# AN HISTORICAL AND GEOGRAPHICAL STUDY OF THE SMALL TOWNS OF SHROPSHIRE 1600-1830

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by

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ABSTRACT

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The thesis begins with a brief historiographical survey establishing the rationale for research into the role of small towns in the early modern English economy. The spatial dimension of the Shropshire urban system is then analysed employing Christaller central place methodology. Databases for 1797 and 1828 are derived from directory sources and supplemented by information on the transport and market infrastructures and their services to examine centrality, function, connectivity and nodality by hierarchical ranking.

The second part of the thesis develops occupational and sectoral classification systems to delineate the economic parameters of the urban system. The sectoral structure of the small towns at the benchmark dates of 1797 and 1828 is analysed and a typology of the urban system is developed from the demographic and economic data.

The final part provides case studies of six small towns: Bishops Castle, Bridgnorth, Broseley, Ludlow, Much Wenlock and Oswestry. Benchmark estimates derived from probate inventories, occupational and fiscal data are used to analyse the composition and rate of growth of output by sector, and to create time series from the early seventeenth to the early nineteenth centuries. The extent to which the evidence of the case studies is representative of the urban system as a whole, typologically differentiated, is considered in the conclusion.

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# Part I

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## CHAPTER 1 - Introduction

There remains considerable debate over the exact definition of a "town". Population size has always been a popular though problematic candidate for the most important variable. Any discussion as to what might constitute a small town is therefore likely to prove yet more thought provoking as these settlements are on the margin of urbanity. Furthermore what constitutes "small" in one context may be large in another. What constituted a large town in the medieval period may only rate as a small one in the early modern period. The problems of finding a definition to suit all countries in all ages are legion and yet in order to employ the concept of a town, one must be sure of what it means.

The search for the definition of a town has led to the development of a number of urban classification systems. These attempt to define towns by the activities of the individuals who inhabit them. Towns are thus characterised by economic, social and administrative forms of organization which give them an identity and render them a generic form in their own right. Abrams who has completed a comprehensive assessment of such theories suggests that this avenue of inquiry may lead to a form of urban determinism which one would do well to avoid.[1] Towns no more caused the demise of feudalism and the rise of capitalism than they caused industrialisation or economic development. Braudel's notion that towns controlled and organised financial development through forms of taxation and the provision of credit; or that they caused social development by instituting class conflict and social control, must therefore be rejected.[2]

A much fuller understanding of their role can be achieved by looking at the environment they provide for development rather than the controls they exert over it. Towns do not exist in isolation but are part of a rural/urban continuum in which the same factors of economy and society operate but to different degrees and in different ways. It is in the particular articulation of these factors in towns that the solution to the problems of urban definition lies. The development and character of a town is the product of the dialectical relationship existing between the town and the cultural, social and

economic factors operating within the period and the country of its origin.

The subjective nature of the historical discipline means that many of the concepts it employs lack precise definitions. Corfield suggests that "for many purposes a purely subjective but commonsense definition is quite satisfactory: a town is a human settlement known to contemporaries as a town."[3] This is not to say that empirical and objective techniques may not be used in the analysis of urban forms however. Indeed, the objective analysis of a subjective concept may yield much information. This is certainly the case in the field of urban history and a survey of the literature provides a useful description of the process of urbanisation in England.

Chalkin clearly states that "England was not an urban nation in 1700. Over three quarters of the population of between five and six million lived in the countryside."[4] In the 1690s Gregory King postulated the existence of some 810 market towns, a figure with which Everitt, in his survey of English market towns, agrees.[5] The majority of these were small, most had less than 1,200 or 1,500 inhabitants: some were little more than large villages of 3-400 with the right to hold a market. These were the remnants of Finberg's "golden age of borough making" in the 200 years after the Norman conquest.[6] This was a period when town charters were obtained by entrepreneurial lords hoping to raise the value of their estates. It is not therefore, surprising that many failed.

There is some confusion as to the fortunes of urban centres in the seventeenth century. Wrigley suggests a theory in which the growth or decline of real wages is related to urban development.[7] Rising real wages leave more money to be spent on other than subsistence (food) requirements. This promotes rural industry, urban processing, marketing and requires greater industrial organisation. The obvious location for secondary and tertiary economic functions of this kind is an urban one. Wrigley therefore suggests that rising real wages (measured by the Phelps Brown and Hopkins index) can be associated with urban growth and increased agricultural productivity.

The sixteenth century saw the decline of real incomes and faltering urban fortunes in most towns except London. Wages bottomed out in the early seventeenth century and then began to rise achieving a 27% increase by 1700. At the same time Wrigley identifies a gradual decrease in the rural agricultural labour force from 80% of the total population in 1520, to 70% in 1670 and 66% in 1700. As this was a period of overall population increase, the growth must have taken place in the non-agricultural rural and urban populations. A large proportion of this urban population increase is accounted for by London which contained 11% of the country's total population by 1700 and was the largest city in Europe. It is suggested that most of the rest was located in the larger towns. This was especially so after 1670 when the new centres of Birmingham, Manchester and Leeds first appear. For the first time the rates of growth in the provincial towns challenged that of the capital.

Clark and Slack identify three types of town each with varying fortunes in this period.[8] They agree with Wrigley over the growth of larger towns big enough to specialise, after 1660, and identify a group of middle rank towns which faced problems throughout. These experienced growth and decline according to various factors: a fluctuating economy, the migration of industry, and dependence on the rural economy which was prey to the ravages of famine, fire and plague. The smaller towns grew from 1560 to 1640 contrary to Wrigley's wage rate theory, and then entered permanent decline.

Both Dyer and Everitt take issue with the latter point. Everitt, while noting that the smaller towns varied greatly in their fortunes during this period, suggests that most were expanding. He points to the evidence of expanding market places, construction of market-and guildhalls, a growing number of shops, reorganization of tolls and institution of market officers.[9] Dyer has shown that 70 new markets were formed between 1650 and 1673, and another 70 between then and 1690.[10] A plateau was then reached which had become a decline by 1792. Whether market status is a good indication of urban status by this time would obviously affect this point. The percentage population not involved in agriculture would perhaps be a more reliable measure. It should also be remembered that in this century

Birmingham and Manchester both experienced rapid population growth and rose from insignificant origins to positions high in the urban hierarchy.

The eighteenth century saw a more radical reordering of the urban hierarchy and more rapid overall growth. By 1750 the combined populations of the provincial towns was greater than that of London. The exceptional growth of the capital compared to other towns was over. However, it was still the case in 1800, as it had been in 1700, that most towns, except the capital and regional centres, were small. Chalkin gives a breakdown of the numbers of different sized towns in 1700 which shows how true this was.[11] Towns of 500-1,800 inhabitants: there were about 500 of these, they were market towns acting as local central places, some of which displayed a degree of market specialization and some of which saw the development of manufacturing. Towns of 2-5,000 inhabitants: there were 40 or 50 of these, similar in type to those above, but with individual advantages possibly in transport, administration or industry, which led to greater regional significance and growth. Towns of 5-10,000: there were 24 of these, being regional centres and capitals increasingly reliant on the specialization of industry and function. Towns of over 10,000 inhabitants: these were the seven regional capitals with important religious, administrative and market functions, supported by some form of industry and often high quality processing.

At this time there was still only one town, other than London, with a population over 25,000. This was Norwich (30,000), situated at the centre of the Norfolk road system, the county town, see of the diocese, acting as an informal money market as well as holding a livestock and grain market of renown. Its central administrative funcitons encouraged the presence of gentry and the growth of luxury retailing. The further advantage it had was its position at the heart of the East Anglian worsted industry. Cloth made in the surrounding countryside was brought to Norwich to be finished and marketed. Some was woven in the town itself, and the industry was controlled from here. Bristol, the second largest provincial town, (19,403 in 1695), had a similar advantage in its port function and the large size of its hinterland served by the River Severn. The

benefits such specialization gave to these towns over the purely administrative, commercial and regional role played by unindustrialized York, for example, is seen in the size differential. (York's population was only just over 10,000 in 1672.)

By 1800 the importance of new manufacturing industries to urban growth can be seen in the complete reorganization of the towns over 10,000. Throughout the century the larger centres of traditional industry, such as Norwich, Colchester and Exeter, saw little or no expansion in their role as regional centres. Instead they suffered from the competition offered by the development of new industrial centres on the coalfields of the North and the Midlands. By 1750 40% of the population in the larger provincial towns was to be found in those of an industrial nature. By 1801 the proportion had increased to 50%.

By 1820 there were fifteen towns with over 25,000 people. Manchester, Liverpool and Birmingham had grown 50- or 60-fold since the early sixteenth century to become the first, second and third largest provincial cities in 1801. Sheffield, Leeds, Hull, Nottingham, Bath, Plymouth and Portsmouth, all over 25,000 in 1820, had increased their populations five times since 1700. This was a period in which the total population of England and Wales only doubled. Industrial and port functions, though experiencing rapid growth in a changed economic environment, were not new in the eighteenth century though they were enhanced. What was new was the development of a leisured class with an interest in conspicuous consumption of luxury goods, services and entertainments. The development of the resort towns of Brighton, Weymouth, Cheltenham, Tunbridge Wells and, most spectacularly, Bath, which grew from 3,000 in 1700 to 35,000 in 1800, was a phenomenon of the eighteenth century and was yet one more factor in the process of urbanization.[12]

There were numerous new towns from the industrializing areas in the 5-10,000 group: Bolton, Preston, Halifax, Huddersfield, Wigan, Oldham, Blackburn, Wolverhampton, Stoke, to name but a few. Towns over 5,000 and especially the larger among these, increased their share of the total population significantly more than the smallest

towns. This was a period not only of rapid industrial development and creation of employment in this sector, but also of an expansion in marketing and retailing. The market areas of larger and growing towns engulfed those of their less successful neighbours leading to the decline and possible demise of the latter. The effect was a streamlining of the urban network and a shedding of very small towns which had become obsolete.[13] A relative fall in the real wages of the agricultural counties compared to the industrializing ones checked urban growth rates. Agricultural market towns in these counties often only just managed to achieve rates which kept pace with that of national population increase. Many of these towns were still only between 1-5,000 in 1821. However, their share of the urban population remained stable, because their numbers increased and they still accounted for 50% of all towns in 1801.[14]

As this brief survey of urban growth has shown, most research so far has tended to concentrate on the larger English towns, the county towns and the industrializing towns, where change took place at a dramatic rate. Little has yet been done on the smaller towns which throughout the period formed the most numerous group. Indeed, work by Corfield which sets an urban threshold at a population of 2,500 over a 200 year period, and by Wrigley who accepts, though not without question, a threshold of 5,000 totally ignores the relevance of large numbers of smaller 'small towns' in the development of urban England.[15]

Small towns are significant simply in terms of their numbers. In the seventeenth and eighteenth centuries the majority of people were still living in the countryside and the numerous small towns would have been their most immediate experience of urbanity. Though small, these towns were sufficiently different to provide a novelty and nonconformity not seen in any village. On fair- and market-days their size would temporarily increase and they could acquire the bustle and atmosphere of a much larger place. Compared to villages, the society of towns was much more open in its attitude to strangers. This accessibility attracted people despite attempts by the government to reduce population mobility by the introduction of settlement laws.

