1780s to seven hours in the 1830s.[2] Viewed in overall terms, the reductions in journey times over the period for the region as a whole ranged between 25 and 50 per cent, and this is in line with the general national picture.[3] However, the precise scale and timing of these reductions was very much the product of prevailing local conditions: the actual dates of turnpiking of the particular roads in question, the quality of the road improvements that were subsequently effected, to name but two examples. The role of the turnpike trusts, in particular, was critical.

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[1] Ibid.

[2] Ibid.

[3] W.T. Jackman, op. cit., Appendix 5

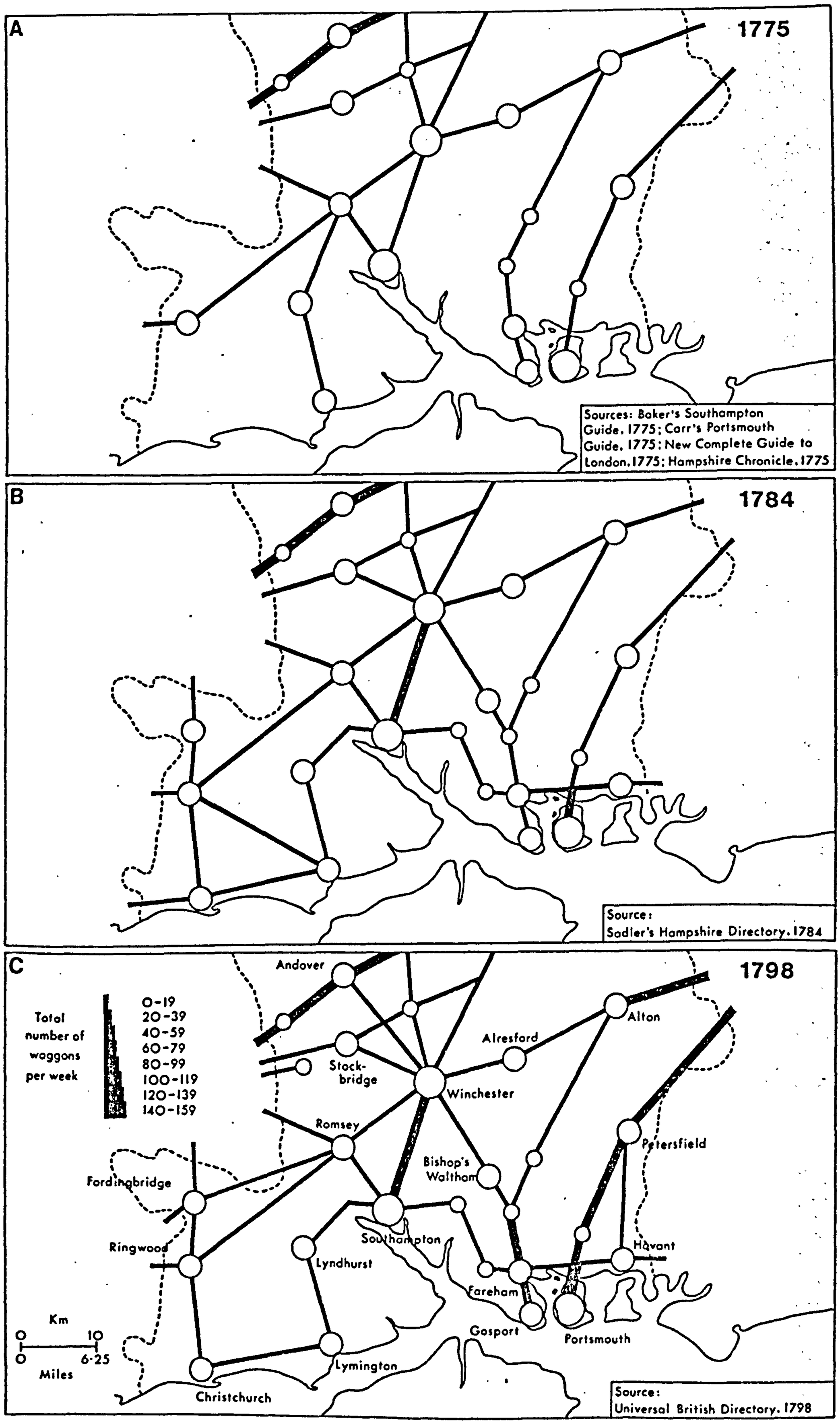
A
1775
Sources: Baker's Southampton Guide, 1775; Carr's Portsmouth Guide, 1775; New Complete Guide to London, 1775; Hampshire Chronicle, 1775
B
1784
Source: Sadler's Hampshire Directory, 1784
C
1798
Total number of waggons per week
0-19
20-39
40-59
60-79
80-99
100-119
120-139
140-159
Andover
Alresford
Alton
Stock-bridge
Winchester
Romsey
Petersfield
Bishop's Waltham
Fordingbridge
Southampton
Ringwood
Lyndhurst
Havant
Fareham
Gosport
Portsmouth
Lymington
Christchurch
Km
0
10
0
6·25
Miles
Source: Universal British Directory, 1798

FIGURE 9.1

CHAPTER NINE

THE CARRIER SYSTEM, 1750-1850

9.i) Spatial and chronological development

The remarkable development in both the range and efficiency of stage-coach facilities in Southern Hampshire during the course of the turnpike period was closely mirrored in the realm of carrying. While carrier services are known to have been in operation in the Southern Hampshire region as early as the first half of the seventeenth century,[1] the range of these facilities was limited and in the winter season quite a number of services were withdrawn.[2] Furthermore, and parallelling in many ways the position with stage-coach facilities, there was remarkably little growth in carrier service provision over the ensuing 100 years. The result was that the facilities available in the mid-eighteenth century showed little advance upon those of 60 or 70 years before.[3] From the mid-eighteenth century, this situation began to change. In particular, the years from about 1760 to the mid-1790s saw the setting up of a considerable number of new carrier services in the region, involving both new and existing routes. This expansion of carrier activity is illustrated in figure 9.1 which shows the extent of development of the region's carrier system at three different dates in the period.[4] Admittedly, the pace of expansion was not nearly as great as that of the stage-coach system over the same time (cf. with fig. 8.1) and there was no parallel to the diligence/mail-coach/long coach saga, which acted as an important stimulant to the establishment of new stage-coach facilities. However, the expansion of activity was still marked, and particularly when viewed against the situation in the preceding half-century or so. A number of major carrier routes emerged in the region: London to Portsmouth and London to the West of England (via Andover), in

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[1] In 1637, for instance, there was a twice-weekly service between Portsmouth and London and a weekly service between Winchester and London - J. Taylor, The Carriers' Cosmographie, (London, 1637),

[2] See chapter five, p. 102

[3] See chapter five, p. 104

[4] For details of how these and all the other flow maps included in this chapter have been compiled, see chapter three, p. 53-4

particular, and by 1798, placed like Portsmouth, Southampton and Winchester possessed 60 or more inward and outward movements each per week.

The reason for the comparatively sudden growth of carrier services in the region is almost certainly very similar to that given for the sudden growth of stage-coach facilities at the same time. Whilst the demand for public transport facilities was probably on the increase during the middle decades of the eighteenth century, it was not until the widespread adoption of the turnpike trust as a road maintenance mechanism that the condition of the roads permitted any response to that demand on the part of public transport operators. The greater proportion of the region's main roads were turnpiked in the 1750s and 1760s, and the major expansion of both stage-coach and carrier facilities dates from this time. The preceding chapter showed how the connection between turnpiking and the expansion of stage-coach services is especially clear in the case of the London-Portsmouth and London-Southampton routes, and this is equally true in the expansion of carrier services. On the London-Portsmouth route, for example, the 1760s and 1770s saw a significant extension of the carrier facilities run by the Clark family,[1] whilst a similar pattern prevailed in respect of the facilities run by the Asletts, the Brookmans and the latter's predecessors on the London-Southampton route.[2]

One especially interesting feature of the expansion of carrier activity in this period was the way several established carrier concerns changed hands. The prime example is provided by the Winchester-based concern operated by the Waldron family since the Restoration. This business had been built up over a period of many years and covered a variety of different routes, and between about 1770 and 1777, it changed ownership no less than three times.[3] The prevalence of such changes, and in respect of this business in particular, is perhaps a reflection of the developing prospects for carrier operations at the time.

The marked expansion of carrier activity in the later decades of the eighteenth century was not continued in the early years of the nineteenth.

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[1] See for example, Traveller's Pocket Companion, (London, 1743); Complete Guide to London, (London, 1763); Portsmouth Guide for 1775

[2] See for example, Southampton Guides for 1768, 1775 and 1781

[3] Hampshire Chronicle, 1772-8 - numerous advertisements. The respective owners were Thomas Waldron, John Savage, William Hooper and James Brookman

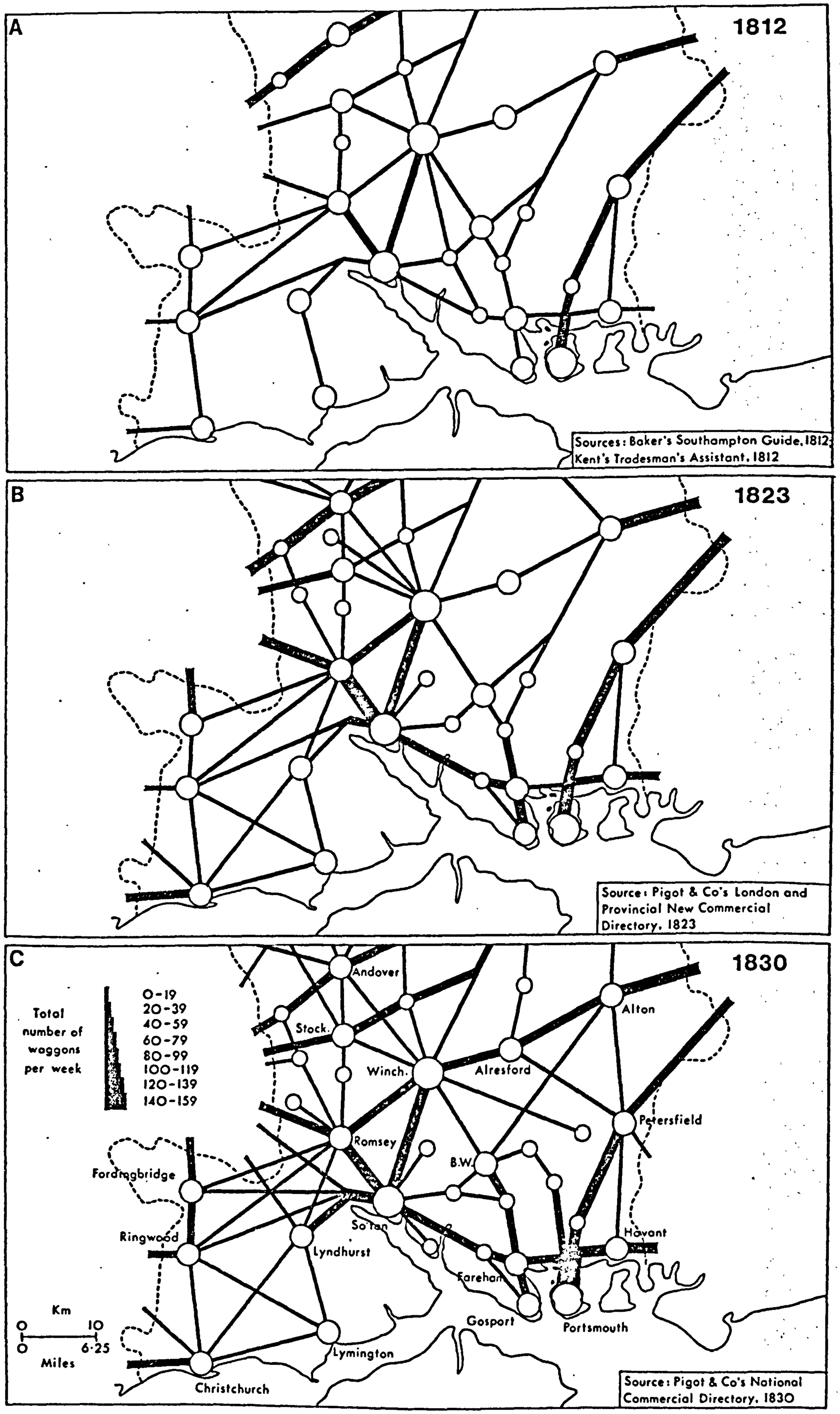
A
1812
Sources: Baker's Southampton Guide, 1812;
Kent's Tradesman's Assistant, 1812
B
1823
Source: Pigot & Co's London and
Provincial New Commercial
Directory, 1823
C
1830
Total
number of
waggons
per week
0-19
20-39
40-59
60-79
80-99
100-119
120-139
140-159
Andover
Stock.
Winch.
Alresford
Alton
Petersfield
Romsey
B.W.
Fordingbridge
Ringwood
Lyndhurst
Southampton
Fareham
Gosport
Portsmouth
Havant
Lymington
Christchurch
Km
0
10
0
6·25
Miles
Source: Pigot & Co's National
Commercial Directory, 1830

FIGURE 9.2

This is clearly evident from a comparison of figures 9.1C and 9.2A, which reveal little change in service provision between 1798 and 1812. Admittedly, there were a number of alterations in carriers' routes - the establishment of a London-Southampton service via Botley and Bishop's Waltham using the new London-Southampton turnpike in 1801, for example[1] - but the overall level of service provision remained the same. The explanation for this apparent stagnation is not absolutely clear. A similar trend was identified when examining stage-coach activity in the region,[2] and on that occasion the high prices of horses and horse provender were put forward as the main explanation. Carrier operators would not have been greatly affected by a rise in horse prices, simply because they did not use horses in as intensive a way as operators of stage-coaches: it was unusual for carrier operators to change horses in the course of a journey during the period. However, they would certainly have been affected by rises in the price of horse provender and this is confirmed by the considerable numbers of notices found in the local newspapers at the time announcing increases in rates of carriage for this very reason.[3] Any increase in operating costs of this nature would not have been conducive to the setting up of new services, thus accounting for the stagnatory phase.

As was noted in the preceding chapter, the advent of peace in 1815 was accompanied by a general collapse of agricultural prices. This would have meant the removal of the suggested constraining influence upon the expansion of carrier activity during the war years, thereby opening the way for renewed growth. The development of the region's carrier system during the succeeding 20 to 25 years bears out this view. Between the ending of the war and the late 1830s, the system expanded considerably (figs. 9.2A, 9.2B, 9.2C and 9.4A), with the later 1810s and the early 1820s emerging as an especially significant growth phase (figs. 9.2A and 9.2B).

The reason for the marked upsurge in activity in these early post-war years is uncertain. In the case of stage-coach activity, the period

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[1] Hampshire Chronicle, 8/6/1801

[2] See chapter eight, p.185-6 - In the case of stage-coach activity, the trend persisted through until the early 1820s.

[3] See for example, Hampshire Chronicle, 15/12/1800, 5/1/1801, 19/12/1808, 26/12/1808

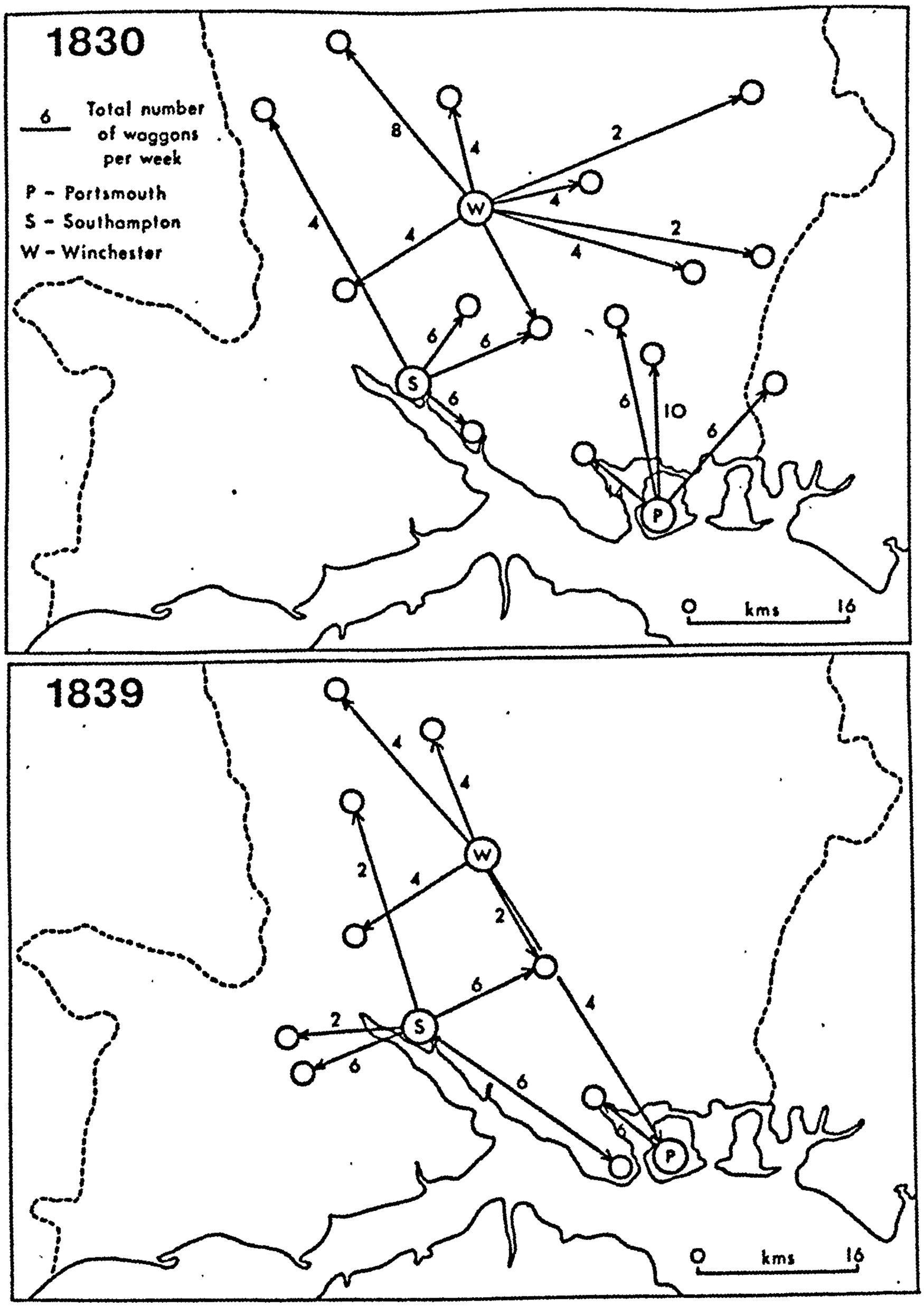
1830
6 Total number of waggons per week
P - Portsmouth
S - Southampton
W - Winchester
W
S
P
0 kms 16
1839
W
S
P
0 kms 16