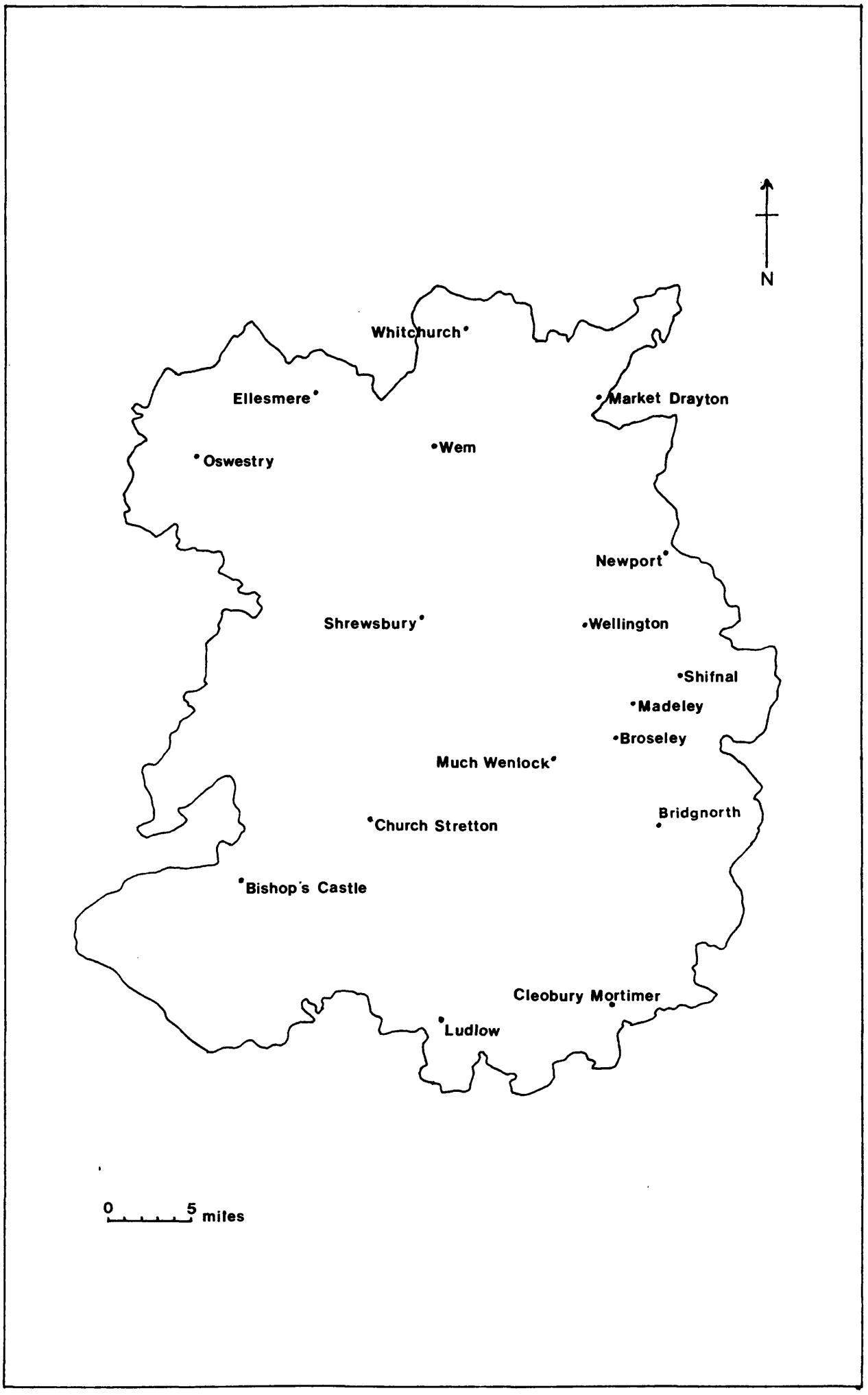
Division and proletarianization of the labour force could take place to a greater extent in towns than in the industrializing countryside where it began. In the latter the shrinking agricultural labour force sought an extra source of income from craft occupations; and craftsmen, at the mercy of fluctuating demand, sought security in access to smallholdings and livestock, typically pigs. The processing and retailing functions of the urban environment and its role in the organization of rural industry promoted further divisions and the development of more specialized occupations. Thus one sees the existence of specialized silk mercers and linen drapers, grocers who specialized in spices and exotic foods which an ordinary grocer could not keep and nailers, filers and bucklemakers rather than the simple smith. The existence of such variety is what differentiates the town, even small towns, from the rural village. The exclusive village leadership of squire and parson with its roots firmly placed in agriculture was replaced by the representation of non-agricultural functions: merchants, tradesmen, innkeepers, shopkeepers, lawyers, doctors, the clergy and manufacturers. So once a part of small town society, rural migrants found that movement within it was possible to a greater extent.

Small towns formed the most common urban experience for the majority of the population. They were therefore crucial to the spread of urbanism as a way of life. Demographic studies have shown that urbanization in England at this time was impossible without rural to urban migration.[16] If one assumes a step-wise pattern of migration, then the first contacts with urban life which potential migrants experienced were the small towns. For many, small towns were the first step on the road to London and the expanding manufacturing towns. Small towns as the staple of the urban system were also the base from which new towns grew, promoted by new trends in economy and society. Bath is again a spectacular example of this, also Sheffield and Birmingham. The fluctuations which occurred in the upper echelons of the urban hierarchy in England therefore occurred lower down as well. The experience of these towns may reveal much about the socio-economic changes which led to urban development and which distinguish the various types of town.

Small towns have, until recently, been rather neglected by urban historians. Notable exceptions include Noble's work on East Yorkshire country towns and that of Reed on Buckinghamshire towns.[17] Frequently, however, the realm of the small town is left to the antiquarian. The enthusiasm which these towns generate is often remarkable. They seem to have the ability to fire contemporaries with great loyalty while their wider significance goes largely unnoticed.

A preoccupation with the phenomenon of growth may account for some of this neglect. It has already been suggested that small towns were a relatively stable group in the urban hierarchy and that embryonic cities such as Birmingham and Bath have more dynamic histories. However, the consideration of urbanization as the development of an urban system necessitates the inclusion of towns both large and small. To disregard the small towns in such a case would be to analyse an incomplete system. A further reason for the neglect of small towns is the problem of data survival. Many of the towns were unincorporated and relied on deteriorating manorial courts and the parish council for their organization and administration. Such bodies did not generate copious historical sources. The corporations of the larger towns, however, generated a greater volume of paperwork covering a wider range of topics and often existing in a form more readily utilized by the historian. Being more numerous, the documents of these towns tend to have a better survival rate and so have attracted more attention.

Shropshire has been neglected by urban historians in much the same way as small towns have. However, its relatively broadly based economy, topographical variety and geographical location make it an interesting county. Situated in the Welsh borderlands, Shropshire in common with the other "Marcher" counties inherited a network of fortified settlements and towns, as well as a network of market centres, in the early modern period. Shrewsbury, the county town, is located near the centre of the shire with few neighbours large enough to compete with it in terms of urban status.




Map 1:1 Shewsbury and the small towns of Shropshire

The hilly, mountainous terrain of Wales and its dispersed settlement pattern did not produce a town of a size to rival Shrewsbury to the west. To the north, Chester was some distance away, and the same was true of Hereford to the south, and Birmingham to the east. Shrewsbury was therefore a town with a potentially large hinterland which was central to the Welsh borderland and which the Welsh had long regarded as a capital in their dealings with the English. One would therefore expect centrality to be a factor of importance in the consideration of Shropshire's urban network and could perhaps expect a regular hierarchical ranking among the towns. This possibility is made more probable by the even mix of economies in the county which meant that economic advantages were distributed relatively evenly among the towns. The periodicity of such economic advantages has to be taken into account, however, and would lead to fluctuations in urban ranking through time.

The economic advantages of Shropshire reflect its physical geography, in terms of which the county can be divided into two main regions. To the south of the River Severn is a hilly area rising in places to heights of over 500 metres; to the north the country flattens out to merge with the Cheshire Plain, seldom rising above 100 metres. In the early modern period the North Shropshire Plain developed as an area of commercial diary farming, pig fattening and some stock rearing. Though expensive, the drainage and enclosure of this area took place early as growing demand for dairy products in London, Bristol and the industrializing Midlands made land improvement profitable. Bridgnorth and Shrewsbury markets were both noted for the large amounts of cheese sold in them.[18]

To the south, mixed farming predominated and on the higher ground flocks of sheep were kept. The light, sandy soils were not generally fertile enough for commercial arable cropping, and though enclosure was cheaper in the south, (no drainage ditches, etc. needed), it was not as profitable and therefore not as popular. In the eighteenth century areas of common land still remained in the hills between Bishop's Castle and Church Stretton, Clun Forest and Clee Hill.[19] These provided important grazing for flocks of sheep and the cattle kept by smallholders. Small farms in this region

produced cheese and butter for the Shrewsbury market and in the upper Teme basin larger stock-rearing farms produced cattle for sale in the Bridgnorth, Shrewsbury, Bishop's Castle and Much Wenlock markets. This trade was complemented by the sale of Welsh cattle brought along the drovers roads to Ludlow, Bishop's Castle and Shrewsbury.[20] Wheat was grown in the south and sold in most markets though the soils were not really good enough and might have been better used for potatoes or turnips. Barley was grown in both regions for fodder and most especially in the north for brewing. Flax and hemp were also grown throughout the county, but only on a subsistence scale.

Towns throughout the county were centres for craftsmen; all had their quota of tanners, brewers, maltsters, smiths, clothworkers, etc. However, some by nature of their hinterland, developed specialities, thus Oswestry and Shrewsbury became centres for the retailing and dressing of imported Welsh woollens. Shrewsbury claimed its share of the trade as the largest town in the area with the most extensive retailing links. Oswestry acted as an entrepot for Welsh textiles being on the border and containing almost as many Welsh- as English-speakers. The town was a convenient half-way point between the production area and Shrewsbury where the people of the two countries could trade on an equal basis.

The main industrial development, however, was on the opposite side of the county in the parishes around the Severn Gorge and Coalbrookdale. Some of these parishes still contained areas of common land and their open structure was well suited to the immigration of labour which then developed industry on the coalfield. The colonization of Broseley and Madeley Woods by squatters in the late seventeenth and eighteenth centuries provided the workforce needed in the coal and iron industries of the Gorge, and in slack periods the men could always turn to their small holdings and common rights for support. By virtue of its physical geography, marginal soils and steep gradients this had always been an area of rural industry and dual economy. Its flexibility and raw materials were used to the maximum effect by the ironmasters of the eighteenth century. The importance of the Severn must not be forgotten; it formed a vital export route for the supplies of iron and metal goods. Supplies of

clay were also found in the area and formed the basis of the Broseley tobacco pipe manufacture and pottery industry. The latter later began using finer clays from Devon and Dorset, but it is doubtful whether the industry would have located here had the initial supplies of clay been missing. Again both industries benefited greatly from access to labour.

To some extent, then, it seems that those areas which were not enhanced by agricultural developments or trade links across the border with Wales, benefited by the growth of rural and urban industry. This is, of course, a simplification of economic variety in Shropshire. However, it represents a reasonable premise from which to begin an investigation of the county's urban network. We can perhaps replace Christaller's isotropic plain with one in which the irregularities coexist in such a way as to cancel each other out. In the same way that deviations from the norm identify points of interest in Christaller's urban hierarchy, any peculiarities in the urban pattern of Shropshire should pick out variations and singularities in the local economy and throw as much light on these as on the towns themselves.

The overall structure of the thesis is threefold. Part I consists of Chapters 2 to 8. This section considers the urban system of Shropshire in the study period 1600 to 1830 from the spatial dimension. It begins with a consideration of two classic theoretical propositions concerning the distribution of economic activity in urban settlements. These are the rank-size model of Auerbach and the central place theory of Cristaller. The conceptual and empirical problems of applying these spatial models to historical data are discussed and their suitability as frameworks for the analysis of urban settlements in the historical context of small towns are assessed. The central place approach is adopted as the geographical paradigm of Part I.

In Chapter 4 the criteria of classical central place methodology are applied to the empirical database to establish centrality value and functional indices for the small towns of Shropshire. The urban system of the county contains 17 units of analysis when the

county town is included. Shrewsbury appears at the head of the hierarchies derived to illustrate centrality and function. It is included in the presentation of the findings of the research at this stage to indicate the relative scale of its dominance within the urban system. The changes in the ordering of the positions of the small towns within the hierarchies are the focus of the study, and it is within this context that the primate quality of the role of the county town is considered.

The nodality characteristics of the small towns are considered in conjunction with the scale and development of their market areas. The market role is central to the small town economy, and this role is determined predominantly by spatial factors. Chapter 6 looks in particular at the part that transport developments play in the evolution of this role. Both the on-going construction and extension of the infrastructure of turnpike roads, and the services they carry, are considered. The links within the regional economy of the county are the principal object of study, but considerable information and analysis of inter-regional routes and services is also provided. The resultant hierarchical rankings are compared with the rankings derived from the studies of centrality and functional indices.

The range of historical materials examined is broadened in Chapter 7 to include data on migration between small urban settlements and the evidence provided by purchasers and vendors at the horse fairs of Ludlow and Bridgnorth. These data are employed to shed light on the relationship between the status of urban settlements and the size of their complementary regions.

The second part of the thesis examines the urban system of Shropshire from the economic perspective. Chapters 9 to 16 deal with five aspects of this approach. First, Chapters 9 and 10 are concerned with the identification of economic classification systems in urban history and with the development of an occupational classification by frequency group analysis of the small town economies. The next two chapters develop the classificatory approach to a second stage, classifying the occupational data into a four-fold sectoral structure. This is analysed at the two benchmark dates 1797

and 1828. It consists of functional differentiation of occupations according to sectoral orientation. Activities which are closely related to the primary sector, the processing of primary products and to traditional activities based upon the renewable resources of the natural environment are considered as Sector I, the traditional sector. Manufacturing activities of a non-traditional type and those based upon non-renewable mineral resources or employing fossil fuels are considered to belong to Sector II, the industrial sector. These activities are considered as essentially modern, rather than traditional. Sector III is considered to embrace the activities of retail and wholesale trade, while Sector IV is the sector containing service and professional activities. Together, these sectors constitute the equivalent of the modern tertiary sector.

Thus there are strong elements of empiricism in this sectoral classificatory system in order to preserve the qualities of the occupational classifications from which it is derived. But it is also clearly informed by the sectoral structures favoured by economic theorists. It provides a concise and instructive tool of intellectual enquiry which is able to generate many suggestive and helpful insights when applied to the small towns of the urban system. This practical relevance is tested in an examination of the relative merits of demographic and structural economic factors as explanatory variables of the profiles of growth and decline in the histories of the small towns.

Chapter 13 constitutes the third stage of the enquiry. It analyses population data on the small towns in an attempt to establish functional relationships between the demographic and economic parameters in the period between the first and fourth censuses of 1801 and 1831. This eventuates in a model of differentiation of the small town hierarchy. This model is characterised in typological terms. The functional analysis reveals that differentiation is largely a function of economic rather than demographic variables, and that these two parameters have a weak association in this period.

The fourth economic dimension examined is that revealed by the sectoral breakdown of the material derived, at this stage, from the directory sources. A sample of nine towns is selected from the two most normal types of towns revealed in the typological differentiation. These are denominated Type A and Type B and the criterion which informs their classification is their estimated output growth rate, net of population change, derived from the 1797 and 1828 databases. The other types in the classification are Type P which represents Shrewsbury, the primate town; Type C which represents those towns whose estimated output is contracting within a particular trend period; Type I which represents industrial or industrialising towns within the urban system; and finally, Type V representing the very small towns in the urban system.

This classificatory system is again designed to reflect the empirical data from which the economic and demographic characteristics have been identified. It is a flexible taxonomy which could usefully be extended or contracted according to the nature of the urban system to which it is applied. The purpose of this classificatory system is to highlight those aspects of differentiation within the system which seem to possess functional relevance in explaining the long-run processes of small town growth, stability, stagnation and decline. There are in particular the aggregate rates of growth of output measured at two levels: gross and net, the latter being the gross estimate corrected for population change. The first is therefore a useful overall economic indicator of the part that a small town plays in the overall expansion of the economic system. The second is a useful proxy for per capita output growth, a more sensitive measure which captures some of the welfare implications of the economic process.

The Type A and Type B towns are distinguished by their net growth rates, the former being a group representing above average growth within a trend period, the latter those towns with below average growth. The constitution of the groups as denominated by type is therefore flexible over trend periods. Thus, a town may over the course of the centuries move from one group to another. Equally,

though this is not the case in this exercise, new types can emerge, representing perhaps the development of a spa town.

The last aspect of the economic dimension examined in Part II is a consideration of the sectorally disaggregated data for the sample of nine towns. This is approached in two ways. First it is used to establish the proportion of total output accounted for by each sector and the changes that can be identified in the sectoral composition of output. This technique is then applied to the database on all the small towns in the system. The explanatory power of this form of disaggregation is considered, and then extended in Chapter 15.

The second approach which is developed derives a sectoral estimate for each small town which measures the contribution which each of the sectors makes individually to the aggregate growth outcome. Since certain sectors, and indeed certain towns, are in decline, these values can be negative as well as positive, and in the case of an individual town there can be combinations of sectors which are growth-inducing and sectors which are contracting. The net outcome of these processes is reflected in the sector-weighted growth rate estimates in which each town's sectoral structure is taken into account in arriving at an estimate of growth or decline derived from the positive or negative contributions of each sector to the process.

In the case studies of individual towns which constitute Part III of the thesis, these techniques of enquiry are extrapolated back in time to the early seventeenth century. Benchmark estimates of sectoral and aggregate variables are developed from a wide variety of historical sources. Probate inventories prove a particularly rich quarry for detailed data on individual towns, and in addition to yielding valuable inputs into quantitative estimates, they also provide a wealth of descriptive detail. This sheds light on both changing composition of output, the changing occupational structure and the interface between the changing economic environment of early modern society and the details of domestic and material culture.

The towns chosen for case study treatment are: Bishops Castle, Bridgnorth, Broseley, Ludlow, Much Wenlock and Oswestry. The selection involved two principal considerations, the first practical and the second theoretical. First it was essential, if the exercise on the late eighteenth and early nineteenth century data was to be conducted from the early seventeenth century, to link up chronologically with the later period and its more abundant resources of data, that these towns be reasonably well documented. Secondly, since it is possible to pursue detailed studies of small towns in the early modern period only on a limited number within any geographical region, it was desirable that those chosen for research should as far as possible be representative of the wider urban system of which they form a part.

At the same time the analysis of the sectoral composition of output has been further developed in Part III by the more detailed breakdown of Sector I. Hence advantage has been taken of the relative richness of the material available on the traditional activities represented in this sector to further disaggregate its composition. The categories into which Sector I is reclassified in Part III are: primary producers, food processers, textile trades, leather trades, metal working and construction.

The value of this more detailed breakdown lies in the insights it provides into the processes of differentiation within the sample of six case study towns. There are many points of contrast and comparison within the group and the quantitative classification into four major sectors, and with the largest of these into six traditional industries, provides a basis for the concise explanation of the varying economic fortunes of these towns, as well as a very full description of their urban histories.

It is the purpose of the last chapter to draw together the three major parts of the study. The fact that each part is characterised by a different paradigmatic perspective and a distinctive methodology renders this a rather complex exercise. Hence rather than extensively reiterate the many findings which the research procedure has revealed in the course of its inter-

disciplinary treatment of the Shropshire urban system, it concentrates on six aspects of the subject which are relatively neglected in the body of the text. Two of these are methodological, two interpretative, and two are typological.

The first methodological problem which arises from the thesis which Chapter 24 addresses is the quality of the statistical relationship between the case study towns considered as a sample of six small towns, and the small towns of the urban system as a whole. Tests of statistical significance are employed with the purpose of establishing the parameters of the representativeness of the sample. Secondly, the link between the long-run chronological time frame of the case study treatment of Part III and the shorter time series employed in Parts I and II is examined to test the coherence and comparability of the estimates. This was considered an important exercise in the light of the different historical sources which were consulted to create the early modern database compared with that for the beginnings of the modern period.

The first interpretative consideration is to consider the interface between the two essentially different paradigms employed in Parts I and II, the spatial and the economic. The purpose of this exercise is to integrate the findings derived from the essentially geographic-historical methodology and material of the one with the economic-historical perspective and insights of the other. The second interpretative goal is to create a long-run time series perspective on the small towns of the urban system as a whole. The methodological considerations concerning statistical relationships are a prerequisite to this, and the result of the exercise is a series of estimates of gross and net output growth rates for the towns classified by type over four trend periods. The first of these circa 1600 to 1665 is the least representative, but thereafter each trend period 1665 to 1745, 1745 to 1797, and 1797 to 1828 is represented by estimates of each of the five types of small town economies. The ranking of these estimates indicates the long-run changes in the urban hierarchy.