FIGURE 9.3

of stagnation associated with the war years extended into the early 1820s and it was suggested that this was due to the post-war economic depression. The position concerning carrier activity was obviously very different, although why it was so is far from clear. However, the contemporary newspapers reveal that the period saw the widespread introduction of 'fly waggons',[1] and this may well have been a significant factor. The establishment of 'fly waggon' services involved adopting the stage-coach practice of changing horses at regular intervals in the course of a journey. This resulted in marked reductions in journey times, which in turn meant that a greater frequency of service could be offered, though often - and here is perhaps the most important point - within the scope of existing vehicle unit capacity. Clearly, the capital input involved in such expansion was significantly less than would have been involved in a parallel expansion of stage-coach facilities, where regular horse changes had been standard practice for some time already. The effect of the upsurge in carrier activity in the early post-war period is well demonstrated in the example of Southampton, where the total number of inward and outward carrier movements per week increased from 62 in 1812 to 212 in 1823; by 1823, the town had four different 'fly waggon' services operating three times a week to London alone: Smith and Co's waggon via Winchester and Basingstoke, Burnett's van and waggon via Winchester and Alton, and Jackson and Co's waggon via Botley, Bishop's Waltham and Alton.[2] In addition, there were further 'fly waggons' to Bath and Bristol, Exeter (for Plymouth), Gosport, Lymington and Poole, and also, of course, a whole range of ordinary services to towns within the Hampshire area.[3] Between the early 1820s and the late 1830s, expansion of carrier activity was considerably less marked. This represents a notable contrast to stage-coach activity where these years saw a dramatic growth in facilities as part of the so-called 'Golden Age'. However, there was one significant new development in the period. This was the establishment of 'market' carrier services[4] around a number of the principal towns, Winchester and

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[1] See for example, Hampshire Chronicle, 3/2/1817, 25/8/1817, 17/12/1821, 24/12/1821, 13/5/1822, 2/9/1822

[2] J. Pigot & Co., London and Provincial New Commercial Directory, (London, 1823), 343

[3] J. Pigot & Co., op. cit., 343-4

[4] Services that can be positively identified as serving a town only on its market day(s)

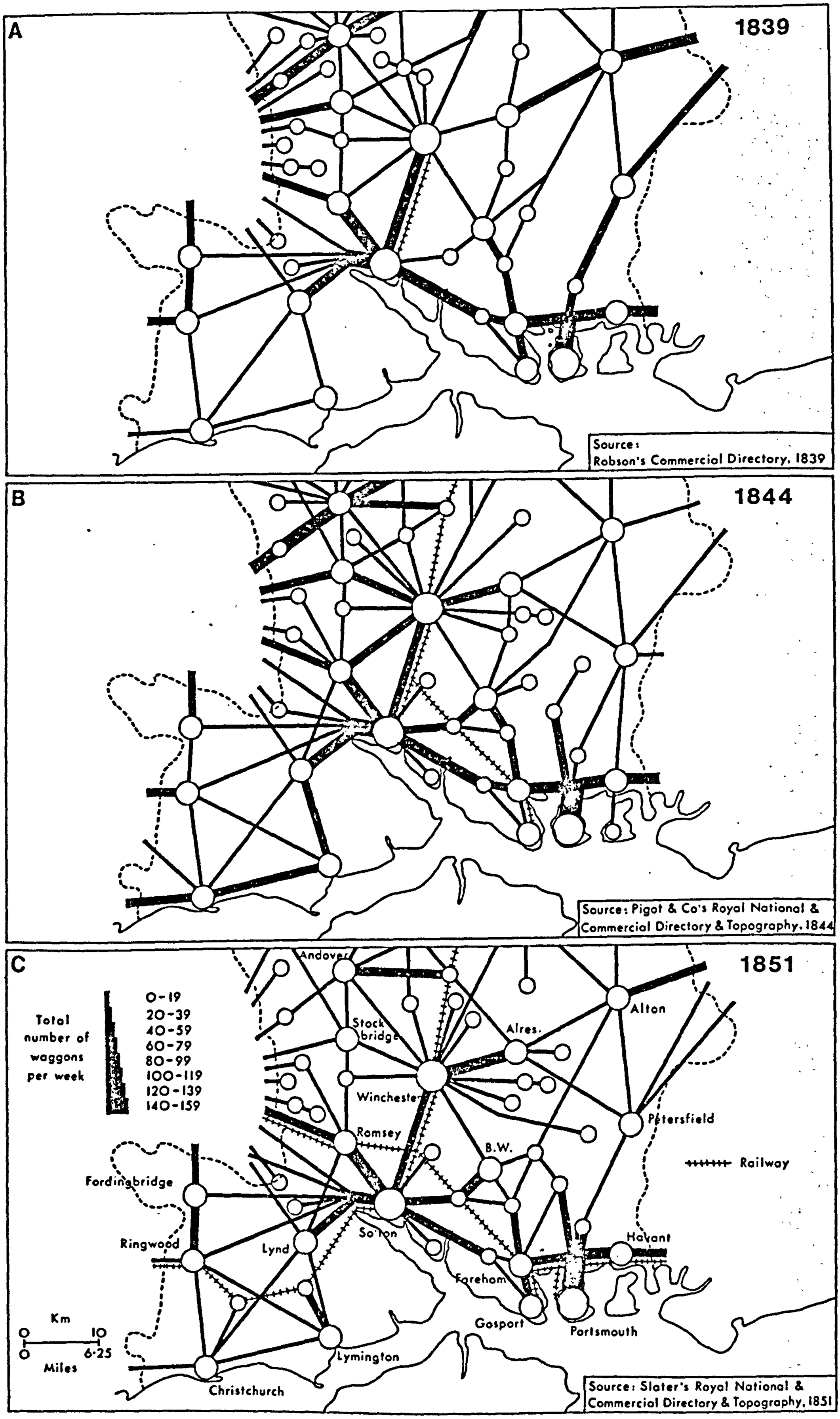
A
1839
Source:
Robson's Commercial Directory, 1839
B
1844
Source: Pigot & Co's Royal National & Commercial Directory & Topography, 1844
C
1851
Total number of waggons per week
0-19
20-39
40-59
60-79
80-99
100-119
120-139
140-159
Andover
Stock bridge
Alres.
Alton
Winchester
Romsey
B.W.
Petersfield
Railway
Fordingbridge
Ringwood
Lynd
So'ton
Havant
Fareham
Gosport
Portsmouth
Lymington
Christchurch
Km
0
10
0
6·25
Miles
Source: Slater's Royal National & Commercial Directory & Topography, 1851

FIGURE 9.4

Salisbury (Wiltshire),[1] in particular (figs. 9.2C and 9.4A). The scope of this activity is indicated more clearly in figure 9.3, which shows the 'market' carrier services for Portsmouth, Southampton and Winchester in 1830 and 1839. The areal extent of Winchester's catchment in 1830 is considerable, with services as far east as Alton and Petersfield. Somewhat surprisingly, the overall range of 'market' services for these three towns was greater in 1830 than in 1839, although in some ways this is not unexpected in view of the fact that 'market' carrying was a fairly new field of operations and the pattern of demand relatively untested.

As with stage-coach activity, the advent of railways to Southern Hampshire from about 1840 marked an important turning point in the development of the region's carrier system. The year 1840 saw the opening of the main line from London to Southampton throughout (fig. 9.4B) and this was followed in 1842 by the opening of a branch to Fareham and Gosport (fig. 9.4B), which gave Portsmouth an almost direct rail connection at the same time.[2] The effect of these two developments upon carrier activity in the region was that many of the longer-distance services - those between Southampton and London and Portsmouth and London, in particular - were forced off the road. Shorter-distance services, however, fared rather better in the face of railway competition, and there was also further expansion in 'market' carrier activity. As with stage-coach activity, therefore, contraction was in no sense the dominant feature of this initial transition phase. Figure 9.4B indicates the state of the region's carrier system in 1844. The disappearance of many of the longer-distance services is clearly evident, while overall, the pattern of activity remained a complex one, and in some parts it is possible to discern a distinct expansion over the position in 1839 (fig. 9.4A).

Further railway development in the region in the later 1840s - namely the opening of the Southampton-Dorchester, Bishopstoke-Salisbury and Portsmouth-Chichester lines - gave rise to more changes in the region's carrier system (fig. 9.4C). Most of the remaining longer-distance services - those on the London-Salisbury route via Andover, for instance - ceased

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[1] As Salisbury lies outside the study area, it is not shown on any of the maps. However, its approximate location is clear from the dominant orientation of routes in the upper left-hand portion of the map. Its so-called 'sphere of influence' extended well into the Southern Hampshire area.

[2] See chapter eight, p.188

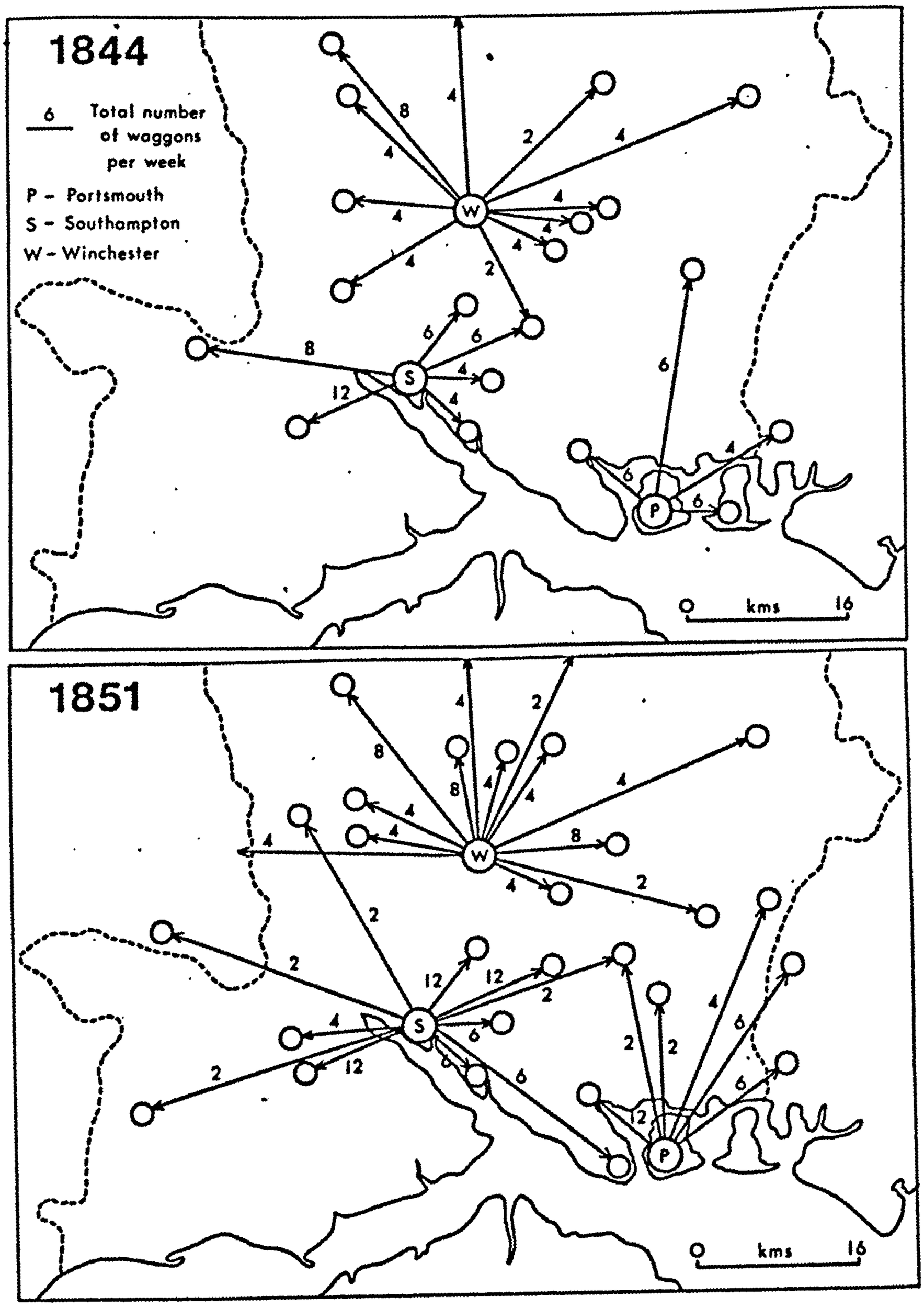
1844
6 Total number of waggons per week
P - Portsmouth
S - Southampton
W - Winchester
kms 16
1851
kms 16

FIGURE 9.5

operation, but once again, shorter-distance services fared noticeably better and there was a further growth in 'market' carrier activity. By 1851, therefore, despite substantial change during the course of the preceding decade, most towns still possessed fairly regular carrier services to their neighbours. In consequence, it is still possible to recognise the existence of a carrier system. This is in marked contrast to the stage-coach system which disintegrated almost completely during the later 1840s.

The clear dichotomy in the way these two essentially similar though complementary public transport systems responded to the second phase of railway development in the region requires some explanation. One especially significant factor in the carrier system's survival was obviously the development of 'market' carrier activity. Although this was of some importance in the 1830s, it grew considerably more important in the 1840s. The precise scope of this activity in the early railway period is illustrated in figure 9.5, which shows the 'market' carrier services for Portsmouth, Southampton and Winchester in 1844 and 1851. It is clear that there was a marked expansion in both the range and frequency of activity between these two dates. This meant that quite a number of towns retained carrier facilities that would otherwise have been lost altogether. In 1851, Winchester, for instance, possessed 'market' services to towns as far away as Salisbury and Alton. These obviously took in the intermediate centres on their route, so preserving vital elements in the system. The development of 'market' carrier activity, however, does not alone explain why the system survived. Other factors were also important: the policies of the L.S.W.R. concerning the carriage of goods among them. As was shown in the previous chapter, the relationship between the L.S.W.R. and the local community in respect of passenger facilities was never good, and this was equally so in respect of goods facilities. The Hampshire Advertiser for the 1840s contains numerous complaints about high freight rates and the lack of enough rolling stock,[1] and this would obviously have left room for some carrier operations to continue. In addition, of course, there is the question of handling charges, which are always a significant factor in freight transport by rail. This would undoubtedly have discouraged the transfer of local goods movement from road to rail, again allowing scope for the continuance of some carrier operations. It is this second factor, coupled with an ability to handle a great diversity of

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[1] See for example, Hampshire Advertiser, 2/3/1844, 11/5/1844, 4/4/1846

merchandise,[1] which probably explains why many of the shorter-distance non-'market' carrier services were able to continue where their stage-coach counterparts were not.

This leads on to a final question that must be asked here: to what extent did carrier operators capitalise on the stage-coach withdrawl by taking passengers? Carrier operators are traditionally known to have taken passengers, although nearly always people from among the poorer elements of the populus. It seems unlikely that Southern Hampshire forms an exception here, as will be shown later in this chapter. The question, therefore, is the extent to which this passenger-carrying activity increased to take in former stage-coach users. Unfortunately, there is no clear answer, since virtually no evidence is available on the subject. All that can be said is that there was almost certainly some extension,[2] but just how much is unknown. However, it is difficult to believe that many former stage-coach users would have resorted to travelling by carrier waggon, firstly because of the much slower rate of travel - 5-6 kms per hour compared with 13-16 kms per hour - and secondly because of the discomfort, both physical and social; they are much more likely to have travelled by horse or by post-chaise. It seems probable, therefore, that the survival of a system of carrier facilities in the region into the early 1850s did not really alter the grim position of public passenger transport provision in some towns.

9.ii) Spatial and chronological development: analysis

The foregoing discussion has outlined the main characteristics of the development of the Southern Hampshire carrier system over the period 1775 to 1851. Once again, however, if any substantial conclusions are to emerge from this discussion - for the purposes of comparison with similar systems in other regions, for example - it is necessary to introduce some

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[1] See this chapter, p. 214-5

[2] In 1844, for instance, there was a daily carrier service between Bishop's Waltham and Botley railway station, and since the former town had lost all its coach facilities by this date and possessed no rail connection, it seems highly probable that the service would have been used by former stage-coach patrons - J. Pigot & Co., Royal National and Commercial Directory and Topography, (London, 1844), 13

	1775	1784	1798	1812	1823	1830	1839	1844	1851
Alresford	12	20	20	36	32	60	50	42	78
Alton	20	28	52	60	86	82	103	44	58
Andover	62	58	54	84	134	98	126	222	56
Bishop's Waltham	-	6	24	20	50	54	58	70	58
Christchurch	-	10	14	4	68	68	32	64	50
Fareham	4	20	78	44	124	104	122	130	80
Fordingbridge	-	10	28	18	44	48	56	48	68
Gosport	2	6	24	14	58	30	34	34	34
Havant	-	14	38	28	52	102	92	116	78
Lymington	2	8	12	6	30	46	20	58	38
Lyndhurst	4	4	12	18	44	58	74	86	36
Petersfield	16	24	52	72	88	96	76	32	30
Portsmouth	8	20	60	52	76	158	98	128	138
Ringwood	4	16	28	14	78	100	66	70	72
Romsey	16	36	46	36	178	130	106	152	104
Southampton	14	44	66	62	212	214	246	290	224
Stockbridge	12	28	28	14	56	66	56	68	26
Winchester	24	54	86	64	138	162	128	168	158
Abbots Ann	-	-	-	-	-	-	4	-	-
Andover Rd. sta.	-	-	-	-	-	-	-	42	54
Appleshaw	-	-	-	-	2	4	-	6	4
Barton	-	-	-	-	-	-	4	-	-
Beauworth	-	-	-	-	-	-	12	8	4
Bishopstoke	-	-	-	-	6	6	-	6	12
Botley	-	4	16	20	24	28	16	48	70
Bramdean	-	-	-	-	-	-	-	4	10
Bramshaw	-	-	-	-	-	-	4	20	4
Brockenhurst sta.	-	-	-	-	-	-	-	-	24
Broughton	-	-	2	-	12	18	4	10	4
Chilbolton	-	-	-	-	-	-	-	4	-
Christchurch Rd. sta.	-	-	-	-	-	-	-	-	12
Clatford	-	-	-	-	4	-	2	-	-
Droxford	4	8	32	16	32	10	12	2	12
East Meon	-	-	-	-	-	4	-	6	2
East Stratton	-	-	-	-	-	-	-	-	4
Hamble	-	-	-	-	-	6	-	16	6
Hambledon	-	-	-	-	-	38	-	32	28
Hayling Island	-	-	-	-	-	-	-	6	-
Hinton	-	-	-	-	-	-	-	12	20
Lockerly	-	-	-	-	-	4	6	-	8
Longparish	-	-	-	-	-	-	4	-	-
Micheldever	-	-	-	-	-	-	-	-	4
Minstead	-	-	-	-	-	-	10	-	4
Mottisfont	-	-	-	-	-	-	2	-	2
Preston Candover	-	-	-	-	-	8	4	2	2
Ropley	-	-	-	-	-	-	-	-	12
Somborne	-	-	-	4	16	12	12	24	12
Sutton Scotney	16	20	20	8	28	56	56	24	20
Thruxton	-	-	-	-	-	-	2	6	2
Titchfield	-	4	16	16	64	58	80	94	52
Tytherly	-	-	-	-	-	-	6	6	4
Waterloo	16	24	48	64	80	96	76	36	76
Wallop	60	56	52	84	96	74	102	136	22
Wickham	4	16	56	28	68	48	56	52	36
Wonston	-	-	-	-	-	-	8	-	-
Gross vertex connectivity	300	538	964	886	1980	2146	2025	2424	1912

TABLE 9.1

means of objective comparison. As with the stage-coach system, this can be achieved by examining vertex connectivity and drawing upon the resources of graph theory.

Table 9.1 gives the vertex connectivity values for all the settlements linked to the region's carrier system during the period in question. When the values for each date are summed, a series of measures of gross vertex connectivity are once again obtained. These are graphed in figure 9.6A and serve to clarify the more intuitive assumptions made previously about the carrier system's overall development. The two expansion phases recognised are clearly identifiable, although the second - coinciding with the widespread introduction of 'fly waggons' - emerges as by far the more significant. Similarly, the period of stagnation associated with the war years is clearly evident. Somewhat contrary to expectations, however, the peak in gross vertex connectivity was attained in 1844 and not in 1839; in addition, there was a slight decrease in gross vertex connectivity between 1830 and 1839. The attainment of peak gross vertex connectivity in 1844 indicates that the withdrawl of some of the longer-distance carrier services in the early 1840s must have been accompanied by a fairly substantial expansion in local services generally, and not just in the sphere of 'market' activity. The fall-off in gross vertex connectivity between 1830 and 1839 might be considered a reflection of uncertainty amongst carrier operators about the possible effects of railways upon their activities. Alternatively, it might be argued that the fall-off was due to directory underenumeration, although there is no evidence to suggest that this was true on any scale. In all probability, a number of different factors were involved, but the former seems likely to have been among the more important.