The typological considerations are concerned to address those aspects of small town analysis which may have been overlooked. Two such considerations are addressed in the conclusion, and they concern the urban forms at either end of the differentiated spectrum of towns in Shropshire. First the very small towns of the county which are relatively numerous and significant on this account alone, but further brief examination reveals other aspects of their distinctiveness, demographic and economic. This gives a brief insight into a potentially valuable field of enquiry in urban history.

Finally, Chapter 24 addresses the issue of the changing role of the primate county town within the Shropshire urban system. The study focuses entirely on the small towns, but no consideration of their changing roles within the system-wide urban environment would be complete unless it considered their relationship to Shrewsbury, the town at the social, spatial and economic centre of the urban system.

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## CHAPTER 2 - Spatial Models of Settlement and Economic Activity: Rank-size and Central Place Theories

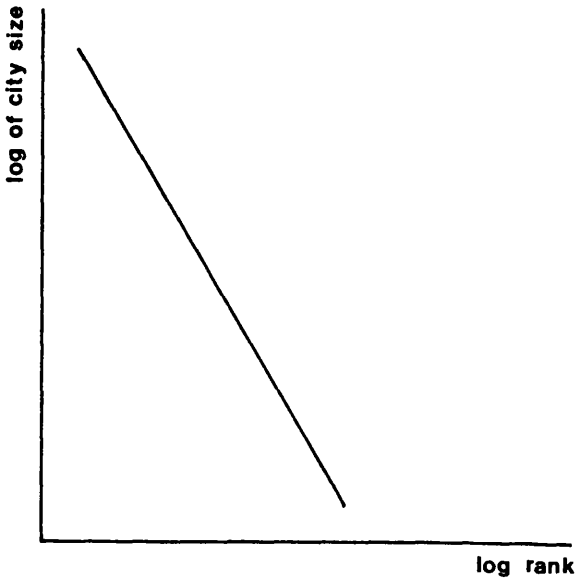
The attempt to find order in the existence and location of settlements has produced a body of theory spanning the disciplines of geography and economics. Studies have largely concentrated on contemporary situations but the need for such forms of enquiry to penetrate the sources of the past has not gone unnoticed. Carter has noted the "sad lack of the adaptation of these methods to the analysis of historical data" and suggests that until this is remedied "one could well argue that studies of dynamic process in the city system are all inadequately based".[1] Fundamental to the search for order amongst settlements has been the concept of hierarchy introduced in the previous section in terms of population. Not all urban hierarchies concentrate exclusively on settlement size in this way though the latter has frequently been directly linked to the measurement of settlement importance and has proved a good indicator of such in the past. Indeed one of the earliest observed forms of urban hierarchy was that postulated by the German geographer Felix Auerbach in 1913 from which he developed the rank-size rule.[2] Nineteenth century scholars had sought patterns in the distribution of settlements but the rule devised by Auerbach was the first attempt of significance.

The rule states, in its simplest terms, that if the population of a town is multiplied by its rank this will equal the population of the largest and therefore highest ranking settlement. This idea was reintroduced and developed in the inter-war years by George K Zipf[3] who observed that within a system, the size of the second city was invariably half the size of the first, the third city invariably a third of the size of the first and so on. A relationship shown by the equation:-

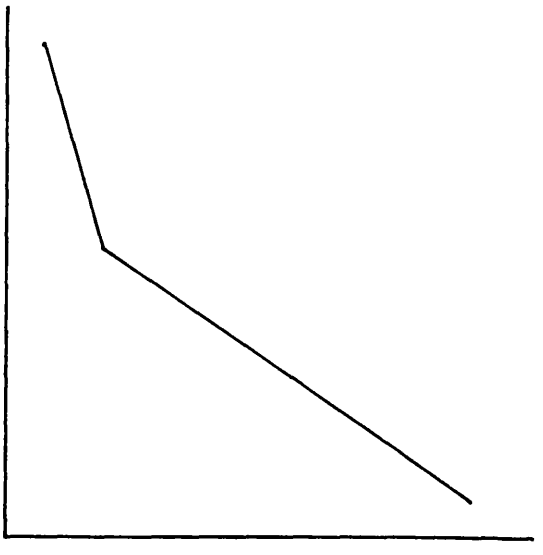
$$Pn = \frac{P1}{rn}$$

where Pn = population of the nth city
P1 = population of the largest city
rn = rank of the nth city

If cities were to be ranked and put on a graph showing rank-size relationships on a logarithmic scale a characteristic pattern would




Rank-size pattern

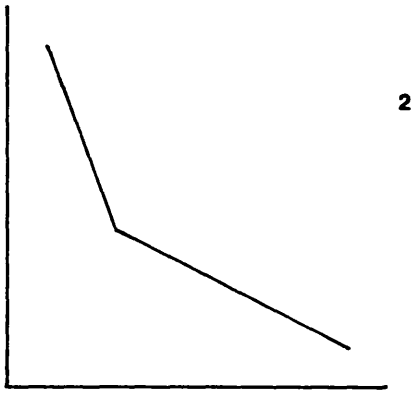


Primate pattern

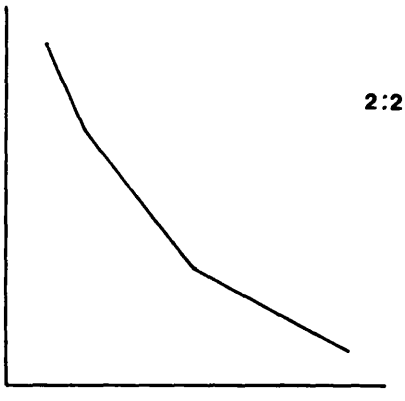
Fig 2:1 Auerbach's rank-size hierarchy of settlements

result (see fig 2:1) showing a smooth hierarchy with no distinctive classes of settlement apparent. The applicability of the rule has subsequently been tested a number of times and has been shown to apply in large areas only, Stewart (1958).[4] However, it is suggested that the rank-size rule provides a useful 'norm' against which to measure and analyse deviations. Berry goes further and suggests that the stages of economic and political development of an urban system may be expressed by characteristic rank-size curves.[5] Conformity with the rule of the kind noted by Auerbach and Zipf is characteristic of large countries and those which, like England have a long urban tradition. Smaller countries, and those more recently settled tend to exhibit a primate pattern of the kind illustrated in figure 2:1. Berry thus suggests that with increasing economic, political and social sophistication the range of urban forms becomes greater and displays growing complexity in form and size, thus straightening the size distribution curve (figure 2:2). Analysis of the rank-size distribution of towns in England, and more specifically in Shropshire, at dates through the seventeenth and eighteenth centuries should indicate to what extent processes of economic and social change were operative

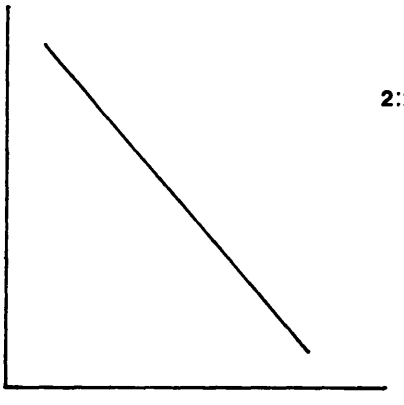
The rank-size rule introduces the idea of a linear hierarchy within which any one settlement has two fundamental attributes. Firstly its relationship with settlements of greater size which is that of a part to the whole, and secondly its relationship to settlements of smaller size which is that of the whole to a part. Implied in this is the concept that many are controlled by a few and that there is a pyramidal power structure in existence. There must therefore be a link between population size and function through which a line of command can be established. The rank size hierarchy has already proved a useful tool of enquiry in terms of one dimensional population size, but the relationship between population and function becomes of even greater interest when the spatial element as well as the temporal is introduced. The introduction of the space and the attempt to explain the location of settlements as well as their size is the main concern of central place theory.



2:2a Less developed stage



2:2b Developing stage



2:2c Developed stage

Fig 2:2 Three stages in the development of an urban hierarchy

Central place theory was put forward by the German geographer Walter Christaller in his doctoral dissertation of 1933 on "central places of Southern Germany" though it was not until its translation and introduction to the U.S. in the 1940s and 1950s that its implications were realized.[6] It was developed from ideas first aired in economics and location theory by Von Thunen and Alfred Weber, and was designed to explain the location and form of towns in the urban network of Southern Germany. It is essentially an organizational tool developed to shed light on what Christaller saw as the elementary order of things, the crystallization of mass around a nucleus of people in a town.

Central places are towns which serve the rural regions around them with central goods and services. They vary in importance, those of a high order are characterized by the greater range of goods and services offered and by the greater size of the area which they serve, known as the complementary region. Lower order central places offer a more limited range of goods and services and supply a smaller complementary region located within that of the higher order settlement. A nesting effect is thus achieved which is comparable with that of a one dimensional rank-size hierarchy. However, unlike the rank-size hierarchy that of the central place model is of a stepped nature and measures size by centrality rather than population. The relationship with the area and population around the town is therefore taken into account in the construction of the hierarchy. The introduction of the a rural-urban element in this way makes central place theory a concept of greater utility in explaining urban settlement patterns than the more elementary observations of the rank size rule.

It is important to be aware of the principles on which the theory was initially based if it is to be successfully and appropriately used as a deductive base for understanding real world patterns of settlement location. A number of assumptions form an integral part of the theory in its pure form. These assumptions have been criticised as being so strict as to make the model inappropriate for use in the modern world.[7] Their investigation may show that they

are however, more appropriate to the conditions prevailing in the environment of the seventeenth and eighteenth centuries.

The first assumption made in Christaller's model is that the urban network is situated on an unbounded plain with uniform resource endowment. This assumption is unlikely to be met in any real world situation, perhaps the nearest approximation would be the grain producing plains of the central North American states. The topographical variety of Shropshire, with the hills in the south and plains to the north both disected by rivers and bearing a variety of irregularly distributed resources including limestone, lead, iron, coal and building stone could certainly not be said to comply with this. The notion of an unbounded plain also involves fundamental difficulties. Political and geographical boundaries describe counties, regions and nations, dividing them into manageable units. External influences do of course impinge on any region and in this sense the plain is unbounded. However, in order to undertake research, limits have to be set. In this case they are the political limits of the county boundary. This does not mean however, that the possibility of a more appropriate 'natural region' is dismissed or that external influences on the region will be ignored. Indeed, the fact that Christaller makes such an assumption, and that one would expect the real world situation to diverge from it, is what makes the concept of an unbounded uniform plain a useful tool of enquiry. The failure of Shropshire to comply with this assumption will presumably result in an a-typical urban network and accordingly provide a line of enquiry as to why this should be so.

The second assumption concerns the existence of an even distribution of population and purchasing power. The predominently rural nature of Shropshire's population in the seventeenth and eighteenth centuries means that this assumption is more likely to be met at this time than at any later date . Beyond the county boundaries, however, expanding population centres in the Black Country and the Potteries and the growth of Liverpool to the north, affected the economic development of Shropshire. Christaller's model provides a framework from which to assess the influence of such exogenous factors on the urban network of the county.

The distribution of purchasing power is a two dimensional concept; that it was evenly distributed in spatial terms seems a possibility, that this was the case through the different levels of society is clearly not so. Gregory King's analysis of English society towards the end of the seventeenth century and his national income estimates are a clear example of actual and perceived social inequalities.[8] It is suggested that a peer of the realm could command an annual income of some £10,000, a prosperous knight £800, while labourers had to exist on £10 a year or less. Through much of the seventeenth century luxuries and consumer goods were for the consumption of the richer classes only. Appleby (1976) has shown how "the rich were expected to buy their luxuries, the poor to have enough to subsist. The possibility that at all levels of society consumers might acquire new wants and find new means to enhance their purchasing power ... was unthought of, if not unthinkable".[9] The existence of a pre-industrial work pattern in which individuals sought employment only for as many days of the week as was necessary to provide them and their family with the necessities of life, does much to support this view. However, it seems that by the last decade of the century the situation was beginning to change.

The beneficial effect of progressive levels of spending throughout society was realized though not until the 1770s and Adam Smith's seminal work was it properly incorporated in models of economic growth.[10] By this time the consumer revolution was underway with the lower classes emulating the habits and affectations of those above them. A new and much more extensive market for consumer goods, not just necessities, but decencies and even luxuries emerged and was remarked upon by contemporary writers.[11] By the latter part of the eighteenth century then, demand was more evenly distributed through society than previously. Wealth differentials still existed of course but for the purposes of Christaller's model it was a situation which approximates more closely with what required by his assumptions, than that which had existed at the beginning of the period.

The remaining dimension, the spatial, must now be considered. A number of national surveys of wealth distribution exist, using various sources such as wage rates and taxable wealth.[12] All

indicate that both regional and temporal inequalities occurred. Disparity throughout the period seems to be linked with the developing processes of industrialization and urbanization, implying that a direct correlation between the geographical distribution of purchasing power and population should be avoided. Flinn suggests that in the early eighteenth century agricultural wage rates in the south of England were higher than those in the north, but that by the end of the century the rising demand for labour caused by the development of northern industry had reversed the situation.[13] It is possible that a similar process was at work in Shropshire with the development of industry in the Severn Gorge which by the 1750s had begun to distort the traditional labour market. That this was so in Staffordshire had been shown by Botham and Hunt.[14]

Botham and Hunt calculate wages from 1750 using such sources as the account books of turnpike trusts and mines, building accounts and Wedgwood's wage and hiring books. They incorporate both skilled and unskilled labour in their assessment. When wage rates in Staffordshire are compared with those from for example Maidstone, Oxford and Gloucestershire, those of north Staffordshire appear to display a stronger upward trend. The wages of miners and potters in particular show a greater increase than those of general labourers and craftsmen. It would seem reasonable on this basis to expect the wages of Shropshire iron founders, furnace men and coal miners etc, to rise in a similar way in comparison with those of this county's agricultural labourers. Eversley also observes a rise in urban wage rates compared with those of rural areas.[15]

It will be possible perhaps to verify the emergence of such differentials in Shropshire by a survey of the national taxes imposed on the county during the period. This is the technique adopted by Buckatzsch on the national scale.[16] While noting the problems of using tax data as a wealth indicator, (the anachronistic nature of some forms of taxation rendered them inappropriate as assessments of wealth), he identifies periods of more extensive wealth redistribution as being 1503-1641 and 1693-1803. The counties in which increases in wealth occur are, with the exception of Gloucestershire, all the traditional sites of the industrial revolution and thus

Table 2:1 House and Window Tax Assessments for Five Shropshire Hundreds 1720-1780

| Hundred | House and Window Tax Assessments (£) | | | | % Increase | |
|---|---|---|---|---|---|---|
| | 1720 | 1740 | 1760 | 1780 | 1720-1780 | Income Tax (£) |
| BRIMSTREE | 226 | 209 | 363 | 499 | 120 | 6,575 |
| OSWESTRY | 227 | 224 | 368 | 471 | 107 | 4,073 |
| MUNSLOW | 144 | 160 | 256 | 355 | 146 | 3,052 |
| PURSLOW | 96 | 99 | 144 | 169 | 76 | 1,206 |
| STOTTESDON | 314 | 284 | 484 | 880 | 21 | 4,869 |
| WENLOCK | 135 | 140 | 284 | 322 | 138 | 5,088 |
| TOTAL | 1142 | 1116 | 1899 | 2196 | | |
| STANDARD DEVIATION | 73.04 | 60.46 | | 107.83 | | |

Sources: P.R.O. E182/812-823

include Shropshire. That Shropshire emerges in this national survey as an industrializing region with a rising level of wealth would support the argument for local wage differentials within the county related to the industrial labour force.

The House and Window Tax was levied throughout the eighteenth century and it has been possible to complete a survey of this data for six out of the fifteen Shropshire hundreds in the years 1720, 1740, 1760 and 1780.[17] This sample shows an increase in taxation for all areas throughout the period. The Hundred totals are obviously influenced to an extent by the land area they cover. Purslow for example is a smaller Hundred and therefore consistently records lower values (see table 2:1). That there is a degree of regional variation is shown by the standard deviation which increases through the period. The extent to which this variation is a product of the existence of towns, in each Hundred under consideration, is a pertinent question.

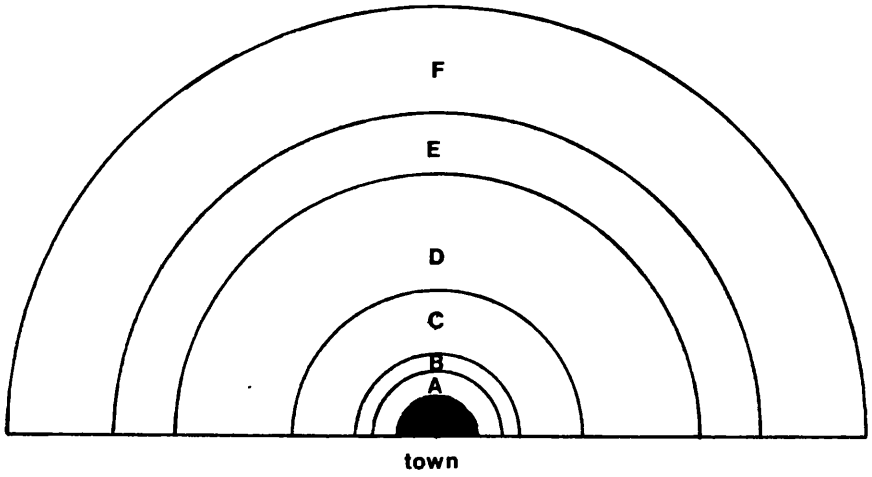
It has been noted that an urban/rural wage differential existed at the national scale; a breakdown of the Hundred tax totals shows that it also in Shropshire. There appear to be substantially more taxable units in urban than in rural areas and these distort the picture given by the Hundred summary. When purely rural areas are considered the regional variation in taxable value is seen to diminish. This sample, by including the Hundred of Wenlock which incorporated the industrializing parishes of Broseley, Madeley and Benthall etc, also indicates that the argument for greater wealth and purchasing power in such areas stands. Broseley and Madeley record consistently higher totals than the rural parishes in this Hundred and than the small town of Much Wenlock its administrative centre. By 1800 and the introduction of Income Tax, their greater wealth puts the total above that of Hundreds containing larger, more traditional towns like Bridgnorth in Stottesdon and Oswestry. The temporal as well as spatial trends in the distribution of taxable wealth are thus illustrated.

To what extent then is Christaller's assumption met? To a limited extent only it appears, and less so as the period progresses.

It could be argued that rural purchasing power was in effect evenly distributed through the county, but that urban and industrializing influences upset the pattern. The industrializing influence is problematical as it constitutes a sector of the economy altogether absent from the central place model. This exclusion has formed the core of arguments against its use in the analysis of urban systems, yet its use is in fact profitable as it emphasizes the distortions which the development of industry in this period produced on the pattern of settlement.

The third and fourth assumptions require equal freedom of movement in all directions over the plain and that transport costs are proportional to distance travelled. The concept of distance decay put forward in Von Thunen's land use model is thus incorporated.[18] He suggested that land values decreased proportionately with increasing distance from the city. Christaller suggests that as distance increases the cost of goods and services offered by the city increases in proportion to the extra cost incurred travelling to and from the place of purchase or by delivery. He therefore postulates that only expensive, specialized and high order goods will retain their markets over long distances.

Christaller's model was designed to explain the settlement patterns he observed in South Germany in a period before the mechanization of transport and as such it is perhaps applicable to the early modern period when transport was limited to journeying on foot or by horse, or horse and cart. This period did however see the advent of canals and river navigations, both of which have proved important in the economic development of Shropshire. The River Severn, which bisects the county, was always navigable as far as Shrewsbury and as far as Welshpool in flood.[19] One might therefore expect towns situated on its banks to be of relatively greater accessibility than those elsewhere. In which case equal freedom of movement in all directions would no longer exist. The directional nature of such river transport was to some extent dissipated by the construction of canals connected to the Severn in the latter half of the eighteenth century. These increased the area accessed by the river though again in a very linear and rather uneven form.



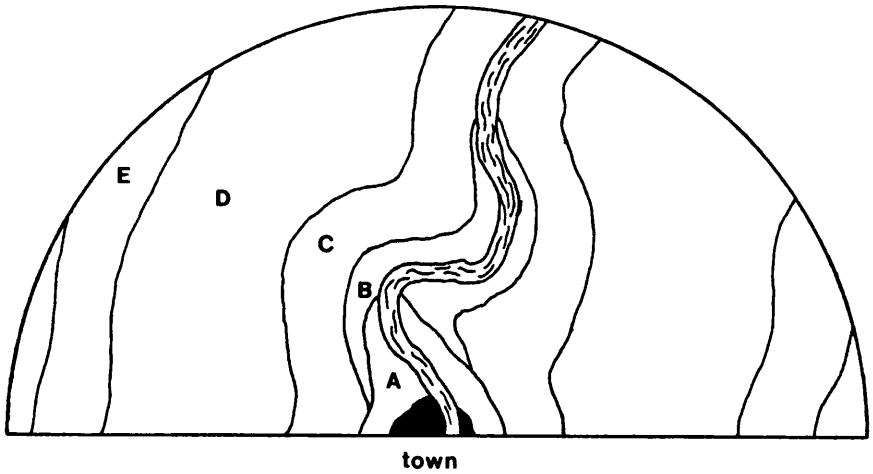




Fig 2:3 Land-use zones in Von Thünen's Isolated State

River valleys provide corridors accommodating overland communications as well and the effects of this in the southern upland region of the county must not be underestimated. The hill and vale topography of this region provoked a directional bias for communications promoting movement through valleys as easier, faster and therefore cheaper than that over the tops. Only in the North Shropshire plain with its predominantly low lying, more homogeneous landscape, would transport costs be approximately proportionate to distance travelled in all directions. One might expect the Severn, which divides these two regions, to distort the purchasing patterns of population in a way similar to that of the river introduced by Von Thunen to his land use model. By introducing a cheaper mode of transport in this form, he redesigns his pattern of land use from the concentric rings of the "norm" to a varient of this incorporating a sinuous pattern following the line of the river (figure 2:3).[20] A similar effect could perhaps be expected on the introduction of a more efficient turnpike road.