Examination of gross vertex connectivity ignores the possibility of variations in expansion and contraction at individual settlements in the region, and thus it is important to establish the extent to which individual settlements conformed to the pattern indicated in figure 9.6A. This can be achieved by calculating the correlation coefficients for successive time-intervals, and the results are shown in figure 9.6B. Throughout the period, R values never fall below +0.8,[1] and this indicates that the system was changing in a fairly uniform way both spatially and through time. In other words, the picture presented in figure 9.6A is fairly representative of the pattern followed by individual settlements. This offers a notable contrast

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[1] All are statistically significant at the 0.1 per cent level

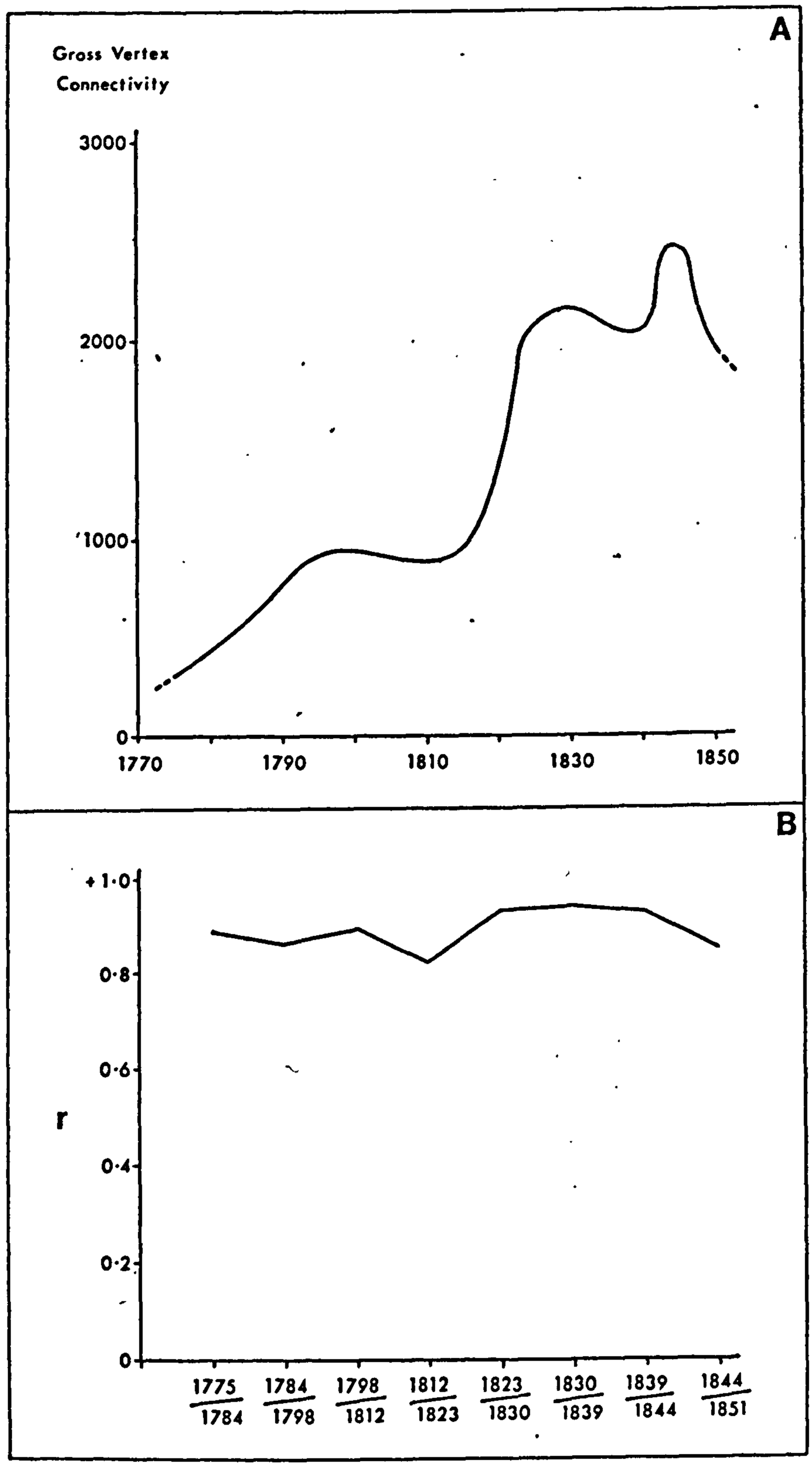
A
Gross Vertex
Connectivity
3000
2000
1000
0
1770
1790
1810
1830
1850
B
+1·0
0·8
0·6
r
0·4
0·2
0
1775/1784
1784/1798
1798/1812
1812/1823
1823/1830
1830/1839
1839/1844
1844/1851

FIGURE 9.6

to the stage-coach system, where both the early development phase and the railway transition period were characterised by more haphazard change.[1] The difference in the railway transition period is entirely expected, simply because there was no disintegration of the region's carrier system as with its stage-coach system. The difference in the early development phase is less easily explained. One probable reason might be that the demand pattern for carrier facilities was established by the 1770s, with the result that, compared with the stage-coach system, few adjustments were necessary in either the route network or in the relative frequency of service provision in this early development phase.

The results of the graph-theoretic analysis are shown in figure 9.7. As with the stage-coach system, graphs are included for the beta, alpha and theta indices, and also for network length. Examining actual levels of network connectivity first, as indicated by the beta and alpha indices (figs. 9.7C and 9.7B), the value of the beta index increased from approximately 1.1 in the mid-1770s to almost 1.8 by 1830, and then fell back to just over 1.5 in 1851, while the value of the alpha index rose from approximately ten per cent in the mid-1770s to some 42 per cent by 1830, but falling back to 30 per cent in 1851. The attainment of beta and alpha values of 1.8 and 42 per cent by 1830 respectively suggests a well-developed transport system and compares very favourably with the correponding figures of 1.3 and 20 per cent for the stage-coach system at the same date. It is clear from a straightforward visual comparison of the sets of flow maps for the two systems that the network of carrier services was considerably more complex and more highly connected, but these figures establish this feature more precisely.

Examining the general trends exhibited by the four graphs, the two main expansion phases and the wartime stagnation phase are readily apparent in all of them. In addition, it is very evident that in 1851 the region's carrier system was still very much a functioning entity, despite the railway developments of the preceding decade. In the 1830s and 1840s, however, a number of interesting features emerge. For instance, whereas the region's carrier system reached its peak of development in terms of gross vertex connectivity and in terms of route length in 1844 (figs. 9.6A and 9.7A), the peak in network connectivity, as already mentioned, was attained in 1830 (figs. 9.7B and 9.7C). Clearly, while the overall level

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[1] See chapter eight, p. 192

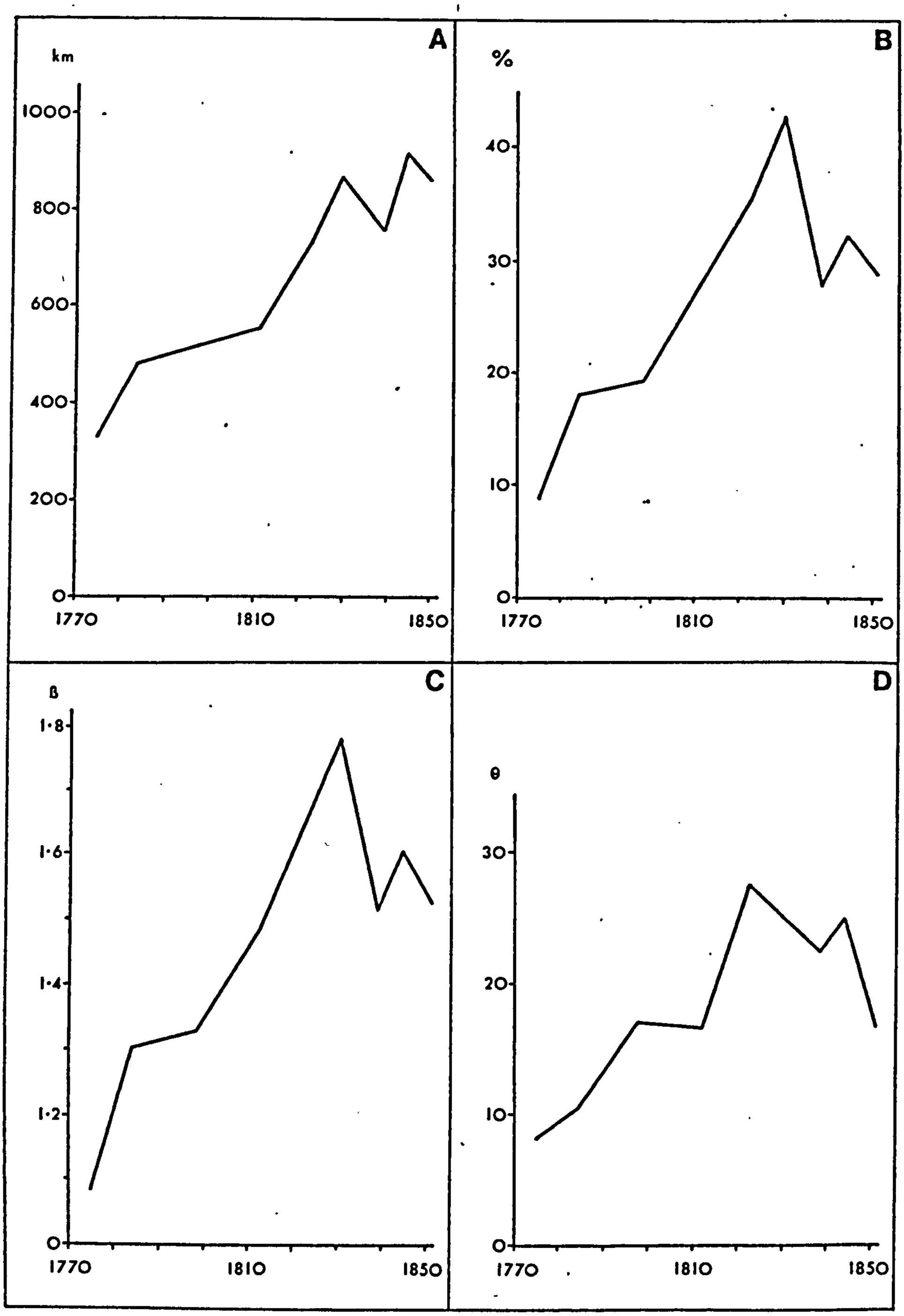
A
km
1000
800
600
400
200
0
1770
1810
1850
B
%
40
30
20
10
0
1770
1810
1850
C
ß
1·8
1·6
1·4
1·2
0
1770
1810
1850
D
θ
30
20
10
0
1770
1810
1850

FIGURE 9.7

of service provision was greater in 1844 than in 1830, the degree to which the various nodes in the system were connected with one another was less. This obviously reflects the increased significance, in 1844, of shorter-distance/feeder type services, those perhaps best exemplified by the 'market' carriers. A second feature of interest is the fall-off in the overall level of carrier activity between 1830 and 1839, which was also commented upon earlier. This fall-off is apparent in all four graphs, but it is most pronounced in those relating to network connectivity - i.e. the graphs for the beta and alpha indices (figs. 9.7C and 9.7B). This suggests that the fall-off in activity was associated more with the complete withdrawl of services on particular routes, than with a general cut-back in facilities.

9.iii) Day to day fluctuations in carrier activity

In reconstructing and examining the development of both the stage-coach and carrier systems of Southern Hampshire, it was found desirable to use the week rather than the day as the basic unit of study, and the reasons for adopting this practice were discussed in chapter three.[1] Nevertheless, it was admitted in that discussion that it was still important to look at the question of daily activity, and in particular, to establish whether there was any fluctuation in levels of activity from one day to the next. In the case of stage-coach activity, however, daily fluctuations were found to be of little significance and thus no attention was devoted to this question when discussing the stage-coach system. With carrier activity, the reverse was the case, and the object of this particular section of the chapter is to examine the significance of daily fluctuations in carrier activity and to attempt to account for their existence.

The method adopted for examining daily fluctuations is to look once again at vertex connectivity, and gross vertex connectivity in particular. The results are shown in figures 9.8 and 9.9, which show graphs of gross vertex connectivity for eight of the nine dates for which the region's carrier system was reconstructed.[2] Gross vertex connectivity is indicated

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[1] See chapter three, p. 53

[2] The raw data for the 1775 reconstruction is not sufficiently detailed to allow daily activity to be distinguished clearly.

PAGE

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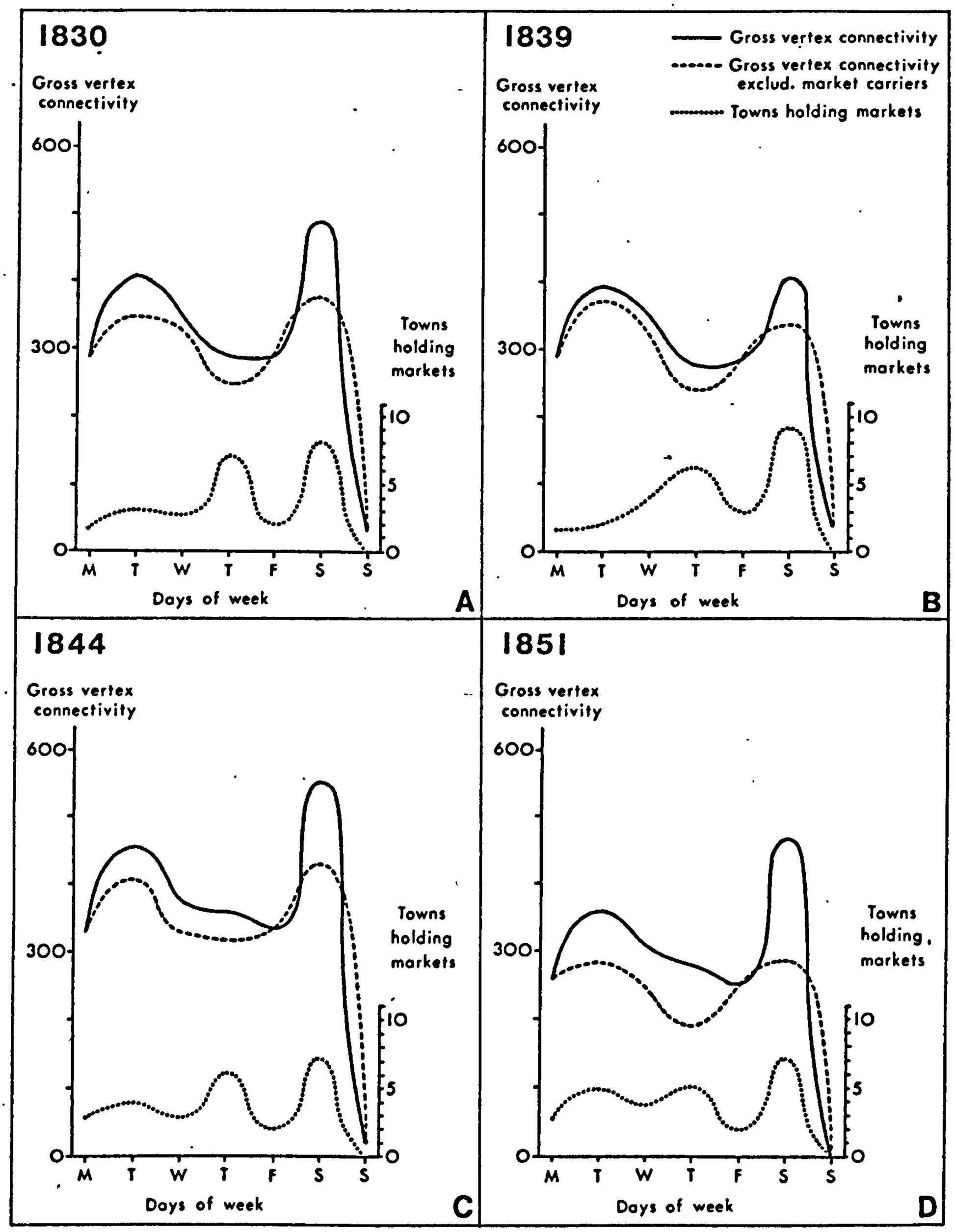
1830
Gross vertex connectivity
600
300
0
Towns holding markets
10
5
0
M T W T F S S
Days of week
A
1839
Gross vertex connectivity
Gross vertex connectivity
Gross vertex connectivity excluding market carriers
Towns holding markets
600
300
0
Towns holding markets
10
5
0
M T W T F S S
Days of week
B
1844
Gross vertex connectivity
600
300
0
Towns holding markets
10
5
0
M T W T F S S
Days of week
C
1851
Gross vertex connectivity
600
300
0
Towns holding markets
10
5
0
M T W T F S S
Days of week
D

FIGURE 9.9

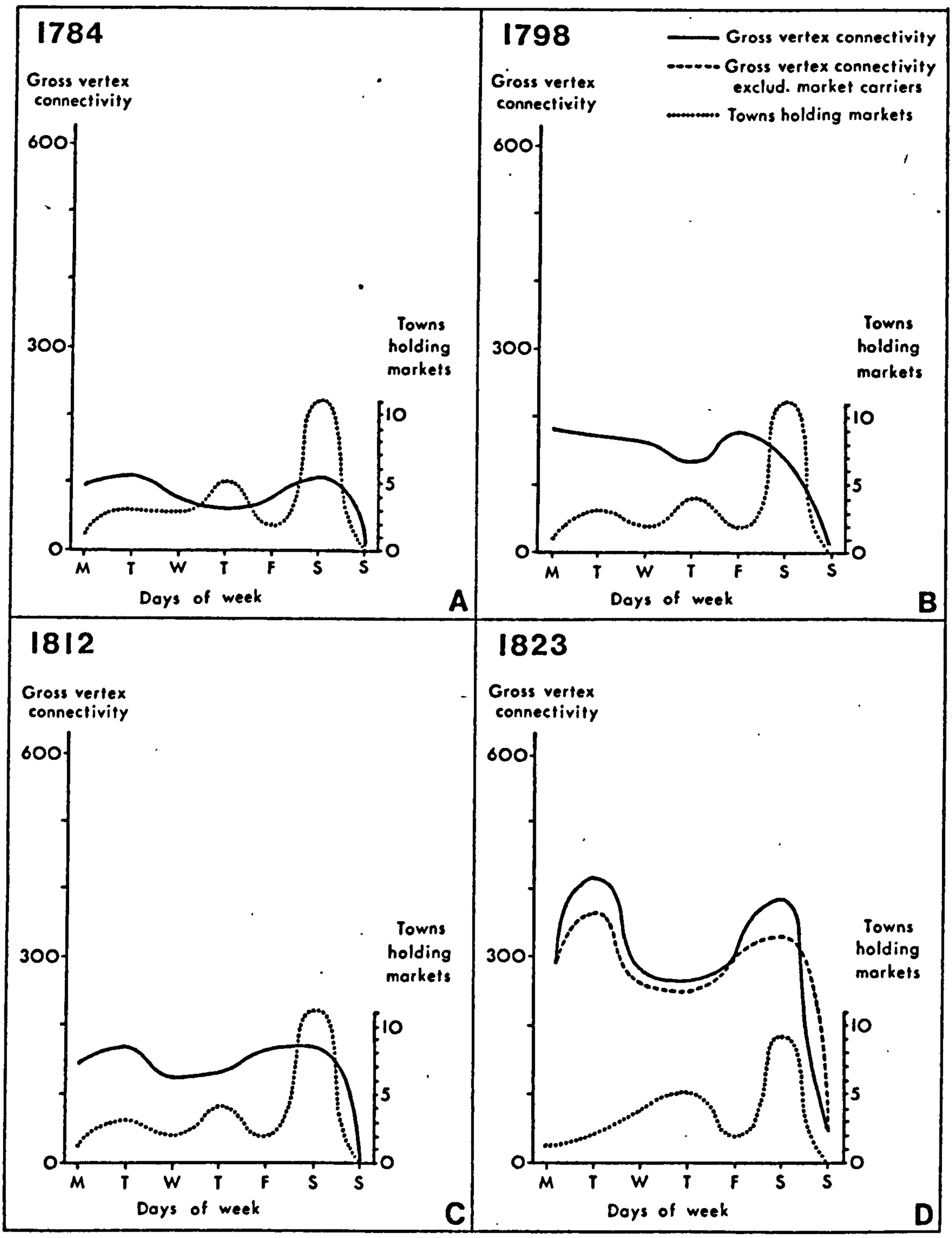
1784
Gross vertex connectivity
600
300
0
Towns holding markets
10
5
0
M T W T F S S
Days of week
A
1798
Gross vertex connectivity
Gross vertex connectivity exclud. market carriers
Towns holding markets
600
300
0
Towns holding markets
10
5
0
M T W T F S S
Days of week
B
1812
Gross vertex connectivity
600
300
0
Towns holding markets
10
5
0
M T W T F S S
Days of week
C
1823
Gross vertex connectivity
600
300
0
Towns holding markets
10
5
0
M T W T F S S
Days of week
D

FIGURE 9.8

by the heavy black line. Examination of the eight graphs reveals that for the earlier period, taking in 1784, 1798, and 1812, daily fluctuations were evident, but of no great significance.[1] From 1823, however, daily fluctuations were much more prominent and exhibit a highly consistent dual-peak characteristic. The peaks occur on Tuesdays and Saturdays, with the Saturday one generally the higher of the two. What is the explanation for this clearly identifiable rhythm of activity?