The turnpiking of the roads in Shropshire took place within the period of study and was basically complete by its end. Such roads still tended to pass through rather than round villages which must have increased journey times. However, their advantage over other roads was the superior quality of their surfaces, the regulated width and the maintenance of bridges, ditches and such features incorporated in them.[21] This meant that traffic could proceed at a faster pace. The levying of tolls also discouraged their use by herdsmen and drovers so that the incidence of slow moving but mobile obstacles was also reduced. It is known that the turnpikes attracted the erection and establishment of inns and posting houses along their routes and particularly at junctions. In commercial terms, location near them was undoubtedly seen as an asset because of the concentration of traffic along them. The implication must surely be then, that the establishment of turnpike roads in the eighteenth century made some areas more accessible than others and decreased the cost/time to distance ratio for some destinations, but not others.

The final assumption made in Christaller's model is related to purchasing power and requires that goods and services have the same

basic price at any central place. Evidence for this is difficult to come by. There are occasional references to the price of commodities in the writings of contemporary authors. John Mackey in 1724 remarks on the "Cheapness of Boarding" in Ludlow and was obviously impressed by the fact that "Provisions of all sorts are extremely plentiful and cheap". He says much the same of Shrewsbury and indeed attributes the 'good company" he found there to the town's "conveniency and cheapness".[22] Celia Fiennes found much the same on her passage through the county town in 1698. She remarks on the popularity of the market and fair held there and finds it a place of "great plenty which makes it cheap living".[23] Defoe was so impressed by the cheapness of things in Shrewsbury that he cites examples, convinced that there is no better value for money in "all the western part of England ... we paid here, in a publick inn, but a groat a night for hay, and six-pence a peck for oats for our horses, which is cheaper than we found it in the cheapest part of the north of England...".[24] He also attributes the apparent popularity of the town in part to the cheapness of provisions there.

Contemporaries therefore seem of the opinion that compared with other parts of the country Shropshire was generally quite a cheap place to visit. Whether this implies that this was the case throughout the county is more difficult to ascertain. Prices in towns may well have been similar but it seems probable that an urban/rural differential would have existed. Christaller's final assumption therefore remains unsatisfied.

The purpose of the five assumptions involved in the central place theory is the establishment of the isotropic plain on which no location enjoys advantage over another and there is no reason for a settlement to locate in one place in favour of another. These are the constraints Christaller placed on the environment. Also important are the limits set on geographic and economic behaviour. These are such that supply and demand are equated as far as possible, the sum of the distances travelled to any central place will be as small as possible, profits will be maximised and the total number of settlements servicing an area will be as small as possible. The effect of the four behavioural limitations is to produce an

environment in which 'Economic Man' makes completely logical decisions concerning the location of any business and the patronage of such. This ensures that the location and size of any settlement on the plain will be the product of logic and will thus optimise its position.[25]

Once again, however, certain caveats have to be introduced to allow for the sometimes economically irrational behaviour of seventeenth and eighteenth century man in a marketing system which was only gradually adopting the principles of capitalism and discarding the mercantilist preoccupations of the previous era. The pre-industrial mentality, work pattern and perceptions were important influences on economic behaviour throughout the early modern period in England. Town corporations could place limits on the numbers of trade and craftsmen inhabiting their streets, manorial lords could dictate which corn mills the farmers on their lands patronized; individuals were not free to move about the country as they desired, but were subject to settlement laws. In some respects however the Shropshire of this period would conform more closely with the behavioural limitations of the model than that of later ages. During the seventeenth century in particular, except for some strong influences like the Welsh textile trade, the economy of the county approximated more to that of the closed type featured in Chrystaller's model. In most commodities and services supply and demand would tend towards equality. The balance would be upset in times of natural disaster such as harvest failure or flooding etc. The development of exports such as iron manufactures, wool and textiles, cheese and by the importation of luxury goods would also affect it. External influences of this type were on the increase through the period and produce a temporally dynamic element in the application of the theory to this county.

That the sum of the distances travelled must be as small as possible is also a feature likely to characterise the start of the period rather more than its end. Forms of transport were limited in the seventeenth century and the remnants of a medieval network of market centres at approximately 12-mile intervals still survived. It has been calculated that distance one could travel to market in a

day, on foot, or with pack horses, would be 6 miles there and 6 back. The effective market area of a settlement was therefore 6 miles in radius and lead to a close and surprisingly even network of market centres.[26] The gradual improvement of roads boosted by the turnpike acts of the 1700s and the more extensive use of wheeled forms of transport through the period, contributed to a change in behaviour and a willingness to travel further in search of a greater range of facilities. The tendency to minimise distance travelled remained but trends towards consumerism and the opportunity for specialization of services impinged upon it.

It can generally be assumed that profit maximization was the aim of tradesmen in the early modern period, however, there was still a tendency for craftsmen to work only for as long as necessary. Though this trait declined with the progression of the consumer revolution in the eighteenth century, traditional attitudes of this kind were certainly an influence on economic behaviour. Unlike the previous two, this behavioural feature of the model becomes more characteristic of society as the period progresses. The same is true of the requirement for the minimum optimal number of settlements servicing an area.

In the past manorial lords had sought charters for settlements on their land with the aim of making them into profitable towns, many of the Norman new towns were planned in this way. Once established they were reluctant to see their demise. Town corporations also clung to their urban status and took defensive action against the establishment of more competitive urban centres. In the early modern period however, an economic streamlining of the urban network took place and many markets were to decay or disappear leaving a network of a more optimal form. In Shropshire the castle towns which clustered round the border with Wales, a product again of the Norman age, saw the reasons for their existence disappear in times of peace. Where their location proved uneconomic they faced decline and loss of urban status.

It appears then that the conditions under which a settlement pattern of the type identified by Christaller is likely to appear,

are not to be met with in seventeenth and eighteenth century Shropshire. Indeed, there is a progressive move away from the limited extent to which they might have existed in the past. Some would argue that the fact that Christaller's assumptions cannot be met in the real world renders his theory of little use. How can something bearing so little connection with reality be used to explain it? The real value of Christaller's theory is that it illustrates some of the processes at work in the formation of an urban network. The assumptions and behavioural pattern incorporated in the theory are designed to isolate the spatial variable so important in determining the location of towns. The necessary relaxation of his assumptions does not render Christaller's work useless, but introduces influences which can then explain the deviation of reality from the theoretical. In so doing one learns more about the processes behind observed patterns of urban development and in this way central place theory becomes a useful tool of enquiry. As Carter (1972) has said, these types of models though not providing the definitive explanation of settlement patterns contain much of value as they "point in the right direction, for they demonstrate the search for unified principles rather than continue the description of individual towns. They connect what had hitherto been an isolated fact and they lead to further experimental observation by indicating the most pertinent questions to ask".[27]

FOOTNOTES

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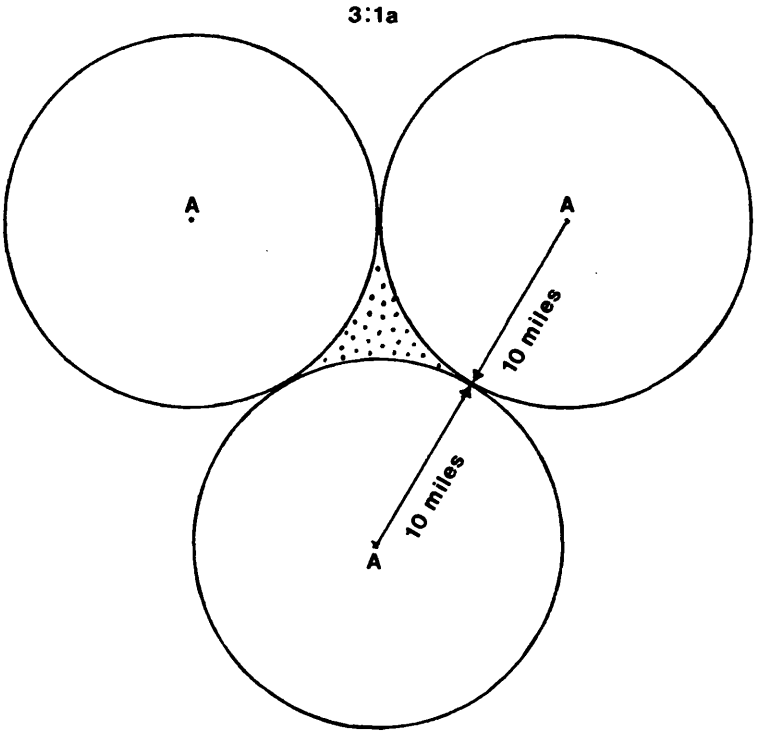
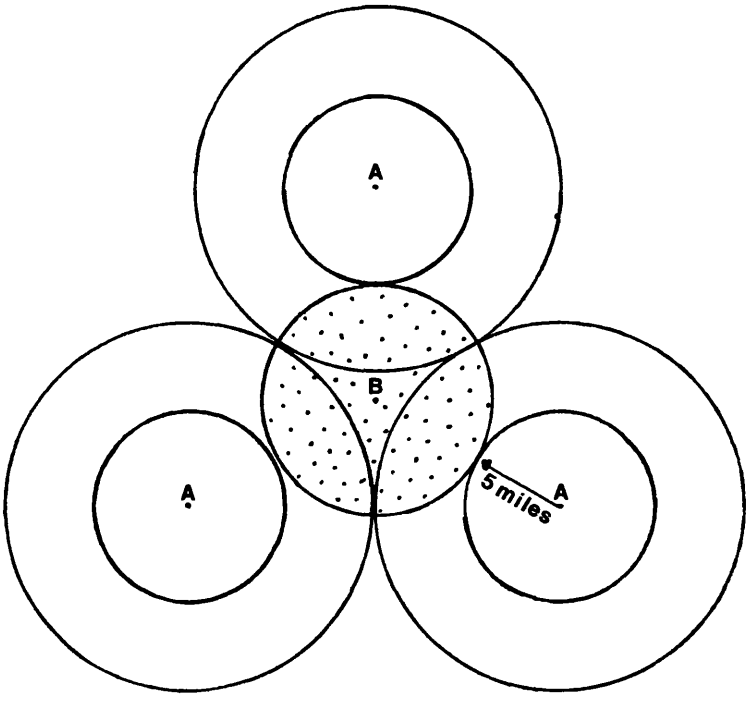
## CHAPTER 3 - Conceptual and Empirical Problems in the Application of Central Place Theory to the Study of Small Towns.

In the previous chapter the theories behind spatial and economic models of settlement were examined. It is now appropriate to look in greater detail at the processes of urban network formation involved in central place theory. These processes are primarily those determining the spacing of settlements and their size relative to one another. If as assumed, prices are the same throughout the isotropic plain, the distance travelled in order to purchase a good will constitute an additional cost thus creating a distance threshold where price rises high enough to result in nil demand. This threshold distance then becomes the "range" of the commodities and services offered and thus defines a sphere of influence or market area for the settlement. This in turn defines the distance at which settlements will be located from one another.

The maximum number of suppliers in a market is determined by the threshold values of the goods and services offered. For example, if a particular good has a threshold of a hundred units of demand per week, a total market of 10,000 units per week means that demand is sufficient to support a maximum number of a hundred suppliers of that good. Different types of goods have different thresholds. Victuallers and ale houses were much in demand by many people, they had low thresholds and could therefore be supported in large numbers; a perukemaker, however, would have a much higher threshold and would be found in fewer settlements, needing a large sphere of influence to find sufficient demand. In this way it is possible to order goods and services by threshold size into a hierarchy. Expensive luxuries which customers would travel further to buy are located at the top, while cheaper groceries and foodstuffs in popular demand every day are at the bottom.

A spatial dimension is easily added to the commodity hierarchy. Commodity rank one, say a periwig, may have a range of ten miles, settlements offering periwigs for sale will therefore be situated twenty miles apart (see fig 3:1). On the diagram the shaded area represents that where consumers may go to any of the towns to




3:1b

Fig 3:1 Circular demand zones and the distribution of settlements

purchase a periwig as all are equidistant. This area therefore constitutes a source of potential and occasional excess profits for the retailer in the centre labelled 'A'. Goods of other ranks will also be offered in these centres though their ranges may be smaller, say of nine, eight or seven miles. The area of excess profits will therefore gradually get bigger as the range of good decreases. The process will continue until the excess profits area equals the threshold of another good (see fig. 3:1). This creates the opportunity for the establishment of a secondary centre offering goods of this threshold value and below. Again this process continues down the hierarchy of goods to produce a hierarchy of settlements offering a decreasing range of goods.[1]

In central place theory the circular market areas which are the logical result of the assumptions and economic principles incorporated in the model, are replaced by hexagonal market areas conforming with the need for equal supply and demand. Circles do not tessellate neatly but leave areas of demand unprovided for. The choice of hexagonal market areas is a function of their geometric efficiency in covering space and represents the best compromise between the economic idea and geographical reality. This was the pattern of settlements and market areas devised by Christaller for southern Germany in 1933 (fig. 3:2a) the salient points to emerge from which were, firstly the existence of a functional hierarchy of service centres, and secondly the uniform spacing of settlements.[2]

Since Christaller's pioneering work on the theory a number of case studies assessing its applicability have been made. That by Berry [3] of the central places in south-west Iowa succeeded in identifying a five tier urban hierarchy of regional capitals, cities, towns, villages and hamlets. It was also seen that customer patronage followed the model to some degree. Residents visited all orders of central place for low threshold goods and groceries, but travelled further to higher order settlements for clothing, lawyers and physicians. Similar patterns are apparent in the studies of the Indian Punjab by Mayfield, of New Zealand by King and of Washington State by Berry and Garrison, despite the cultural and geographical contrasts of these regions.[4] In these examples the

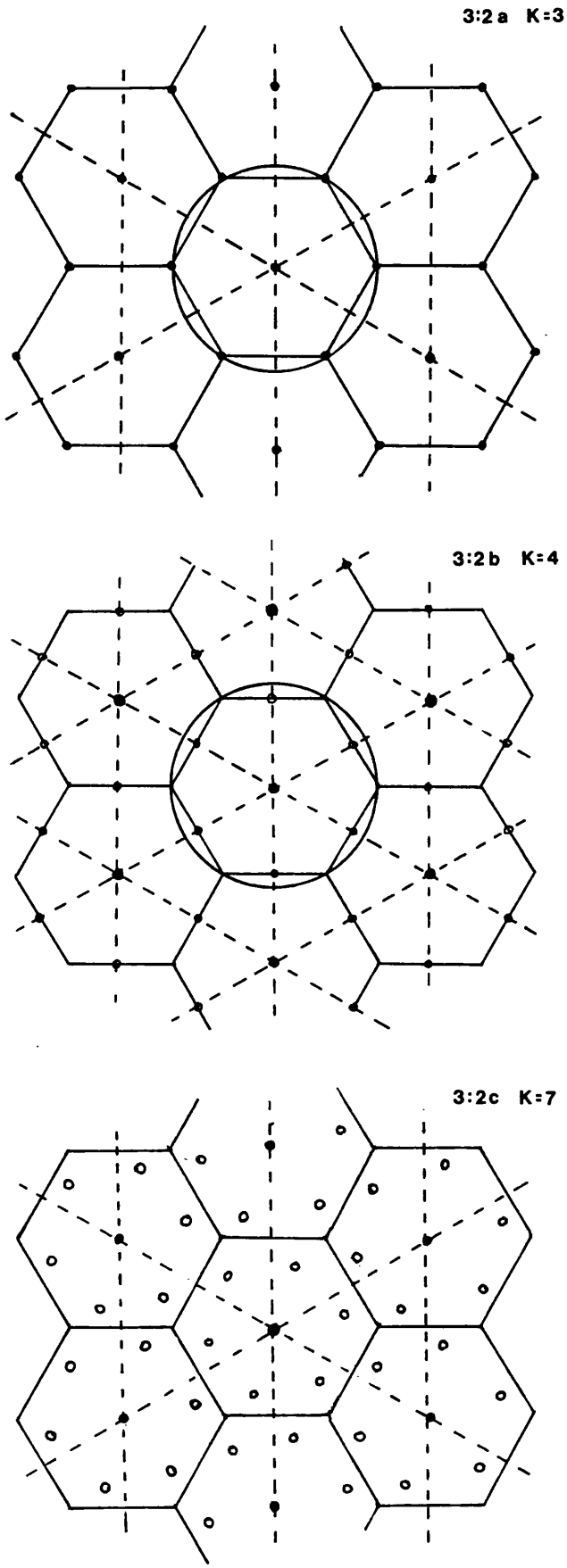



Fig 3:2a, b and c Market, traffic and administration optimizing central place networks

theoretical assumptions about behaviour were relaxed to allow for:

i) personal shopping traditions
ii) towns with reputations for certain services
iii) a preference for smaller centres in the face of congestion and inconvenience occurring in larger centres
iv) personal preference
v) perception of distances to towns.

There were of course numerous other behavioural idiosyncrasies in operation which affect the establishment of a central place hierarchy, but there was enough consensus of opinion among consumers to promote a high level or order. In reality classical theory may not be followed to the letter but it appears that its principles at least are in operation.

Christaller recognised that modifications to the pattern he identified might be necessary to incorporate the effects of other than market functions. Figure 3:2a shows the K=3 network which maximises the role of settlements as market centres. Figures 3:2b and 3:2c illustrate the introduction of a transport and administrative function resulting in K=4 and K=7 patterns respectively.[5] In the former links between orders of settlements through the system are optimized, while in the latter the hexagonal spheres of influence circumscribe rather than divide centres. Berry and Morton (1980) suggest that the different K methods may be typical of particular situations.[6] They find that the market pattern is common in agricultural areas while the greater influence of transport networks may be the result of increasing rational integration and importance similar to the effects for instance, of the introduction of turnpike roads in the eighteenth century. An administrative pattern is often the result of historical circumstance and tradition. One might expect to find such a network among the castle towns of the Welsh Marches. The effect of this can be seen perhaps most clearly in Shropshire, in the development of Ludlow as an administrative centre for the Marches.

It has been suggested by Marshall [7] that the use of models in the analysis of urban networks is too static; equilibrium is

brought about by the balance of various factors, but there is little room for these to change, or for functional dynamism.[8] However, the points made by Berry and Garrison (1958) referred to earlier constitute the introduction of a time element most effectively.[9] The theory is capable of application not only in contemporary circumstances but in those of the past. The assumptions it makes have to be relaxed in one way or another whatever the period. It is rather a problem of data sources which renders its application to the past more problematical.

One of the more contentious aspects to emerge from the application of the central place model has been the recognition of a town's status in the hierarchy by its characteristic set of functions or 'trait complex'. Early attempts to identify hierarchies were based on the preconception that they would exist. Their aim was to find a basis for the categorization of settlements into appropriate ranks rather than testing for the existence of a hierarchy. The work of Smailes on the urban hierarchy of England and Wales (1944) illustrates the problems involved in the adoption of this type of approach.[10] He claimed to be aware in Britain of what he called 'the fully fledged town' for which he identified a trait complex involving the presence of banks, grammar schools, hospitals, cinemas, Woolworth shops and certain newspapers.[11] The grounds on which these criteria were selected were not made explicit and the validity of the categories so constructed has to be entrusted to the insight and experience of the classifier. Smailes claimed that "any grading must in some measure be arbitrary ... yet indefiniteness of boundaries does not warrant denial of the reality of stratification"[12].

However, when urban ranks are defined in this arbitrary way it renders them of local interest only. They cannot be applied to other areas and comparability between studies becomes problematic. It also leads to ambiguity over what is actually being measured. It is therefore important to specify firstly the unit of study used; whether it is the town, parish or commercial core etc., and secondly the level of generalization. There are a number of ways in which central functions can be registered. For example one could assess retail outlets either by type or by number. This distinction is

important in the historical context where shops often sold more than one type of good. A grocer/tobacconist could be considered as one unit with two functions and therefore be counted once or twice depending on the scheme employed. By including all the facilities offered rather than making an arbitrary selection of diagnostic facilities, one begins to avoid the problems encountered by Smailes. Data sets of this type, however, can easily reach unmanageable proportions. Conveniently this is less likely to occur in the historical context because data survival determines the size and representative quality of the sample. The arbitrary decisions are therefore taken out of the hands of the classifier and become part of the dialectic of historical research.