The first reason that might be put forward is that it is related to the number of towns in the region holding markets. This would seem a particularly plausible explanation since 'market' carriers made their first appearance at just about the time that the dual-peak feature first becomes prominent. The number of towns holding markets is indicated in each of the graphs by the dotted line and the days with the largest number of markets were generally Thursday and Saturday. This means that the Saturday peak in carrier activity clearly fits in with the first possible explanation, but the Tuesday peak clearly does not. In many respects, however, the simple counting of the number of towns holding markets is a distortion of reality, in that some markets - those of the principal towns, for instance - were more important than others. A much better way of testing the relationship between the dual-peak characteristic and the market element is to calculate what proportion of daily gross vertex connectivity is made up by 'market' carriers. The pecked line on each of the graphs for 1823 and later shows gross vertex connectivity with the 'market' carriers removed. If the dual-peak characteristic was related to 'market' carriers, the graphs would be expected to level out. However, it is clear that this does not happen at any of the five dates. It is true that there is a fairly noticeable reduction in the scale of the Saturday peak in some cases, but the dual-peak characteristic still remains. Clearly, some other explanation must therefore be sought. The most likely one is that it is merely part of a natural economic rhythm. Monday, of course, has always been known as a 'flat' day from the point of view of trading activity and it is entirely logical, therefore, that activity should be high on Tuesday if the stocks of both buyer and seller were to be replenished after the week-end. Further replenishment would obviously have been necessary towards the end of the week and again the logical time was probably Saturday.

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[1] Throughout this discussion, Sundays are ignored.

9.iv) Type and volume of goods carried

Having reconstructed and analysed the development of the Southern Hampshire carrier system in some detail, it is clearly important to turn attention away from the facilities themselves and to focus instead upon the type of goods with which carriers dealt, and related to this, the volume of goods carriers were involved in moving around. This is essential if, for example, it is desired to gain any indication of the carrier system's economic significance.

Unfortunately, very little evidence survives on the type of goods with which carriers dealt. For instance, no carrier operators' records are extant for the region at all, and the only available material comes in the form of an exceedingly scattered and fragmentary series of items from amongst customers' bills, receipts and accounts, and the columns of local newspapers. Clearly, therefore, it is not possible to examine the question of the type of goods carried in any detail. Instead, the procedure adopted will be to examine the available evidence in the light of the traditionally accepted views of the goods that carriers handled.

As was mentioned earlier, carriers have never been considered as exclusively transporters of goods; they are generally known to have taken passengers as well, though usually only people from among the poorer elements of the populus. The evidence available on the passenger-carrying activities of carriers in Southern Hampshire is extremely limited, but the few items that can be assembled accord with this view. The items concerned - some twelve in number - come from the local newspapers and take the form of accident reports. Of these twelve reports, seven mention that there were passengers on the waggons at the time, and in one case, involving Russell and Co's London-West of England waggon near Andover, a family of ten were stated to have been aboard.[1]

Leaving passenger-carrying aside, carriers are traditionally considered to have dealt with an incredibly varied range of goods, and the available local evidence indicates that this was very much the case in Southern Hampshire. For example, amongst the Winchester College Muniments, there are bills/receipts from local carriers for the transport of a range of items including wine, hops, a patent stove, a large gilt-framed portrait, and even an organ.[2] Examination of the account books of the

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[1] Hampshire Chronicle, 12/10/1818

[2] See for example, W.C.M., 33346-33351A (wine). The organ came from Brentford and the carrier involved was Thomas Aslett, a long-established operator on the London-Southampton route (30638)

Travelling between	No. of waggons per week	Carrier	Tons carried p.a.	weekly average
London & Falmouth	12	Russell & Co.	2496	(48)
London & Taunton	6	Alexander & Co.	1248	(24)
London & Taunton	12	Alexander & Co.	936	(18)
London & Salisbury	2	Russin	208	(4)
London & Salisbury	12	Ward	2496	(48)
London & Salisbury	6	Smith & Dawes	1248	(24)
London & Salisbury	2	"	208	(4)
London & Southampton	8	"	1664	(32)
London & Southampton	6	Burnett	1248	(24)
London & Alton	6	Sayers	624	(12)
London & Alton	6	Gillam	624	(12)
London & Alresford	6	Vine	624	(12)
London & Isle of Wight (via Portsmouth)	6	Pescott	624	(12)
London & Portsmouth	12	Stanbury & Co.	2496	(48)
London & Portsmouth	12	Moore	1095	(21)
London & Gosport	6	Hyslop	624	(12)

TABLE 9.2

treasurers of Winchester Cathedral reveals payments to local carriers for the transport of an equally diverse collection of items, though not surprisingly with candles featuring as by far the most significant on the list.[1] A series of newspaper reports concerning items stolen or lost from carriers' waggons or warehouses presents a similarly varied picture. In October 1778, for instance, a parcel containing 25 lbs of Bengal raw sewing silk was lost from Aslett's London-Southampton waggon,[2] and in April 1818, cheeses and trusses of broad-cloth were stolen from the Salisbury warehouse of Wallington and Co., carriers on the London-West of England route.[3] Finally, carriers operating in the Southern Hampshire area were often involved in the transport of naval and military supplies, and this covered a wide variety of items. During the course of the second half of the eighteenth century, for example, the Clark family, carrier (as well as stage-coach) operators on the London-Portsmouth/Gosport route, were concerned in government contracts for the transport of goods ranging from arms and ammunition to bedding and clothing.[4]

Turning attention to the volume of goods carriers were involved in moving about, once again there is remarkably little surviving material. In fact, the only body of information to give any precise indication of the volume of goods movement is that contained in the Parliamentary Report on the London and Southampton Railway bill of 1834. It takes the form of a series of figures giving the approximate quantities of goods carried annually by the various carriers operating along, or in the vicinity of, the proposed line of railway.[5] The figures relating to the Southern Hampshire area are shown in table 9.2. As far as can be ascertained, the number of waggons per week includes both 'up' and 'down' journeys. Taking the London-Southampton route by way of example, Smith and Dawes, and

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[1] Winch. Cath. Lib., Treasurers' Accounts - see especially 1805-22

[2] Hampshire Chronicle, 21/12/1778

[3] Hampshire Chronicle, 20/4/1818

[4] See for example, P.R.O., War Office Records: Ordnance Bill Books, WO51/288; P.R.O., Admiralty Records: Accountant General's Bill Books, Adm 18/116, 117

[5] B.P.P., Report of the Lords Committees on the London and Southampton Railway bill, 1834, (H.O.L. 106), XXIII, 42-3 - These figures were compiled by Mr. John Smith, one of the principal carrier operators in the area.

Burnett were carrying some 56 tons of goods backwards and forwards each week, while the corresponding figures for the London-Salisbury and London-Portsmouth routes were 80 and 81 tons respectively. The average waggon loadings on each of the routes varied from 1.5 tons to 4 tons, and the overall average for all routes was around 2.8 tons. If the figure of 2.8 tons is assumed to be representative of average waggon loadings in the region as a whole, it means that in the early 1830s, Southampton, for example, must have had some 600 tons of goods moving inward and outward by carriers' waggons each week. The corresponding figures for Portsmouth and Winchester would have been approximately 440 and 460 tons respectively. In contrast, the position in the mid-1770s (allowing for the fact that average waggon capacities were almost certainly lower than in the 1830s) would probably have been as follows: Southampton - some 30 tons, Portsmouth - some 16 tons, and Winchester - some 50 tons. In other words, between the mid-1770s and the early 1830s, the volume of goods moving in and out of these three towns by carrier waggons increased approximately 20-fold in the case of Southampton, approximately 28-fold in the case of Portsmouth, and approximately nine-fold in the case of Winchester. Clearly, it is necessary to treat the exact sizes of these increases with caution, since the 1770s figures are very much estimates, the numbers of carriers in operation at the time providing the only factual basis. However, they do give some indication of the scale of expansion over the period.

9.v) Carriage rates and journey times

The rates charged by carriers were to some extent controlled by local government. As mentioned in chapter five, under an Act of 1692, local Justices were directed to assess and set annually the maximum rates that could be charged by carriers for goods brought into their areas.[1] However, it was shown in that chapter that Justices often failed to make assessments. It was also pointed out that it is difficult to establish whether Justices tried to enforce the provisions of the Act on the few occasions when assessments were made. In 1748, the powers of the Justices were extended.[2] The original Act covered only goods brought into their areas, but the later

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[1] See chapter five, p.103

[2] 21 Geo. II c. 28

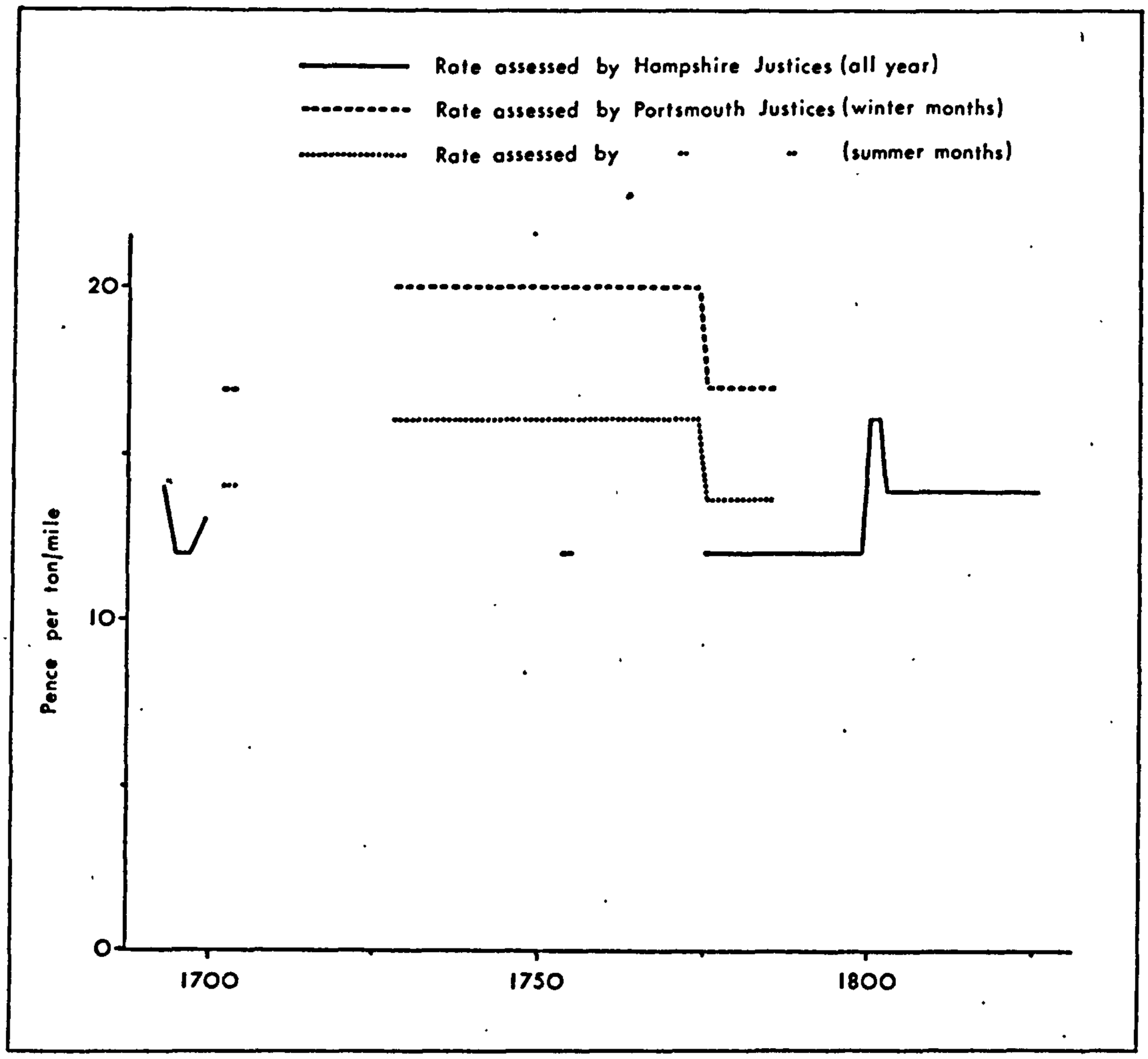
Rate assessed by Hampshire Justices (all year)
Rate assessed by Portsmouth Justices (winter months)
Rate assessed by " " (summer months)
Pence per ton/mile
20
10
0
1700
1750
1800

FIGURE 9.10

Act applied to goods carried out of them as well. It would be reasonable to expect that an extension of powers of this kind, coupled with the increasing number of carriers in operation, would have encouraged Justices to be more vigilant in complying with the provisions of the Act. To a large extent, this is exactly what happened, although there were still one or two periods when no assessments were made.

All the available information on the local Justices' assessments, from the date of the first Act of 1692 to the date when the legislation was repealed in 1827,[1] is presented in figure 9.10. As stated in chapter five, the Hampshire Justices made a series of assessments in the years immediately following the passage of the first Act, but made none at all in the first half of the eighteenth century.[2] With one exception, this situation continued up until 1775, but from 1775, assessments were made in almost every year up to 1827. As stated in chapter five also, the Hampshire Justices' assessments did not apply to the London-Portsmouth route. The rates for this route were set by the Portsmouth Justices. The Portsmouth Sessions records are incomplete, but assessments were found to survive for some 20 years in the first half of the eighteenth century,[3] and a further 30 or so were discovered for the period 1750 to 1827.

The Hampshire assessments[4] show that in the 1690s the rate fluctuated around 13d per ton/mile. By contrast, in the last quarter of the eighteenth century, it remained stable at 12d per ton/mile. Then in 1800 and 1801, it increased to 16d per ton/mile - undoubtedly because of the high price of horse provender at the time[5] - only to fall back to 14d per ton/mile in 1802, where it remained through until 1827. If one is at all justified in identifying an overall trend here, it was upwards. However, the repetition of rates over lengthy periods suggests that justices may not have taken the task of assessment altogether seriously. The years around the turn of the century, for instance, were not the only time when the price of horse provender was high,[6] yet there is no reflection of this in the assessed rates.

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[1] 7 & 8 Geo. IV c. 39

[2] See chapter five, p.103, 105

[3] See chapter five, p.103, 105

[4] All are taken from Hants. R.O., Q07-35

[5] See this chapter, p.205

[6] See this chapter, p.205

Examining the Portsmouth Justices' assessments,[1] two separate rates were always given, one for summer and one for winter,[2] with the latter always the higher of the two. At the beginning of the eighteenth century, the rates were 14d and 17d per ton/mile respectively, but by the later 1720s these had increased to 16d and 20d per ton/mile. The rates then remained at that level right up until 1775, whereupon they fell back to 13½d and 17d per ton/mile. This position was maintained up to 1787. Again, if one is at all justified in identifying an overall trend here, it was clearly downwards, although if assessments survived for the nineteenth century, the picture might well have been rather the opposite. In common with the Hampshire Justices' assessments, there is a noticeable repetition of rates, with much the same implication. The reason why the Portsmouth assessments were consistently higher than those for Hampshire is not clear. It might conceivably be argued that the London-Portsmouth route was a difficult one in terms of the terrain over which it passed, but this also applied to quite a number of other routes in the region. Alternatively, the explanation may be linked with the fact that it was a very busy route.

Having examined in detail the so-called 'assessed' land carriage rates for the region, it is essential to attempt to establish what carrier operators in fact charged their customers. The 'assessed' rate was merely an upper limit and operators were free to set their rates at any level below it. If they exceeded the 'assessed' rate, the provisions of the Act stated that a fine could be imposed. It was noted in chapter five that for the period up to 1750 virtually no evidence is available about rates charged by carriers, with the result that it proved impossible to say whether any attention was paid to the few 'assessed' rates that were made during that time. For the period after 1750, the position is rather more favourable, and it proved possible to assemble from a variety of sources some 40 items of information about carriers' rates. These items fall into two distinct categories: advertised rates and actual rates. The terms mean exactly what they say: the advertised rates are those given in the advertising media - local newspapers and directories, for instance; the actual rates are those obtained from customers' bills, receipts and accounts - the carriers' bills and receipts preserved amongst the

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[1] These are taken from Ports. R.O., S3/19-183, 11A/16/1-846

[2] The summer rate applied from Easter to Michaelmas, and the winter rate for the remainder of the year.

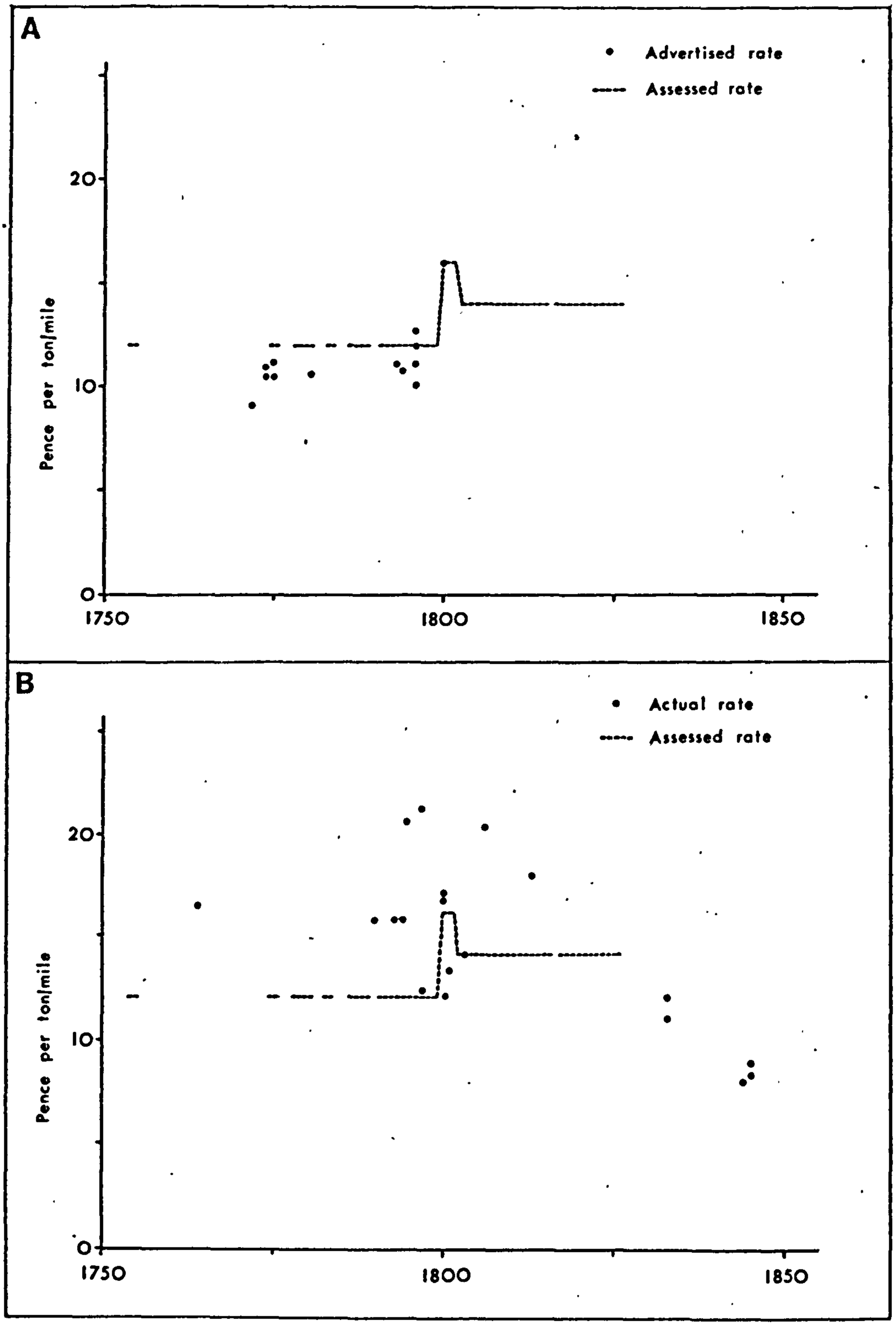
A
Advertised rate
Assessed rate
Pence per ton/mile
20
10
0
1750
1800
1850
B
Actual rate
Assessed rate
Pence per ton/mile
20
10
0
1750
1800
1850

FIGURE 9.11

Winchester College Muniments, for example.[1]

The items of information relating to the general Southern Hampshire area (i.e. excluding the London-Portsmouth route) are presented in figure 9.11. The upper diagram refers to the advertised rates and the lower diagram to the actual rates. The 'assessed' rates, where they were made, are indicated on both of them. Examining the evidence on advertised rates, it is clear that carriers kept fairly closely in line with the 'assessed' rates. However, it might perhaps be argued that the rates that carriers advertised may not necessarily have been those they charged customers. A carrier operator might well have ensured that he complied with the law when advertising his services, but his actual charges could easily have been set higher. Admittedly, there is unlikely to have been any great discrepancy, as this would have brought public outcry, but the existence of some variation is undoubtedly possible. Examining the evidence on actual rates, a quite different picture emerges. Of the 14 actual rates discovered for the period up to 1827, eleven fell above the 'assessed' rate, and some by a considerable margin as well. It might be concluded that this offers tentative confirmation of the suggestion made earlier that the rates carriers advertised may not necessarily have been those they charged customers. However, there are no actual instances of this happening here and such a conclusion can really be considered no more than a speculation.

The items of information relating to the London-Portsmouth route are presented in table 9.3. The 'assessed' rates, where they survive, are shown in brackets. Only three advertised rates are available, and as there are no 'assessed' rates with which to compare them, it is not possible to offer much comment. Turning to the actual rates, it is clear that carriers operating on this particular route kept fairly closely in line with the 'assessed' rates, thereby offering a marked contrast to the position in respect of the Southern Hampshire area generally. However, the evidence covers only a limited period in time, and moreover, relates to one particular carrier only - the Clark family. Thus, it is obviously dangerous to attempt to use it to draw precise conclusions.

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[1] It might be suggested that institutional users, such as Winchester College, could have been granted special concessionary rates, thereby partially invalidating some of this information. However, no evidence was discovered to show that this was the case.

Advertised rates of common carriers on London-Portsmouth route

		(per ton/mile)
1816	18¾d	(-)
1816	15½d	(-)
1839	10¼d	(-)

Actual rates of common carriers on London-Portsmouth route

		(per ton/mile)
1773 (April-June)	17d	(16d)
1775-6 (Oct.-June)	17d	(13½d - 17d)
1779	17d	"
1781	17d	"
1845	9d	(-)

TABLE 9.3

On the basis of the varied and often conflicting evidence on carriage rates presented above, what general conclusions can be drawn about the cost of transporting goods by carrier waggons in the region during the period? The first point that can be made is that carriage rates ranged between about 10d and 20d per ton/mile; the limited nature of the evidence does not really permit a more precise figure to be given. Rates of this order were fairly typical of those prevailing in other parts of the country at the time.[1] The second point that can be made is that, like stage-coach travel, sending goods by land carriage was expensive. For example, the charge for sending a ton of goods from London to Portsmouth in the later eighteenth century would have been between four and five pounds, depending upon the time of year;[2] the charge by sea, in contrast, would have been only eleven shillings, though admittedly at some considerable sacrifice in journey time.[3]

The relative speed of land carriage, in comparison with carriage by sea or by inland waterway, obviously constituted some consolation for its expensive nature. Moreover, the period between the 1770s and the 1830s witnessed some dramatic reductions in carrier journey times in the region, apparently without any substantial advance in costs (see fig. 9.11). Indeed, it would seem that in the 1840s, carriage rates were lower than at any time in the previous 150 years (fig. 9.11).[4] Figure 9.12 shows known changes in journey times for carriers operating between London and Southampton during the period 1768 to 1840.[5] About 1770, the journey took

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[1] See for example, W.T. Jackman, The Development of Transportation in Modern England, (2nd edition, London, 1962), Appendix 7

[2] This assumes carrier operators set their charges roughly in line with the 'assessed' rates

[3] P.R.O., War Office Records: Ordnance Bill Books, WO51/288, 294; WO52/96, 109

[4] The actual rates for the 1840s come from a series of Parliamentary Committee Reports on Railway bills covering the region, viz. H.L.R.O., Minutes of Evidence, H.C., 1845, Vol. 7, Brighton and Chichester Railway bill Portsmouth Extension, Appendix A; H.L.R.O., Minutes of Evidence, H.C., 1845, Vol. 76, Southampton and Dorchester Railway, Appendix C; H.L.R.O., Minutes of Evidence, H.L., 1845, Vol. 13, Direct London and Portsmouth Railway, Table 6; H.L.R.O., Minutes of Evidence, H.L., 1844, Vol. 3, London and South Western Railway branch to Salisbury, Table 5

[5] This information is drawn mainly from the two principal local newspapers - viz. Hampshire Chronicle and Hampshire Advertiser - and from local guide-books

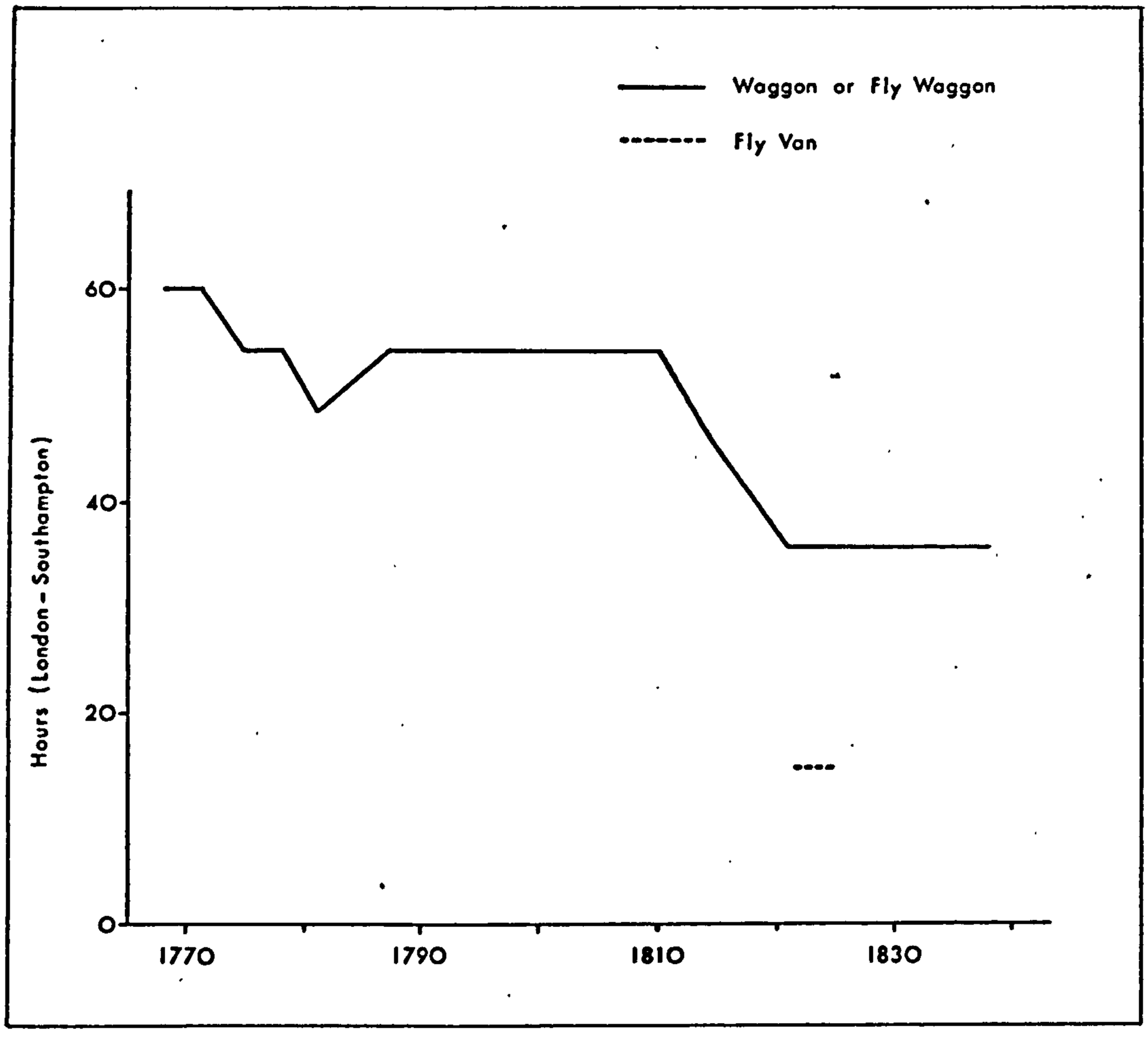
Waggon or Fly Waggon
Fly Van
Hours (London - Southampton)
60
40
20
0
1770
1790
1810
1830

FIGURE 9.12

some 60 hours, allowing for two overnight stops on the way. By the 1820s and 1830s, this time had been reduced to some 36 hours, though again allowing for one or two overnight stops on the way.[1] As with the reductions in stage-coach journey times on this route, however, the trend was in no sense uniformly downward. The changes were made in two distinct periods, though one considerably more significant than the other. The first period, during the 1770s, saw journey times reduced by some six hours or so.[2] The main influencing factor here was undoubtedly the improvements in the roads following the widespread adoption of the turnpike trust as a road repair mechanism in the area.[3] The second period, during the 1810s, witnessed a much more substantial reduction, of the order of 20 hours, and was without doubt linked to the introduction of 'fly waggons' in the region.[4] Further road improvements and superior waggon designs may also have made a contribution, but the adoption of the stage-coach practice of changing horses at intervals along the route was unquestionably the most significant factor. Somewhat surprisingly, the age of the McAdamisation of roads saw no further reduction in journey times, suggesting perhaps that the ceiling in horse technology had been reached on this route by the early 1820s. The pecked line shown on the graph in the 1820s refers to the journey times of the several 'fly vans' which were introduced on the route at about this time.[5] The 'fly van' was a kind of cross between a 'fly waggon' and a stage-coach in that it was intended primarily for the transport of passengers' luggage, though passengers were sometimes carried as well. This function was reflected in the 15-hour journey time - roughly half that of the 'fly waggons' and roughly twice that of the stage-coaches.

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[1] During this period, carrier operators on the route often advertised their services as being 'only one day on the road' (see for example, Hampshire Chronicle, 24/12/1821, 27/1/1823), but this was somewhat misleading, as a service starting from Southampton on a Tuesday evening, for instance, invariably did not arrive in London until Thursday morning - i.e. a 36-hour journey time.

[2] This is ignoring the further six-hour reduction recorded in 1781

[3] See chapter six, p. 109-111

[4] See this chapter, p. 206

[5] See for example, Hampshire Chronicle, 9/12/1822, 27/1/1823; Hampshire Advertiser, 15/9/1823

The example provided by the London-Southampton route is fairly representative of the pattern followed on other routes in the region. On the London-Portsmouth route, for instance, the pattern was almost identical, the carrier journey time falling from some 60 hours around 1770 to approximately 36 hours in the early 1820s, again with the 1810s as the most significant period of change.[1] On the Southampton-Salisbury route, the carrier journey time was cut from some 18-20 hours in the 1770s to ten hours by the early 1820s.[2] In contrast to the London-Southampton and London-Portsmouth routes, however, further reductions were made after this date, and by the late 1830s, the time was down to eight hours.[3] Taking the region as a whole, the reductions in journey times between the 1770s and the 1830s ranged between about 40 and 60 per cent. In common with the position regarding stage-coach journey times, though, the precise scale and timing of these reductions was very much determined by prevailing local conditions; the activities of the turnpike trusts were of particular importance here.

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[1] Hampshire Chronicle, Hampshire Advertiser - various advertisements.

[2] Hampshire Chronicle, Hampshire Advertiser, op. cit.

[3] Ibid.

CHAPTER TEN

CONCLUSION

10.i) Roads and road transport in Southern Hampshire, 1750-1850: A phase of revolutionary change

The outstanding feature revealed by this study is the radical transformation of roads and road transport in Southern Hampshire over the course of the Industrial Revolution period. The transformation was characterised by a constantly improving road infrastructure, in terms of both structural efficiency and quality, by a growing volume of traffic movement, and by a continuing erosion of the friction of distance. Together, these formed the ingredients of an increasingly dynamic spatial system.

For much of the first half of the eighteenth century, road transport in the region was at a point of crisis. The basic cause was the poor state of the majority of roads, in the winter months especially. The existing mechanisms of road maintenance were both ineffective and inadequate, while the slow growth in the amount of traffic using the roads, wheeled traffic in particular, served merely to exacerbate the situation. The poor condition of roads placed a severe constraint upon the development of public transport facilities, and their range and efficiency improved little between the last quarter of the seventeenth century and 1750.

The introduction and widespread adoption of the turnpike concept from 1750 represented a concerted attempt to overcome the problem of bad roads. Although a turnpike was set up in the region as early as 1710, it was the beginning of the 1750s before development really got under way. Between 1753 and 1772, the region was in fact gripped by a form of 'turnpike mania', and some 500 kms of roads were placed under turnpike administration. The result was that by as early as the 1770s the region possessed a comprehensive and well integrated turnpike system. The succeeding 70 years witnessed the turnpiking of further roads and by 1841 the system had reached some 780 kms in length. In direct contradiction to the assertions of the Webbs,[1] regional turnpike development proceeded in a logical and rational manner and the majority of turnpikes were set up contiguously.

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[1] S. & B. Webb, The Story of the King's Highway, (London, 1913), 125

The utility of the turnpike roads as travel arteries was heavily conditioned by the effective functioning of the trusts set up to operate them. The record of the Southern Hampshire trusts here is generally favourable. As administrative mechanisms, they seem to have functioned reasonably effectively, and were without doubt a very substantial improvement over the 'Statute' and 'Highway Rate' systems. They devoted far greater funds towards road repairs than had ever been possible previously - this was especially true for the busier roads. Finally, and perhaps most significant of all, their road maintenance activities were both progressive in nature and also considerable in scope. The effect was that by the 1820s and 1830s the region was favoured with a system of main roads which would have exhibited a remarkable degree of modernity even when viewed in present-day eyes. Through their considerable variety of maintenance activities and their concern to minimise toll evasion, the region's turnpike trusts were responsible for the creation of a system of 'through-ways' which made road travel both easier and faster, in broadly similar manner as motorways have done in the mid-twentieth century.

The clearest measure of the significance of the changes brought about by the activities of Southern Hampshire's turnpike trusts is provided by the remarkable expansion in the volume of road traffic over the period from the 1750s to 1840. Traffic volume on some turnpikes increased more than three-fold during these years, while on the turnpike from Portsmouth to Sheet Bridge - covering part of the London-Portsmouth route - the scale of increase was probably more than treble. Expansion in the volume of road traffic was accompanied by a decisive weakening in the significance of seasonal traffic fluctuations, offering yet a further reflection of the significance of trusts' road maintenance activities. Of the various components making up the increasing volume of traffic over the region's roads, the public transport one exhibited most striking change. From about 1770 onwards, there was an almost continuous improvement in both the range and efficiency of stage-coach and carrier facilities, and at no great advance in costs when viewed in relative terms. For example, whereas in the 1740s Southampton had three coaches to London each week, by the later 1830s this figure had increased to almost 80. Over the same time-span, the journey time by coach from Southampton to London fell from approximately two days to just eight hours. These were revolutionary changes, the more remarkable since they could almost have occurred in one person's lifetime. An overall indication of the development in the range

	1775	1784	1798	1812	1823	1830	1839	1844	1851
Alresford	72	68	92	96	80	132	122	78	78
Alton	104	148	172	186	164	196	223	92	84
Andover	166	214	150	300	350	362	402	400	96
Bishop's Waltham	-	18	48	44	62	78	82	70	58
Christchurch	-	10	14	6	68	92	80	112	122
Fareham	36	104	222	176	232	260	326	190	80
Fordingbridge	-	10	28	30	56	60	92	72	92
Gosport	18	54	66	50	76	54	82	46	34
Havant	-	62	62	76	124	186	188	284	78
Lymington	8	14	36	22	66	106	99	136	146
Lyndhurst	16	16	60	46	116	154	170	194	72
Petersfield	40	168	172	216	196	276	352	128	70
Portsmouth	20	116	162	178	184	314	290	230	158
Ringwood	16	40	52	70	126	172	174	178	96
Romsey	44	72	144	144	268	226	286	340	104
Southampton	80	98	264	260	458	526	702	546	386
Stockbridge	12	64	112	62	104	102	104	100	26
Winchester	132	156	278	190	378	444	578	246	174

TABLE 10.1

of public transport facilities in the period is given by table 10.1. This shows vertex connectivity values for the region's towns, combining stage-coach and carrier facilities. Some towns recorded quite phenomenal rates of expansion. Fareham, for instance, had 36 inward and outward coach and carrier movements in 1775; by 1839, the figure had risen to 326. Expansion was equally remarkable at Southampton, where total inward and outward movements per week increased from 80 in 1775 to 702 in 1839. Whilst these rates of growth were obviously closely related to the general economic expansion of the region, they could never have been sustained without the road improvements brought about by the turnpike trusts.

The role of the turnpike trusts in the traffic development of the period was clearly critical. While the trusts represented more an administrative than a technological innovation, they were a fundamental element in economic progress. Increasing movement of people and goods formed an integral part of the multitude of organisational changes which made up the Industrial Revolution period, and the region's turnpike trusts constituted a vital permissive, if not also positive, force in that growing movement.

10.ii) The relationship to regional geographic change

It has not been the intention of this thesis to explore the relationship between the road transport developments of the period and regional geographic change. Although there can be no doubt about the merits of such an exploration, there are numerous methodological difficulties; the relationship between transport and geographic change is a highly elusive one and extremely hard to pin down in precise terms. However, a certain amount of light has been cast upon this important question almost inevitably. For instance, since the region's towns formed essential focal points for stage-coach and carrier services, they could not fail to be affected in clearly identifiable ways. The remarkable development of public transport facilities over the period demanded a parallel development in the complex underpinning structure of inns, stabling, coach and waggon offices and so on. In turn, this structure had to be kept supplied with food and sundry other goods. The associated impact upon employment was considerable, and with some towns, public transport operations became vital to economic prosperity. Unfortunately, it is exceedingly difficult to quantify these various effects, owing to the dearth of suitable statistical data, notably before the first really comprehensive census in 1841. However, a rough indication of the relative significance of public

	1775	1784	1798	1812	1823	1830	1839	1844	1851
Alresford (New)	-	-	1:12	1:11	1:15	1:11	1:13	-	1:21
Alton (Town)	-	-	1:12	1:12	1:15	1:14	1:14	-	1:42
Andover (Borough)	-	-	1:22	1:11	1:12	1:13	1:12	-	1:54
B. Waltham	-	-	-	-	-	-	-	-	-
Christchurch (Bor.)	-	-	-	-	-	-	1:24	-	1:15
Fareham	-	-	-	-	-	-	-	-	-
Fordingbridge	-	-	-	-	-	-	-	-	-
Gosport (Town)	-	-	-	1:156	1:81	-	1:108	-	1:289
Havant	-	-	-	-	-	-	-	-	-
Lymington (Bor.)	-	1:159	1:66	1:120	1:48	1:32	1:39	-	1:29
Lyndhurst	-	-	-	-	-	-	-	-	-
Petersfield (Town)	-	-	1:7	1:6	1:7	1:5	1:4	-	1:21
Portsmouth (Bor.)	-	-	1:205	1:228	1:248	1:160	1:183	-	1:456
Ringwood	-	-	-	-	-	-	-	-	-
Romsey (Town)	-	-	1:12	1:12	1:7	1:9	1:7	-	1:20
Southampton (Town)	-	1:63	1:30	1:37	1:29	1:37	1:40	-	1:91
Stockbridge	-	-	-	-	-	-	-	-	-
Winchester (City & Soke)	-	-	1:22	1:35	1:20	1:20	1:19	-	1:77

Note: Population data taken from nearest available census or other population count

TABLE 10.2

transport operations in the economic life of different Southern Hampshire towns can be gained by examining the ratio between services and population - at least where suitable population data are available. The results are presented in table 10.2. It is clear that public road transport operations were generally of greatest significance in the region's smaller towns - Alresford, Alton, Andover, Petersfield and Romsey. All recorded ratios below 1 : 20. The town of Petersfield was at the top of the list, with ratios of 1 : 5 and 1 : 4 in 1830 and 1839 respectively. One service for every four or five people is undoubtedly a very high figure and suggests that public transport operations formed the linchpin of the town's economy, a conclusion which will be reinforced later in this section. Public road transport operations were generally of least significance in the larger towns such as Gosport, Portsmouth and Lymington. However, two notable exceptions here were Southampton and Winchester. Both towns consistently recorded ratios within the range 1 : 40 to 1 : 20, suggesting an important, though not greatly significant role for public transport operations in their respective economies.

In a less direct way, the growth of the region's public transport facilities over the period had equally important effects upon the commerce and trade of many towns. From the 1770s, people and goods were moving from one place to another in increasingly greater volumes, in increasingly shorter times, and often at little advance in costs in relative terms. The development of Southampton at the time reflects this change closely.[1] For most of the first half of the eighteenth century, the town was in a state of depression, but from the 1750s clear signs of recovery became apparent. Between 1757 and 1788, its population increased at an average annual rate of 2.9 per cent, seven times the corresponding figure for the preceding thirty years or so, and this ties in well with the growth of stage-coach and carrier facilities to and from the town. In the 1750s, there were less than 20 inward and outward coach and carrier movements a week, but by the late 1790s the figure had risen to some 260. Without this expansion of public transport facilities, there would have been far fewer visitors and new residents, and in consequence, the rate of expansion of the town as a whole would have been significantly less. With the exception of the interlude of the French Wars (1793-1815), the marked demographic growth of Southampton in the later eighteenth century continued

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[1] See chapter four, p. 66-8

and indeed accelerated in the earlier half of the nineteenth century. Between 1811 and 1821, the average annual rate of increase was 3.9 per cent, and between 1821 and 1841 almost 4.5 per cent. Once again, this fits in closely with the growth of stage-coach and carrier facilities: in the early 1810s, there were some 260 inward and outward movements a week, but by 1839 this had increased to just over 700. The role of such an expanding range of facilities in the town's early nineteenth century development is unmistakeable: they were highly important in its revival as a watering place and vital to its initial expansion as a port.

The effects of the development of public transport facilities on the region's towns were not, of course, confined to the economic sphere. There were many important social gains. The stage-coach and the carrier waggon, for instance, came to play an especially important part in the dissemination of news and ideas. Whereas in the earlier eighteenth century, it often took two to three days for the London newspapers to reach Portsmouth and Southampton, 100 years later they arrived within seven or eight hours. The steadily increasing flow of news and information not only helped to unify Southern Hampshire with other parts of the country, so aiding the decline of 'Provincialism', but it also made the region far more aware of what was going on in its various constituent parts. From 1784, the carriage of the mail was transferred to specially designed stage-coaches and yet a further social gain obtained. Before that date, there was often a time-lapse of as much as seven days between the despatch of a letter and the receipt of a reply. Once the system of carrying mail by stage-coach had become firmly established, however, this time-lapse had been reduced to a couple of days. Social gains apart, the growth of stage-coach and carrier facilities also had important effects upon the fabric of the region's towns. As mentioned earlier, expansion of these facilities demanded a parallel expansion in the complex underpinning structure of inns, stabling, coach and waggon offices and so on. This involved considerable new building activity, and perhaps more important, the absorption of substantial areas of land in town centres. The relics of such change are still visible in some of the region's urban landscapes today; beyond the somewhat diminutive-looking inn front, for instance, there is often a large inner courtyard and a multitude of outbuildings, together covering a sizeable area of land.

The significance of public transport facilities in the urban life of the region in the early nineteenth century is vividly highlighted

when railway competition forced many of them to be abandoned. The town of Petersfield, which in 1839 possessed one service to every four heads of population, was affected especially seriously. Over the brief period from 1839 to 1851, the number of inward and outward coach and carrier movements per week fell from 352 to 70, with quite disastrous economic and social consequences. Innkeepers lost much business through the rapid reduction in the number of people passing through the town, and as Petersfield had been a key staging post on the London-Portsmouth route, both for coaches and for carriers, there was a commensurate reduction in the number of horses requiring stabling. The inevitable result was that domestic servants, horsekeepers and stable-boys were laid off, whilst local farmers lost a ready market through the much reduced demand for horse-feed. The 150 or so coach horses stabled at Petersfield in 1839, for example, would have required about one ton of oats and bran a day and one and a half tons of hay; by 1851, this requirement had been cut to about three hundredweight of oats and bran and five hundredweight of hay.[1] The overall effect of such change was, in the words of the Borough's M.P., 'most disastrous'.[2] Within the short space of a decade, Petersfield was transformed from a thriving urban thoroughfare into a rural backwater. The arrival of the railway some ten years later, in 1859, offered little consolation.[3] Towns such as Alresford, Andover, Bishop's Waltham and Stockbridge all met similar fates, though to varying degrees. Andover was probably the most seriously affected of this group. Closely following the pattern experienced by Petersfield, the number of inward and outward coach and carrier movements per week fell from 402 in 1839 to 96 in 1851, and this resulted in great injury to the economic well-being of the town and its surrounding district. In his evidence to a Parliamentary Committee on the L.S.W.R's proposed Basingstoke and Salisbury Extension, Charles Matcham, an Andover innkeeper, stated that the effect was such that the neighbourhood was 'nothing like what it was (formerly)'.[4]

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[1] Feed requirements calculated on basis of a letter to the editor of a local newspaper - Hampshire Advertiser, 8/12/1827

[2] H.L.R.O., Minutes of Evidence, H.L., 1845, Vol. 13, Direct London and Portsmouth Railway, 27

[3] The London to Portsmouth 'direct' line. It remained single until 1878, and even when doubled was given only poor services.

[4] H.L.R.O., Minutes of Evidence, H.L., 1846, Vol. 34, L.S.W's Basingstoke and Salisbury Extension Railway bill, 9

	No. separate Enclosure Acts
1750-9	3
1760-9	2
1770-9	2
1780-9	10
1790-9	15
1800-9	7
1810-9	8
1820-9	5

Source: G. Slater, The English Peasantry and the Enclosure of Common Fields, (London, 1907), 279

TABLE 10.3

As well as forming focal points for stage-coach and carrier services, the region's towns also, of course, formed focal points for many turnpike roads. The various repair and improving activities of turnpike trusts, which ultimately resulted in the creation of a comprehensive and integrated system of 'through-ways', greatly facilitated the inward and outward movement of all kinds of road traffic, not just public transport vehicles. The toll income and traffic equivalent data presented in chapter seven provide a useful indication of the scale of this increased movement. The inevitable consequence was a marked growth in the range and scale of the commercial and trading activities of many of the region's towns. Unfortunately, this is a relationship which is extremely difficult to define with any degree of precision, but it is almost certainly evinced in the significant demographic expansion experienced by many of the region's towns during the period, and the associated strong increase in the degree of regional urbanisation.[1]

While it is on Southern Hampshire's urban geography that the effects of the road transport developments of the period are perhaps most readily apparent, their influence undoubtedly extended much further. For example, the region's rising population, coupled with the decisive movement towards greater urbanisation, necessitated a commensurate increase in agricultural output and a much greater movement of agricultural commodities, particularly to the urban markets. The road transport developments of the period formed a highly important element in making such change possible. The conversion of large tracts of maiden downland over to tillage, and the enclosure of common fields and wastes would have been very much more difficult without improved roads, for instance. They greatly facilitated the transfer of fertilisers like lime, chalk and marl, which were so essential to better yields. Equally important, they enabled products to be despatched to market much more cheaply and efficiently. Once again, an indication of the scale of this increased movement is given in the toll income and traffic equivalent data presented in chapter seven. The true connection between road transport development and agricultural advance is hard to pin down in precise terms, but it may well be significant that enclosure by private Act of Parliament, for example, reached greatest intensity in the region in the two decades (1780-1800) almost immediately following the 'turnpike mania' years (table 10.3) - the time when trusts'

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[1] See chapter four, p. 61-3

repair and improving activities would just have been starting to have really substantial effect. In a slightly different context, the increased movement of agricultural products to meet the demands of the expanding urban markets is clearly reflected in the growing significance of 'market' carrier activity in the region from the 1820s onwards, and particularly around the larger centres like Winchester. The emergence of a clear natural rhythm in regional carrier activity might be considered as yet a further reflection of the same trend.

In direct contrast to the position with agriculture in the region, the effects of the road transport developments of the period upon industry were largely negative. As was stated in chapter four, in the first half of the eighteenth century, Southern Hampshire was favoured with a small but thriving industrial sector, and this provided a valuable complement to its predominantly agricultural economic base. After 1750, however, industrial activity in the region entered into decline, and in many ways, of course, the road transport developments in the region during the period aided this process. For example, the improvements in the roads and the associated development of public carrier facilities greatly extended the market areas for such industries as brewing, tanning and paper-making. As a result, a process of industrial concentration was set in motion and many of Southern Hampshire's breweries, tanneries and paper mills ceased operation. More important than this, though, the improved roads and the growing range of carrier facilities formed a vital link in the chain whereby cheap West Riding woollen products and Lancashire cotton goods, for instance, penetrated overland into the Southern Hampshire market, so spelling disaster for the region's hitherto important textile industries. The question of external links provides a valuable pointer to the wider significance of the road transport developments in Southern Hampshire during the period, and it is to this that final attention is directed.

10.iii) The wider significance

While this thesis has been primarily concerned with road transport developments in Southern Hampshire, it is essential to remember that one is dealing here with but one element in a much larger system. The experience of Southern Hampshire was undoubtedly mirrored, with variations, in many other parts of the country. Valuable reinforcement of this view

is provided by the preliminary work of Dickinson and Wilson on the West Riding of Yorkshire.[1]

Dickinson's work, which is concerned with stage-coach services in the region, reveals that Leeds had close on 700 inward and outward coach movements per week in the 1830s.[2] The corresponding figure for Southampton, in contrast, was only within the range 312 to 456. While this variation may be related in large part to the fact that Leeds's population at the time was five to six times that of Southampton, it is without doubt also a reflection of the greater buoyancy of the West Riding economy, of which Leeds formed the central focus. Although no detailed work has yet been done on carrier services in the West Riding in the 1830s, the evidence for Southern Hampshire indicates that Leeds must have had at least 300 inward and outward carrier movements per week.[3] In other words, the total number of public transport vehicles passing in and out of Leeds at the time must have been in excess of 1,000 per week. This serves to highlight yet further the very considerable volume of road traffic movement in the period, even in the public transport sector.

Wilson's work, which is concerned with the use of transport dues as indices of economic growth, incorporates a valuable series of figures on the toll incomes (from toll lessees) of the main turnpike trusts around Leeds, and covering the period 1772 to 1820.[4] Examination of these figures reveals some marked increases in trusts' toll incomes, and by implication, in traffic. On the Leeds-Harrogate turnpike, for example, income rose from some £700 per annum in the late 1770s to some £1,900 per annum in the late 1810s. Since there were no intervening

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[1] G.C. Dickinson, 'Stage-coach services in the West Riding of Yorkshire between 1830 and 1840', J. Transport Hist., 4, (1959), 1-12; R.G. Wilson, 'Transport dues as indices of economic growth', Econ. Hist. Rev., 19, (1966), 110-23

[2] G.C. Dickinson, op. cit., 2

[3] Bagwell gives the total number of carriers in business in Leeds in 1830 as approximately 160. Working on the simple (though unlikely) assumption that all these operated one service, 300 would not seem an unreasonable minimum estimate - P.S. Bagwell, The Transport Revolution from 1770, (London, 1974), 56

[4] R.G. Wilson, op. cit., 115

changes in toll levels, this can be taken as a direct indication of the scale of traffic increase on the turnpike - i.e. two to three-fold. If the author had been able to include income figures for the 1760s and for the 1820s and the 1830s, it is possible that the scale of traffic increase would have been almost double. The picture on the Leeds-Bradford-Halifax turnpike is broadly similar. When changes in toll levels are taken into account, the scale of traffic increase between the late 1770s and the late 1810s was roughly three-fold. As before, if income figures were included for the earlier and later decades, the scale of increase is likely to have been considerably greater. While these two Leeds-centred trusts recorded very similar scales of traffic increases over almost identical periods, comparison of their individual income levels reveals that in terms of traffic volume, the Leeds-Bradford-Halifax trust was by far the more significant. Its average annual toll income in the late 1810s was approaching the £5,000 mark, as against just under £2,000 for the Leeds-Harrogate trust. As the two trusts controlled roughly equal lengths of road, and as it is unlikely that their toll schedules differed to any great extent, this most certainly represents a real difference in traffic volume. If these income levels are compared with those for trusts covering approximately equal lengths of road in Southern Hampshire, one is left with the clear impression that West Riding turnpikes were very much the busier. For instance, the average annual (joint) income of the two trusts covering the important Southampton-Winchester road was only around £550 in the late 1810s, and it took until the late 1830s before the £2,000 mark was obtained. It is certain that none of the Southern Hampshire trusts (even those for which only limited data survive) ever recorded annual toll incomes approaching £5,000. The nearest contender was the Portsmouth-Sheet Bridge trust, which in the early 1810s, registered income levels of just under £4,000. It might be argued that regional comparisons of this kind are not really valid since toll schedules may have varied markedly from one part of the country to another. However, it is clear from the various regional turnpike studies of Cossons and others[1] that toll schedules varied surprisingly little from one region to the next.

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[1] See chapter one, p. 12-13

The results of this work on the West Riding of Yorkshire, which really does little more than scratch the surface, suggests that the road transport developments in Southern Hampshire during the Industrial Revolution period were not only mirrored in many other parts of the country, but in some cases even surpassed. In this light, the case for further detailed regional studies of the kind undertaken here is clearly a very strong one. As well as being of substantial intrinsic interest, examinations of regional turnpike development, the associated repair and improvement activities of turnpike trusts, the expansion of road traffic, and the growth of public road transport systems, can contribute greatly to our knowledge of contemporary regional geography. At a broader level, such examinations represent a fundamental step towards furthering our understanding of the workings and course of the Industrial Revolution. As stated in the introduction, economic historians are generally in full agreement about the key role of inland transport developments in this major phase of economic and social change, and yet the aspect of these developments made up by road transport has been accorded little attention. There can be no doubt, however, that the road transport developments of the period were as important as the parallel canal developments in permitting and sustaining the transition whereby principles of self-sufficiency and diversity of economic opportunity increasingly gave way to those of exchange and specialisation. Clearly, therefore, a great need exists for a concerted research effort towards expanding our knowledge and appreciation of the turnpike road, the stage-coach and the carrier as elements in the developing transport infrastructure of Britain in the later eighteenth and early nineteenth centuries. Only then will it be possible to try to proceed towards rectifying Thompson's criticism that the exact relationship between transport and the growth of the economy is one of the least understood aspects of the British Industrial Revolution.[1]

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[1] A. Thompson, The Dynamics of the Industrial Revolution, (London, 1973), 39

APPENDICES

APPENDIX 3.1 - Levels of turnpike tolls (Source: Turnpike Acts)

i) Toll per carriage, chariot, etc. drawn by four horses (N.B. Vehicles drawn by three, two or one horses in proportion)

	1700	1750	1800	1850
Portsmouth-Sheet Bridge	1/- →	→	→	3/- →
Kingston-Sheet Br. Lower		9d →	1/- →	1/6 →
Sarum-Eling		9d →		1/6 →
Winchester Upper		1/- →		1/6 →
Winchester Lower		1/- →		1/6 →
Andover		1/- →		1/6 →
Stockbridge		1/- →		→
Whiteparish-So'ton		9d →		1/- →
Gosport		1/- →		→
Southampton North		1/- →		→
Southampton South		1/- →		→
Winchester-Stockbridge		1/- →		1/6 →
Winchester-S.C. Down		1/- →		1/6 →
Popham-Winchester		1/- →		1/4 →
Winchester-Romsey		1/- →		1/4 →
Romsey-Ringwood		1/- →		1/4 →
Ringwood-Wimborne		1/- →		1/4 →
Winchester-Andover		1/- →		1/6 →
Winchester-Newtown		1/- →		1/6 →
Cosham-Chichester		9d →	1/6 →	
Romsey-Stockbridge etc.		1/- →		1/6 →
Lymington		1/- →		→
Botley		1/- →		→
Andover-Chilton		1/- →		2/- →
Petersfield-Ropley		1/- →		3/- →
Basingstoke-Alton etc.			1/- →	2/- →
London-Southampton			1/6 →	
St. Cross-Park Gate			1/- →	
Titchfield-Cosham			1/- →	
Winchester-Petersfield				3/- →
Midhurst-Sheet Bridge				2/- →
Farnham-Petersfield				1/6 →
Cranbourne & New Forest				1/6 →
B. Waltham & F. Pond				1/- →
Andover Station				1/6 →
Christchurch-Lyndhurst				1/- →

ii) Toll per waggon, cart etc. with narrow wheels (less than 4½") drawn by four horses (N.B. Vehicles drawn by three, two or one horses in proportion)

	1700	1750	1800	1850
Portsmouth-Sheet Bridge	6d	1/-	4/-	
Kingston-Sheet Br. Lower		9d	1/6	
Sarum-Eling		1/-	1/6	
Winchester Upper		1/-	1/6	
Winchester Lower		1/-	1/6	
Andover		1/-	1/6	
Stockbridge		1/-	1/6	
Whiteparish-So'ton		1/-		
Gosport		1/-	1/6	
Southampton North		1/-	1/6	
Southampton South		1/-	1/6	
Winchester-Stockbridge		1/-	2/0	
Winchester-S.C. Down		1/-	2/0	
Popham-Winchester		1/-	1/4	
Winchester-Romsey		1/-	1/4	
Romsey-Ringwood		1/-	1/4	
Ringwood-Wimborne		1/-	1/4	
Winchester-Andover		1/-		
Winchester-Newtown		1/-		
Cosham-Chichester		1/-	1/6	1/10
Romsey-Stockbridge etc.		1/-	1/6	
Lymington		1/-		
Botley		1/-		
Andover-Chilton		1/-	2/-	
Petersfield-Ropley		1/-	4/-	
Basingstoke-Alton etc.			1/-	1/4
London-Southampton			2/-	
St. Cross-Park Gate			1/6	
Titchfield-Cosham			1/-	1/6
Winchester-Petersfield			4/-	
Midhurst-Sheet Bridge			1/4	
Farnham-Petersfield			2/4	
Cranbourne & New Forest			2/-	
B. Waltham & F. Pond			1/6	
Andover Station			1/6	
Christchurch-Lyndhurst			1/-	

iii) Toll per waggon, cart etc. with broad wheels (more than 9") drawn by four horses (N.B. Vehicles drawn by three, two or one horses in proportion)

	1700	1750	1800	1850
Portsmouth-Sheet Bridge	6d		1/-	2/-
Kingston-Sheet Br. Lower		9d	1/-	1/4
Sarum-Eling		1/-	1/6	
Winchester Upper		1/-	1/4	
Winchester Lower		1/-	1/4	
Andover		1/-		
Stockbridge		1/-		
Whiteparish-So'ton		1/-		
Gosport		1/-		
Southampton North		1/-		
Southampton South		1/-		
Winchester-Stockbridge		1/-	1/4	
Winchester-S.C. Down		1/-	1/4	
Popham-Winchester		1/-	1/4	
Winchester-Romsey		1/-	1/4	
Romsey-Ringwood		1/-	1/4	
Ringwood-Wimborne		1/-	1/4	
Winchester-Andover		1/-		
Winchester-Newtown		1/-		
Cosham-Chichester		1/-	1/4	1/-
Romsey-Stockbridge etc.		1/-	1/6	
Lymington		1/-		
Botley		1/-		
Andover-Chilton		1/-	2/-	
Petersfield-Ropley		1/-	2/-	
Basingstoke-Alton etc.			1/-	1/4
London-Southampton			1/8	
St. Cross-Park Gate			1/2	
Titchfield-Cosham			1/-	
Winchester-Petersfield			2/-	
Midhurst-Sheet Bridge			1/4	
Farnham-Petersfield			1/6	
Cranbourne & New Forest			1/-	
B. Waltham & F. Pond			1/-	
Andover Station			1/-	
Christchurch-Lyndhurst			1/-	

APPENDIX 4.1 - Reliability of population data for Hampshire (1676-1851) presented in chapter four

One of the best ways of checking the reliability of a set of demographic statistics is to compare it against a similar set of material of roughly the same date, though preferably different in origin. For Hampshire in the later seventeenth and eighteenth centuries, however, the availability of demographic sources is insufficiently comprehensive to allow comparisons at the macro-scale. It is possible, though, to make some tentative comparisons at the micro-scale. For example, the returns of the tax on births, marriages and burials for Southampton for the years 1695-7 give the town a total population of 2,939.[1] The Compton Census of 20 years earlier records that Southampton had 1,921 persons over the age of 16,[2] suggesting a total population of about 2,800. The former source is probably the most complete population listing for the town before the first national census, and the close comparability of the 1676 estimated total clearly provides fairly strong evidence of the accuracy and completeness of the information provided by Southampton's parish clergy for the Compton return. A similar degree of comparability is evident in the 1725 visitation return for the town, which gives the total number of souls as approximately 2,750.[3] On the basis of this demographic evidence, it would seem that Southampton was experiencing a period of economic stagnation, possibly even decline, during the early eighteenth century, and this impression is confirmed by the accounts of contemporary visitors to the town,[4] thus adding further credence to the population statistics under investigation. An encouraging degree of comparability is also apparent in the population totals for Portsmouth for the later seventeenth

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[1] E.S. Welch, (ed.), Southampton Maps from Elizabethan times, (Southampton, 1964), 24-5

[2] William Salt Library, Salt MS. 33

[3] Hants. R.O., Replies to Visitation Enquiries, 1725, B/2/A

[4] See for example, D. Defoe, A Tour through the Whole Island of Great Britain, (London, 1724-6), Penguin edition, 1971, 154; C. Morris, (ed.), The Journeys of Celia Fiennes, (London, 1947), 54; E. Gibson, (ed.), Britannia, (London, 1695), 132; W. Stukeley, Itinerarium Curiosum, (London, 1724), 185

century. The Compton Census gives Portsmouth (excluding Portsea) an estimated total population of 3,750,[1] while the Hearth Tax return of 1664 indicates that there were 770 households in the town,[2] i.e. approximately 3,500 people. Clearly, it would be foolish to suggest that the evidence of these few examples alone in any way proves the reliability of the several ecclesiastical censuses used in chapter four. However, it is significant that the population totals given by these sources for two of the principal towns of the region exhibit clear signs of reliability, for it is in the towns, far more than in the countryside, that the clergy would have been expected to under-estimate or over-estimate population numbers.

A further guide to source reliability is often to be found in the documentation itself. For example, the fact that the Compton Census includes returns for all but three per cent of Hampshire parishes affords some indication of the seriousness with which it was carried out. It is also significant that few of these returns are given as round figures, suggesting perhaps that the clergy had gone to some considerable pains in collecting the necessary information. The visitation replies of 1725 are also fairly complete, although it should be mentioned that round figures and approximations are rather more frequent in these returns than in those for 1676. However, quite a number of the replies to this particular visitation enquiry are exceptionally detailed. For instance, the incumbents of Hartley Mauditt and West Worldham parishes included the following breakdowns in their returns: men and their wives; widowers and widows; young people grown up and servants; children. Others provided additional information about the number of houses and the number of families. The most interesting return, though, is the one of the incumbent of Portsmouth, which, in answer to a subsequent question in the visitation enquiry about the numbers of christenings, marriages and burials in the parish in the previous year, incorporates a table giving christening, marriage and burial figures for every year from 1707 to 1724, with the added note that 'they are much less numerous at present than they were in the time of the war'.[3] As with the Compton Census,

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[1] William Salt Library, Salt MS. op. cit.

[2] The author is indebted to Mr. P. Christie, Department of Geography, Portsmouth Polytechnic, for supplying this figure.

[3] Hants. R.O., Replies to Visitation ..., op. cit.

this enquiry seems to have been carried out in a business-like manner. The questions (12 in all) were set out on a printed form, with detailed instructions as to the size of the paper on which replies were to be entered. The returns were then bound into a series of volumes in order to facilitate future reference. The visitation replies of 1788 differ very little from those of 1725, with the main exception that they survive only for about 35 per cent of parishes.

It is clearly impossible to make any precise statements about the reliability of the three demographic sources used for Hampshire in the later seventeenth and the eighteenth centuries, but it is certainly fair to assume that they are not wildly inaccurate. If used with caution, they provide a valuable means of charting population change in the region in the 100 or so years before the first census. Finally, it is perhaps important to stress that these returns come much closer to a true population count (this is particularly true of those of 1725 and 1788) than many of the sources used previously in population studies of the period.

It might be expected that with the introduction of decennial national censuses from 1801, the reliability problems encountered in demographic studies of previous centuries would disappear. However, this is not strictly true, for it is now well established that the early nineteenth century censuses are not 100 per cent accurate. Krause has estimated that the first three censuses - 1801, 1811 and 1821 - undercounted population by five per cent, three per cent and one per cent respectively.[1] But, even if one accepts these estimates, they can have little more than general application, as levels of inaccuracy must undoubtedly have varied from one region to another. For this reason, no attempt is made here to correct any of the population totals given for Hampshire in the first censuses, although it is important to remember that inaccuracies are almost certainly present.

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[1] J.T. Krause, 'Change in English fertility and mortality, 1781-1850', Econ. Hist. Rev., 11, (1958), 52-70

APPENDIX 4.2 - Deane & Cole's population estimates for Hampshire in the eighteenth century[1]

The population totals given by Deane and Cole for Hampshire are as follows: 1701 - 108,409; 1751 - 134,148; 1781 - 186,252 or 174,513[2] (all figures include the Isle of Wight). The local ecclesiastical censuses give Hampshire (including the Isle of Wight) estimated populations of 113,000 in 1676,[3] 140,000 in 1725,[4] and 200,000 in 1788.[5] If each of these two sets of figures are assumed to be accurate to within five per cent either way, the county's population was stagnant or possibly decreased between 1676 and 1701. Then, between 1701 and 1725, it increased by at least 20 per cent, while from 1725 to 1751 stagnation prevailed once again. It is extremely unlikely that this kind of pattern prevailed in reality, with the result that doubt must clearly be cast on the accuracy of one or possibly both of these sets of demographic sources. This judgement is further reinforced by the fact that the totals for the 1780s differ by as much as 25,000. In view of what is said in Appendix 4.1 about the reliability of the ecclesiastical census material extant for Hampshire, and also keeping in mind the increasing suspicion being cast upon the PRA data as a basis for studying British historical demography in the eighteenth century, it would seem logical to reject Deane and Cole's estimates without hesitation. This is further justified by the fact that if one accepts Deane and Cole's second 1781 figure of 174,513, then Hampshire's population (including the Isle of Wight) increased by some 45,000 between 1781 and 1801. This represents a mean annual growth rate of 1.3 per cent and exceeds several of the inter-censal growth rates sustained by the county in the first half of the nineteenth century. It is hard to believe that this happened in reality. Thus, the truth of

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[1] P. Deane & W.A. Cole, British Economic Growth, 1688-1959 - trends and structure, (Cambridge, 1962), 103

[2] Deane & Cole consider that the second of these estimates is the more accurate - P. Deane & W.A. Cole, op. cit., 102

[3] William Salt Library, Salt MS. 33

[4] Hants. R.O., Replies to Visitation Enquiries, 1725, B/2/A

[5] Hants. R.O., Replies to Visitation Enquiries, 1788, B/2/A - 2

Flinn's statement that results drawn from the PRA 'are built on such shifting sand as to make them virtually unacceptable for the purposes of modern scolarship'[1] is reinforced.

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[1] M.W. Flinn, British Population Growth, 1700-1850, (London, 1970), 20

APPENDIX 6.1 - Local Turnpike Acts (original and renewal)

Portsmouth-Sheet Bridge, Petersfield-Ropley (1772) trusts

1710 - 9 Anne c. 33
1726 - 12 Geo. I C. 19
1742 - 15 Geo. II c. 14
1772 - 12 Geo. III c. 108
1796 - 36 Geo. III c. 135
1821 - 1-2 Geo. IV c. lvi
1826 - 6 Geo. IV c. lxxxvii

Kingston-Sheet Bridge Lower trust

1749 - 22 Geo. II c. 35
1768 - 8 Geo. III c. 56
1792 - 32 Geo. III c. 119
1803 - 43 Geo. III c. cxi
1823 - 4 Geo. IV c. lxxix

Sarum-Eling trust

1753 - 26 Geo. II c. 66
1772 - 12 Geo. III c. 74
1798 - 38 Geo. III c. 38
1818 - 58 Geo. III c. xxxi
1840 - 3-4 Vict. c. xxxiv

Winchester Upper, Winchester Lower trusts

1753 - 26 Geo. II c. 15
1772 - 13 Geo. III c. 88
1795 - 35 Geo. III c. 162
1817 - 57 Geo. III c. xxvi

Andover, Andover station (1840) trusts

1755 - 28 Geo. II c. 44
1774 - 14 Geo. III c. 104
1797 - 37 Geo. III c. 169
1821 - 1-2 Geo. IV c. xxv & xxviii
1840 - 3-4 Vict. c. xxxi

Stockbridge trust

1756 - 29 Geo. II c. 46

1776 - 16 Geo. III c. 67

1797 - 37 Geo. III c. 150

1818 - 58 Geo. III c. lxxiii

Whiteparish-Southampton trust

1756 - 29 Geo. II c. 45

1782 - 22 Geo. III c. 110

1803 - 4 Geo. III c. 72

1824 - 5 Geo. IV c. lxxxiii

Gosport trust

1758 - 31 Geo. II c. 73

1780 - 20 Geo. III c. 77

1799 - 39 Geo. III c. 17

1820 - 1 Geo. IV c. 31

1828 - 9 Geo. IV c. xlix

Southampton North, Southampton South, Winchester-Stockbridge, Winchester-Stephen's Castle Down trusts

1758 - 31 Geo. II c. 75

1780 - 20 Geo. III c. 90

1801 - 41 Geo. III c. xcv

1802 - 42 Geo. III c. lii

1823 - 4 Geo. IV c. xv

Popham-Winchester, Winchester-Romsey, Romsey-Ringwood, Ringwood-Wimborne trusts

1759 - 32 Geo. II c. 50

1762 - 2 Geo. III c. 57

1765 - 5 Geo. III c. 95

1779 - 19 Geo. III c. 101

1801 - 41 Geo. III c. xxix

1823 - 4 Geo. IV c. cxx

Winchester-Andover, Winchester-Newtown trusts

1762 - 2 Geo. III c. 61

1783 - 23 Geo. III c. 109

1804 - 44 Geo. III c. 17

1823 - 4 Geo. IV c. lxxxiii

Cosham-Chichester trust

1762 - 2 Geo. III c. 84

1784 - 24 Geo. III Session 1 c. 32

1806 - 46 Geo. III c. 46

1827 - 7-8 Geo. IV c. 8

Romsey-Stockbridge/Middle Wallop/Lobcomb trust

1764 - 4 Geo. III c. 47

1785 - 25 Geo. III c. 126

1806 - 46 Geo. III c. 100

1828 - 7-8 Geo. IV c. lxi

Lymington trust

1765 - 5 Geo. III c. 59

1786 - 26 Geo. III c. 156

1806 - 46 Geo. III c. xiv

1828 - 9 Geo. IV c. 107

Botley trust

1765 - 5 Geo. III c. 95

1786 - 26 Geo. III c. 158

1807 - 47 Geo. III Session 2 c. 56

1829 - 10 Geo. IV c. 81

Andover-Chilton trust

1766 - 6 Geo. III c. 86

1787 - 27 Geo. III c. 94

1807 - 47 Geo. III c. 55

1828 - 9 Geo. IV c. 47

Basingstoke-Alton/Preston Candover trust

1795 - 35 Geo. III c. 137

1816 - 56 Geo. III c. xiv

London-Southampton trust

1801 - 41 Geo. III c. 8

1823 - 4 Geo. IV c. xlvi

St. Cross-Park Gate trust

1810 - 50 Geo. III c. 22

Titchfield-Cosham trust

1810 - 50 Geo. III c. 14

1831 - 1 Wm. IV c. 61

Winchester-Petersfield trust

1825 - 6 Geo. IV c. 14

Midhurst-Sheet Bridge trust

1825 - 6 Geo. IV c. 11

Farnham-Petersfield trust

1826 - 7 Geo. IV c. 80

Cranbourne and New Forest trust

1832 - 2 & 3 Wm. IV c. 17

Bishop's Waltham and Fisher's Pond trust

1833 - 3 Wm. IV c. 17

Christchurch-Lyndhurst trust

4-5 Vict. c. xxii

APPENDIX 6.2 - Trust Case Studies

As stated in chapter six, four of the region's trusts were singled out for close examination - the Stockbridge, the Southampton North, the London-Southampton, and the Titchfield-Cosham - and they were selected in such a way as to provide as representative a cross-section as possible. For example, in terms of the time-scale of expansion, the Stockbridge and Southampton North trusts were established during the 'mania' phase, while the London-Southampton and Titchfield-Cosham trusts belonged to the later development phase. In terms of the length of roads under the four trusts' jurisdiction, the Stockbridge trust covered some 44 kms and was among the largest in the region, while the remaining three trusts came within the 9-12 km range. In the realm of general route classification, the Stockbridge and Southampton North trusts formed parts of trunk lines, the London-Southampton followed a cross-country route (diagonal interconnector), and the Titchfield-Cosham covered part of the main coast road (horizontal interconnector). Finally, the four trusts also provide a fairly representative cross-section in terms of their administrative effectiveness: the Stockbridge was among the two most ineffectively run of the trusts that it proved possible to examine, while the Southampton North was by far the most effectively run; the London-Southampton and Titchfield-Cosham trusts fell somewhere in between.

1) The Stockbridge trust (Basingstoke-Stockbridge-Lobcomb Corner)

In common with most of the trusts established in the region, the Stockbridge trustees' first pre-occupation was the appointment of officers, the erection of tollgates and toll houses, the settling of the expenses of obtaining the Act, and borrowing money on the security of the tolls.[1] Once these tasks had been dealt with, the trustees immediately turned their attention to the road itself, and their first action was to order the removal of a cottage at Sutton Scotney in order to make the road more commodious. A more pressing problem, though, was the surface of the road, and the trustees' next action was to order the surveyors to obtain gravel, flints, stone, chalk and sand, sufficient to repair the whole length of the road under the trust's care. In addition, the surveyors were

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[1] All the information contained in this case study is drawn from Hants. R.O., Minutes of Stockbridge trust, CC

instructed to erect bridges, causeways, to dig drains and to make water courses, wherever these were considered necessary. In some parts, the trustees were making completely new sections of road, for one of the surveyors, a Mr. Sabine,[1] was ordered to 'stake out the ground', and the surveyors as a whole were ordered to agree with farmers and others to 'plough off the turf' - unmistakeable evidence that sections of new road were being cut. This is further supported by the fact that the trustees were involved in numerous land purchases in the early years.

Whilst the trustees clearly lost no time in attending to their designated task - all the above directions were made within six months of the trust's establishment - the fulfilment of their aims obviously took a great deal longer, and not unexpectedly, there were difficulties. In 1758, for example, the trustees found that the person who had contracted to widen and repair the road from Popham Lane to Sutton had not done the job properly, and Sabine was directed to see that this was remedied. At about the same time, the trustees had to deal with the problem posed by a farmer who had planted a hedge across the road at one point, and there were incessant disputes with local landowners over the acquisition of land for widening and diversion schemes. In spite of setbacks, however, work on the whole line of road progressed. In late 1758, the trustees ordered that the section near Cranbourne should be 'stoned and completed', and early in 1759, a contract was concluded for making the road from Basingstoke to Basingstoke Down. Later in that year, the trustees directed that an advertisement should be inserted in the Salisbury Journal informing the public that the road should be completed throughout by the end of the year, but apparently this aim was not realised, for in early 1760, the trustees ordered that contracts should be made for finishing the unopened parts of the road at a maximum cost of £144 per mile (£90 per km). This mention of a maximum expenditure figure for making the road is especially valuable, and the figure itself compares very favourably with road repair expenditure figures for other Southern Hampshire trusts at the time (see table 6.2 and figs. 6.18 - 6.19). In other words, if the Stockbridge trust did spend a figure approaching this order in laying out its roads, it was obviously making major improvements, and the evidence about the amount of money

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[1] Sabine was also employed by several other Southern Hampshire trusts in the 'mania' years - see p. 251

the trust borrowed in the early years indicates that an expenditure rate of £90 per km could have been sustained fairly easily.[1] Although the trustees failed to complete the whole of the road by the end of 1759, as had been hoped, it is certain that work was finished by late 1760, and the road opened throughout. The trustees then ordered that milestones should be erected in appropriate places and attention shifted from road-making to road maintenance.

The shift of emphasis, however, did not mean that new work was not undertaken, for while the road may have been completed to the trustees' satisfaction, this was not so in the case of the various bridges along its course, and the succeeding decade saw several rebuilt entirely. In 1761-2, for example, several new bridges were erected over rivers at Stockbridge. In the following year, another new bridge was built at Sutton Scotney, and in 1764, the trustees ordered the building of further new bridges at Cranbourne. Virtually all these new bridges were built of brick. While bridge-building unquestionably constituted the major form of new work undertaken during the decade or so following the completion of the roads, the trustees did make some road improvements. In 1770, for instance, it was decided to lower the various hills between Stockbridge and Lobcomb Corner in order to render the road more convenient for travellers.

From about 1774, however, the trust's whole pattern of activity underwent a substantial change. Trustees' attendance at meetings declined markedly and frequently meetings had to be adjourned because there was no quorum (fig. 6.11). In consequence, there was a marked fall-off in the volume and range of new work undertaken. Basic road maintenance may not have been affected, as this was generally left to the surveyor or another of the trust's officers, but schemes or projects which involved substantial financial outlay normally had to have the approval of the trustees, and thus it was here that the decline in attendances was felt most. Sometimes, months or even years passed before sufficient numbers of trustees attended to make a quorum. For example, there was not one single quoret meeting between August 1782 and

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[1] By 1761, the trust had probably borrowed some £5,000, and if it spent £90 on each kilometre of road under its care (44 kms, in fact), this would have amounted to a total expenditure of approximately £4,000.

July 1786 - a span of almost four years. Similarly, there was no single quoret meeting between July 1786 and October 1789, or between October 1789 and July 1793. In fact, during the whole of the period from August 1782 until July 1793, there were only two quoret meetings and both of these were taken up by financial business.[1] Clearly, trustees' interest in the management and improvement of the road decreased quite dramatically once the initial work had been completed, and this seems to have been a reasonably common feature of all trusts.[2]

From the mid-1790s, attendances at meetings began to improve (fig. 6.11) and this was accompanied by a general tightening up of trust administration. A new surveyor-cum-clerk was appointed in 1801 and regular sums of money were laid aside for road repairs each month. In addition, the trust started embarking on new work again. In 1804-5, for example, new bridges were erected at Stockbridge and at Nine Mile Water, and in 1806-7, a scheme was set in motion for lowering Salisbury Hill. Unfortunately, this scheme marks the end of the record of the Stockbridge trust's road maintenance activities, for subsequent minutes have failed to survive and there are no other relevant documents available. However, this does not decrease the value of the case study greatly, because the extant minutes cover a 50-year period, and perhaps more important, the trust's formative years.

2) The Southampton North trust (Fernhill-Winchester)

Like the Stockbridge trust, the Southampton North trust covered a section of a trunk line and was established in the 'mania'. Unlike the Stockbridge trust, though, it covered only a fairly short section of road, and in consequence, it was probably in a rather better position for making repairs and improvements. As was usual, the trustees' first preoccupation was the appointment of officers, the erection of tollgates

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[1] To a certain extent, this situation was self-perpetuating, for without a quorum, it was impossible to elect new trustees in place of those deceased. Thus the number of trustees eligible to attend meetings must inevitably have been falling almost continuously at the time.

[2] W. Albert, The Turnpike Road System in England, 1663-1840, (Cambridge, 1972), 61

and toll houses and the borrowing of money on the security of the tolls.[1] When these tasks had been dealt with, attention was directed towards repairing the road, and by early 1759, a gang of labourers had been engaged for the purpose under the direction of a foreman, who was in turn responsible to the surveyor.[2] In direct contrast to the Stockbridge trust, however, the trustees did not embark on any improvement schemes in the early years. Instead, they concentrated their activities on repairing the existing road. There was one exception, though - the building of a new bridge at Chandler's Ford. The question of building a new bridge here was first raised in late 1767 and came up again in early 1769. Apparently, the existing one was of a wooden construction and unsuitable for wheeled vehicles. Thus, all coaches, gigs, waggons and carts had to pass through the ford, and after heavy rains, of course, this was often difficult. The lack of a suitable carriage bridge at this point along the road obviously constituted a major impediment to traffic, in the rainy season especially, and it was therefore in the trust's interest to erect a proper bridge. In consequence, the trustees ordered that a survey should be made for the purpose and also that a plan and an estimate of the cost of erecting a bridge should be prepared. The bridge was eventually built in 1772, with the Southampton South trust contributing towards the cost.

After the passing of the 1780 renewal Act, which completely separated the trust from its southern neighbour, the nature of its repair activities began to change. Whereas previously the trustees had confined themselves to basic road repairs, they now started engaging in new work, in addition. In 1783, for example, a road-widening scheme was put into operation near Southgate, Winchester, and two years later, in 1785, a new bridge was erected at Otterbourne, incorporating a 20-foot wide roadway. In the following year, the part of the road at Fillington Bottom was widened to 40 feet, and in 1791, the trustees ordered that the hill between Compton and Otterbourne should be lowered at a cost of some £100. This spate of improvements obviously absorbed a considerable

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[1] The settlement of the expenses of the Act was delayed for several years. All the information contained in this case study is drawn from Hants. R.O., Minutes of Southampton North trust, 4M30/1-4

[2] William Sabine, surveyor to the Stockbridge trust in the late 1750s (see p. 248), was surveyor for this trust for a short time.

proportion of the trust's funds, with the result that general road maintenance was neglected somewhat. Thus, in the mid-1790s, largely in response to complaints from travellers about the road's condition, the trustees ordered the implementation of a comprehensive programme of re-surfacing, using gravel or a mixture of gravel and chalk.

The trust's concern over the condition of the road surface extended into the first decade of the nineteenth century, for the trustees were continually ordering that searches should be made for gravel supplies during these years, and they even went as far as acquiring a gravel-borer. There was a considerable amount of discussion at the time about new works,[1] but curiously, little was done. After 1810, however, the position changed: new works continued to be discussed, but this time they were put into effect more often. In 1810, for instance, a road-widening scheme was implemented at Otterbourne and in the following year a widening scheme was begun at Southgate, Winchester. The most significant change in the trust's position, though, came in early 1820, with the appointment of William McAdam as surveyor.[2] The trustees could not obtain the services of one of the McAdams fast enough, for the existing surveyor was discharged with a year's salary, and in view of what McAdam achieved in the ensuing decade, the trustees' haste was well justified.

The first action taken by the trust after McAdam's appointment was to give approval for the spending of a maximum of £25 for the immediate repair of each mile of road under its care (£15.5 per km). This amounted to a maximum total of some £130 for the whole length of the road, and it seems that McAdam did in fact spend this sum, for within a few months, he was applying for more. In 1821, the trustees decided to allocate a regular sum of money for road repairs each year. Initially, this was fixed at £25 per mile (£15.5 per km), but in 1822 it was raised to £35 per mile (£22 per km), and in 1823 to £40 per mile (£25 per km). At the same time that the trustees were allocating regular annual sums for repairing the road, considerable sums were also being put towards new works, again under McAdam's overall direction. In 1824, some £400 was spent on road-widening at St. Cross and in raising the level of the road at Fillerton's

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[1] For example, the trustees were continually appointing committees of three or four in number to consider the propriety of particular schemes.

[2] See chapter six, p. 145

Bottom. In the following year, 1825, over £500 was expended on lowering Otterbourne Hill, and in 1826, a further £100 was spent on lowering Red Lake Hill, near Otterbourne Wood. The most ambitious scheme effected during this intensive period of improving activity, though, was the making of an entirely new section of road between Otterbourne and St. Cross in 1828-9, at a cost of some £2,000. After this major project had been completed, the trustees seem to have become somewhat dissatisfied with McAdam as a surveyor, despite the fact that improvements were continuing to be made under his direction. In February 1831, for instance, they sent him a letter saying that the road was not in as good a state of repair as in previous years, and in the following February, McAdam's services were dispensed with altogether, Aaron Blandford being appointed in his place.

The change of surveyor did not discourage the trustees from engaging in further new works, for in 1833 some £500 and more was spent on lowering a hill and filling up an adjacent valley near Fillerton's Bottom, and additional improvements were made in several subsequent years during the decade. A particularly interesting development during the mid-1830s was the sudden interest taken by the trustees in the provision of drains. Admittedly, the making of drains had always formed an integral part of general road maintenance, but in this period the task attracted more than usual interest. The explanation for this is not clear, but it obviously arose from an increased desire to improve the condition of the roads, and significantly, iron drains were being used apparently for the first time. These drainage improvements, however, were among the last new works which the trust undertook, since in 1839, a railway line was opened between Southampton and Winchester and quickly attracted traffic away from the turnpike road. The decline in traffic meant that there was a fall in toll revenue, and in consequence, in money available for road repairs and improvements. But, decline in traffic meant that less repair work was necessary, and also, of course, the incentive to make improvements was largely gone. Not surprisingly, therefore, the late 1830s and the 1840s were comparatively uneventful from the point of view of road repair activity.

3) The London-Southampton trust (Botley-Bishop's Waltham-Corhampton)

As was pointed out in the introduction to these four case studies, the London-Southampton trust was among the later-established of the region's trusts and concerned a cross-country route. More important, though, the trust was involved in making an entirely new road, and this represents a direct contrast to the Stockbridge and Southampton North trusts, both of which were mainly involved in repairing and improving roads already in existence. Since the trust was making a completely new road, the first action of the trustees was to advertise for persons to contract for accomplishing this task (this was done in April 1801), and within a month, contracts had been made for the road from Botley to Corhampton.[1] The contracts stated that the road had to be 30 feet in width, and gravelled two feet thick on the crown. A local surveyor, John Doswell, was employed to stump and mark it out. Although the trust was making a completely new road, the trustees lost little time in getting tollgates and toll houses erected, and by about August 1801, tolls were ordered to be collected. However, it is certain that the road could not have been finished by this time and traffic would therefore have been small. The date when the road from Botley to Corhampton was in fact completed is not easily determined, as the trustees apparently made no special public announcement and the minutes are silent on the subject. But, it is probable that the greater part of the work was finished by July 1802, for in that month an advertisement appeared in the Hampshire Chronicle giving details of a new coach service between Southampton and London via the London-Southampton turnpike.[2] It is hardly likely that a new service of this kind would have been started if the road had not been completed, or at least nearing completion. Having accomplished their principal task - or at least part of it, for nothing had yet been done (or ever was done) about the section of the road from Corhampton to

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[1] As noted in chapter six, the trust's first Act in fact empowered it to make a road from Botley to Filmer Hill, with a branch to Corhampton, but the section from the branch to Filmer Hill was never completed. All the information contained in this case study is drawn from Hants. R.O., Minutes of London-Southampton trust, 5M54/111

[2] Hampshire Chronicle, 12/7/1802 et sequ.

Filmer Hill - the trustees turned their attention to maintaining the new road, usually by contract. However, this does not mean that they did not engage in any new work, for as early as April 1803, a contract was made for lowering Harfield's Hill. On the other hand, of course, the fact that trustees had made an entirely new road from the start meant that there would have been less scope for engaging in new work in subsequent years.

The question of the making of the road between Corhampton and Filmer Hill remained in the forefront of the trustees' minds during the early years, and in March 1805 they requested an estimate of the cost that this would involve. In July of that year, it was calculated that only another £400 was needed for work to begin, and plans were therefore put in hand for raising the additional money. Apparently, though, the plans did not meet with sufficient success as no start was made on the uncompleted section of road within the next twelve months. Faced with this situation, the trustees decided that the only other means by which the road could be finished was to apply for a new Act, amending and enlarging the powers of the existing one in such a way as to ensure that their objective was achieved. However, the trustees failed to obtain a new Act, and after 1806 the question of the remaining section of road receded into the background. From this time, therefore, all attention was concentrated on maintaining the portion of the road that had been completed. In many respects, it is fortunate that events took this course, for in 1809 and 1810 there were frequent complaints about the state of the road and payments to the contractors had to be suspended temporarily. In 1812, two trustees were directed to superintend the repairing of the road between Botley and Bishop's Waltham, and particularly extensive repairs were put in hand on the section of road running through Waltham Park. The last repair scheme involved filling the hollows with stones and laying screened gravel over the whole of the road surface. The increase in repair activity in these few years seems to have proved of considerable long-term benefit, as no further adverse reports were received about the road's condition in the ensuing ten years or so. Road maintenance continued, but on a relatively small scale; the main activity consisted of spreading fresh gravel on the road and the trustees bought quite a lot of gravel-bearing land in the later 1810s and early 1820s in order to ensure a constant supply.

After the trust had obtained its second Act in 1823, a fundamental change seems to have occurred in its situation, particularly in respect of road repair activities. Up to this time, the business of road repairs had formed a fairly frequent subject of discussion at meetings of the trustees, but from 1823, this changed. Road repair activities were discussed on very few occasions and the trustees spent most of their time on administrative business. The main explanation for the change was undoubtedly the trust's slowly deteriorating financial position, especially from about 1830. The main problem was the declining toll income,[1] and by the mid-1830s the stage had been reached where it was only sufficient to meet administrative expenses, repairs to tollgates and toll houses, and the payment of interest. In effect, therefore, the maintenance of the road was placed solely in the hands of the parishes through which it passed, and this remained the position up to 1850 and later. Not surprisingly, the condition of the road deteriorated markedly over these years, and on several occasions, the trustees ordered the clerk to write to the local parish highway surveyors drawing attention to particularly bad stretches with a view to their being amended. However, the road repair resources of parishes were limited and it would have been difficult to maintain the road to anything like the standard expected for a turnpike at the time. Clearly, therefore, the example of this particular trust provides a direct contrast to the Stockbridge and Southampton North trusts. While it is true that the London-Southampton trust made an entirely new road at the start, a limited amount of repair work was done subsequently, and from the mid-1830s, the care of the road was in the hands of the parishes. In essence, the trust proved a failure, although it took almost 30 years to do so. Obviously, it is questionable whether an Act should have been granted in the first place, but one was granted, and moreover, the provision of such a link was in no way illogical.[2] If the trust had merely improved an existing road, it is quite possible that the story would have been different.

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[1] The explanation for this decline is unclear.

[2] See figure 6.8

4) The Titchfield-Cosham trust (Titchfield-Fareham-Cosham)

Like the London-Southampton trust, the Titchfield-Cosham trust was among the later-established in the region. It covered a fairly short section of the coastal road, and in common with the Stockbridge trust, the trustees both improved the existing road and also made completely new sections of road. As was usual, their first pre-occupation was the appointment of officers, the erection of tollgates and toll houses, and the borrowing of money on the security of the tolls.[1] Once these tasks had been completed, attention was immediately directed to the road, and a committee was appointed to make a survey of the whole line to decide where deviations would be necessary. Within a week, the committee had produced its report and advertisements were ordered to be placed in the local newspaper inviting tenders for making the whole road. At the same time, the trustees directed that those parts of the road that were in a bad state of repair should be amended immediately, under the supervision of a committee. Later, the trustees decided to invite tenders for the building of a completely new bridge at Titchfield, and John Doswell[2] was appointed trust surveyor and directed to stump out the whole of the road, which was to be 35 feet wide throughout, with a five-foot footway alongside. All this was achieved in the space of but three weeks and represented a remarkable rate of progress. Several other trusts in the region were quick to implement their respective Acts, but the record of the Titchfield-Cosham trust was probably unequalled. The greater part of the road was completed and opened to traffic by late 1811, at a cost of some £10,000. In general, the trustees seem to have adhered to the McAdam principle of road-making - i.e. adopting the convex from and using fine gravel only - and in addition to building a new bridge at Titchfield, they also erected a new bridge over the river at Wallington.

Up to this time, the trust was clearly in a thriving state, but from about mid-1812, the position altered for the worse. The main problem was a financial one: the making of the road had involved a rather

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[1] All the information contained in this case study is drawn from Hants. R.O., Minutes of Titchfield-Cosham trust, 36M72

[2] John Doswell had earlier been employed by the London-Southampton trust - see p. 254

greater expenditure than had been expected and attempts to raise further loans to cover this had proved unsuccessful. In consequence, the trust quickly found itself in financial difficulty and was forced to cut back road maintenance severely. Thus, when complaints were received about the defective condition of the road at Paulsgrove in late 1812, it was decided that, owing to the state of funds, nothing could be done. However, by 1814, this particular section of road had become so dangerous that the trustees were more or less compelled to make repairs. Cases of this kind, though, were exceptional, and generally, remarkably little repair work was done during these years at all. By late 1815, the trust's funds had fallen into such a depressed state that the surveyor was discharged and a committee of trustees was appointed to superintend road maintenance. The situation was made still worse by the decline in toll income following the ending of the wars with France in 1815, and between about 1818 and the mid-1820s the care of the road effectively passed into the hands of the parishes: the only money spent on road repairs was that from composition in lieu of statute duty. Understandably, the condition of the road deteriorated, but apparently not disastrously, as in 1823 it was reported that the greater part of it was in good repair. The main exceptions were the portions at Titchfield Hill and at East Cams, and the trustees passed the onus for amending these to the parishes on account of the defective state of the trust's funds.

After 1825, the trust's financial position improved and the trustees took the maintenance of the road into their own hands again. Contractors were engaged to repair the road and its condition improved significantly. In 1831, the trust obtained a second Act, which, among other things, permitted the taking of a second toll. This increased its financial resources substantially and enabled a programme of improvements to be carried out at various points along the road. Of these improvements, the most ambitious was probably the widening of the road between East Cams and Portchester. Unfortunately, the trust's finances did not remain in a favourable position for very long, as in December 1833, it was decided to place a strict limit on repair expenditure. By 1835, however, an improvement had taken place and orders were made for the paying off of securities. In that year, further road improvements were effected between East Cams and Portchester, and in 1837, the road at Wallington was lowered. But these were among the last new works that the trust undertook, since in 1842 a railway line was opened between Gosport,

Fareham and Bishopstoke and attracted a considerable amount of traffic away from the turnpike road. Traffic between Fareham and Havant and Chichester was comparatively unaffected, but much traffic between Fareham and Portsmouth quickly transferred to the railway, the passage across Portsmouth Harbour having been facilitated by the establishment of a floating bridge between Portsmouth and Gosport in 1840. The decline in traffic meant a fall in toll revenue, and in consequence, a fall in the resources available for road repairs. On the other hand, of course, the reduction in traffic meant that there was less wear and tear on the road, and according to the surveyor's reports, it would seem that the road was in a better condition in the 1840s than at any previous time. In part, this was probably the cumulative effect of 30 years of repairs and improvements, but more effective trust management may also have been a significant factor.

Clearly, the Titchfield-Cosham trust was in no way a complete success, although it should be stressed that it did not fall within the same category as the London-Southampton trust. Like the London-Southampton trust, though, it seems that the trustees almost certainly spent beyond their true means in making the road. If they had confined themselves to improving the existing road only, it is quite probable that the trust would not have got into financial difficulties.

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[1] Printed local turnpike Acts are also included here.

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