Problems of equivalence are also encountered in the measurement of centrality. Unless a weighting technique is used a small bakers will count as one unit just as a larger and prosperous mercers will. The compaction of shops into groups according to the commodities offered may offset this, for example in the case of convenience goods and shopping goods etc. This however involves the introduction of another set of arbitrary decisions as to which goods go into which category. It is possible to use statistical criteria for their classification by assessing the internal uniformity of groups through standard deviations and variation coefficients. The extent to which functions belong to the same indicator group is thus made by measures of common occurrence and becomes an exercise in objectivity rather than subjectivity. Berry and Garrison (1958) developed more and more complex techniques of this type involving the use of high speed computers for their study of Snohomish County, Washington.[13] In the historical context however the use of such sophisticated techniques may be difficult to justify considering the usually crude and variable form of data input. Carter (1972) suggests that there is much to be said for the simpler measure of the location coefficient used by Davies in south Wales.[14] A location coefficient is worked out for each function using the formula given below:

$$C = t/T \times 100$$

where C = location coefficient of function t
t = one outlet of function t
T = total number of outlets of t in the system

If the location coefficient C is then multiplied by the number of outlets of a function present in a particular settlement a centrality value for that function is reached. The addition of all the centrality values of all the functions in the settlement gives the functional index for that settlement. For example, if there are 200 grocers in the system the location coefficient for a grocer's store is:

$$C = 1/200 \times 100 = 0.5$$

If settlement A has 23 grocers the centrality value for A is:

$$0.5 \times 23 = 11.5$$

This technique has been employed on the occupational data for the small towns of Shropshire. A simple check on the distribution of settlements in the county was first made using nearest neighbour analysis to see the extent to which one might expect a regular distribution of the kind explained by central place theory. Nearest neighbours were measured first in miles as the crow flies and then in road miles taking turnpike roads as shown on the 1808 map by Baugh.[15] These figures were then substituted in the formula given below to give one figure describing the distribution of small towns.

$Rn = 2D\sqrt{(N/A)}$ where; Rn = description of distribution
D = mean distance between nearest neighbours
A = area under study
N = number of points in study area

Miles as the crows files

$$Rn = 2 \times 6.82\sqrt{(18/1345)} = 1.57$$

Road miles

$$Rn = 2 \times 7.49\sqrt{(18/1345)} = 1.73$$

Values of Rn range from 0 to 2.15, a value of 0 indicates clustering of settlements at one location, a random distribution gives an Rn value of 1.0 and a regular distribution equals 2.15. Seventeen small

towns and Shrewsbury were included, the latter being regarded as central to the urban network of the county and liable to distort the pattern if excluded. The first calculation gives a value of 1.57 this is 0.01 nearer to a random distribution than a regular one, but still indicates a well dispersed settlement pattern. The second calculation using road miles (1:73) begins to take account of the distortions which physical features can introduce to the measurement of distance.

On the isotropic plain central places have regular hexagonal market areas because, while distance is measured in the relative terms of time and cost rather than absolute miles, the two are in fact rendered equal by the absence of any restriction to, or obstruction of travel. In the real world physical barriers to movement such as hills and unbridged rivers both increase the actual distance one may have to travel to a central place, and thus raise the cost of travel. The measurement of distance between settlements as the crow flies is not therefore an accurate indicator of the time and cost involved. For example by 1808 the Wem to Whitchurch road had been turnpiked and provided an efficient link between the two over a distance of 8.25 miles. As the crow flies however, Wem is nearer to Ellesmere, 8 miles away, but the absence of a good road between the two means that Whitchurch is in fact the nearest neighbour. For this reason the second Rn value of 1.73 may be regarded as the more accurate measure of settlement distribution. It is therefore most encouraging that this is the higher figure indicating a greater degree of order than the first. It is suggested then, that central places theory may indeed go some way to explaining the patterns of settlements in Shropshire.

FOOTNOTES

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   All quoted in CLARK, D. Urban Geography p.107 (London 1982).

5. CARTER, op.cit. p.78 (1972). HAGGET, P. Geography a Modern Synthesis p.363 (London 1979).

6. BERRY, B.J.L. and HORTON, F. E. Geographic Perspectives on Urban Systems p.89 (U.S.A. 1970).

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9. SMAILES, A. E. "The Urban Hierarchy of England and Wales", Geography, Vol.29 (1944).

10. SMAILES, ibid, p.41.

11. ibid.

12. BERRY, B.J.L. and GARRISON, W. L. op.cit, passim.

13. CARTER, op.cit, p.97.

14. TRINDER, B. (ed) Robert Baugh's Map of Shropshire 1808 (Shrewsbury 1983).

## CHAPTER 4 - Centrality Values and Functional Indices as Explanatory Variables in the Analysis of the Changing Role of Small Towns.

The previous chapters discussed the theoretical and practical problems of using central place theory. They concluded that its application in the historical context was of considerable value. The nearest neighbour statistic suggests that the settlement pattern in Shropshire bears some resemblance to that of the central place model. This will now be applied to the county at two dates, 1797 and 1828, in order to analyse the development of the system over time. In accordance with this two sets of centrality values were calculated for the towns of Shropshire using data taken from directories.[1] The calculation of location coefficients for urban functions and services requires that one knows the number of outlets of a given function, service or good in the whole system as well as in the settlement under scrutiny. The census can supply this type of information in the nineteenth century but for any period prior to this data in such a comprehensive form is scarce. Small towns in particular left incomplete and inconsistent records. Many of the more extensive militia lists and guild records which give occupational information survive for the larger incorporated towns like Norwich and Coventry, but do not survive for small towns. In Shropshire a collection of Freemen rolls, some poll taxes, probate inventories, parish registers and poor law documents exist for the small towns, but only in a piecemeal fashion.[2]

It has to be remembered that these documents often only list occupation incidentally. The accuracy of such records depends firstly on the response of the individuals being listed and secondly on the official making the list. It was common in the early modern period for people to have more than one occupation; whether both are listed and on what basis that chosen was listed will affect the quality of the data base. Retired men often retain occupational labels in these sources, titles of status such as gentleman or esquire may be used for reasons of pride and hide the existence of a wealthy mercer, shopkeeper or industrialist. Women are vigorously discriminated against; not only are they much less likely to appear in such documents than men, but when they do they are given status

titles such as widow or spinster.

Only with the publication of the first directories for Shropshire do we have a historical source, the express purpose of which was to give occupational information for all settlements in the county of any significant size.[3] Even directories however, have their pitfalls. They are essentially commercial publications and do not therefore give a complete occupational census, for example, a workshop and its owner will be recorded, but not the workforce. Methods of compilation were not always very thorough or particularly well organized. The information they contain was collected in a variety of ways, an agent could be sent out to actually ask householders what occupation they pursued, questionnaires could be delivered to be returned on completion, or the publishers could advertise for entries. No method was completely reliable, all were time consuming and the temptation to plagiarize already published works was high. It is possible then that a directory may not contain all the data it should; some areas may have been difficult to get to and therefore neglected; some may be covered by an inefficient agent; the response of some people to their inclusion in a directory may have been more forthcoming than others; the information may be out of date because of the time taken for compilation, and so on.[4]

The earliest directory available for the Shropshire towns is that published by Barfoot and Wilkes 1779-1797 called the Universal British Directory. An agent was apparently appointed to collect information for each town in the county. However it seems possible that only one agent was appointed for the Severn Gorge towns of Broseley, Madeley and Wellington as the coverage of these is universally poor, indeed the latter is described but a list of occupations is absent.[5] It has also been observed that the authors were accused of plagiarising a Hull and a Birmingham directory, so one must not exclude the possibility of this also being the case for some Shropshire towns.[6] The second directory used in this section is that published by Tibnam in Shrewsbury in 1828 which was a local rather than national venture.[7] This may mean that it is more accurate than the former. Wellington is included in this publication but once again the coverage for Broseley and Madeley seems

suspiciously slight. In the absence of any alternative sources however, the two above named have been used. The information they give is not regarded as flawless, but is put forward as a starting point, satisfactory for the exercise in urban modelling below, but to be supplemented in subsequent chapters which attempt economic analysis of further penetration.

The occupations of all people listed in the directories were recorded and location coefficients and centrality values were calculated. The latter were then summed for each town and a functional index achieved for both data sets. Neither directories included Clun in its list of market towns, indeed no other available directory had information on this town, possibly because it was regarded as too small and insignificant. The earlier directory, the Universal British Directory did not contain data for Wellington, the possible reason having already been discussed. This town does feature however in Tibnam's Directory for the later date of 1828, so in this sample there are 17 towns, one more than the earlier sample. Where correlations have been made between the two, Wellington has been dropped from the second set for reasons of comparability. It should also be noted that Shrewsbury has been included. This is not of course a small town, but it is an integral part of the county's urban network and its exclusion could have distorted the calculation of location coefficients. It was further decided to involve all the occupations listed in the derivation of functional indexes so that the data set was subject to as few arbitrary decisions as possible. Which functions are included and excluded is therefore a product of the source and should be criticised in these terms rather than for subjectivity of the type seen in Smailes' work.[8]

The results are given in hierarchical form in table 4:1 and the changes in rank over time shown by arrows. A Spearman's rank correlation coefficient was used to measure the degree of change in a statistical form and resulted in a positive correlation of 0.63 (the range of possible values being -1 to +1). This indicates that the hierarchy of towns remained relatively stable between 1779 and 1828 though a few towns in particular saw quite large changes in rank. When the results were plotted on a graph with rank as one axis and

Table 4:1 Functional indices: a measure of the urban hierarchy in Shropshire in 1797 and 1828

| Rank | Town | Functional Index 1797 | Town | Functional Index 1828 |
|---|---|---|---|---|
| 1 | Shrewsbury | 3606 | Shrewsbury | 6905 |
| 2 | Market Drayton | 2164 | Ludlow | 1663 |
| 3 | Bridgnorth | 2149 | Bridgnorth | 1336 |
| 4 | Ludlow | 2000 | Wellington | 1238 |
| 5 | Oswestry | 1677 | Whitchurch | 1097 |
| 6 | Whitchurch | 1580 | Madeley | 1008 |
| 7 | Ellesmere | 973 | Newport | 977 |
| 8 | Newport | 932 | Oswestry | 852 |
| 9 | Much Wenlock | 778 | Ellesmere | 640 |
| 10 | Cleobury Mortimer | 455 | Bishop's Castle | 623 |
| 11 | Wem | 446 | Wem | 570 |
| 12 | Shifnal | 431 | Market Drayton | 513 |
| 13 | Bishop's Castle | 392 | Cleobury Mortimer | 503 |
| 14 | Madeley | 287 | Shifnal | 417 |
| 15 | Church Stretton | 80 | Broseley | 332 |
| 16 | Broseley | 52 | Church Stretton | 180 |
| 17 | | | Much Wenlock | 147 |

the functional index along the other (see fig 4:1) the results from the Universal British Directory showed a clear hierarchy of towns. Shrewsbury, as expected, is at the top as the county town and regional capital; next a group of five central market towns comprising Bridgnorth, Ludlow, Market Drayton, Oswestry and Whitchurch; the third group of three lesser market centres included Ellesmere, Newport and Much Wenlock while the final and fourth group of seven minor market towns are Bishop's Castle, Broseley, Church Stretton, Cleobury Mortimer, Madeley, Shifnal and Wem. This pattern conforms with that suggested by central place theory in being stepped and having one town at the top and many smaller ones at the base. However, the pyramidical pattern is somewhat distorted in the intervening groups, there being more central market towns (2nd order) than lesser market centres (3rd order).

As a further exercise it was decided to remove occupations unique to towns from the calculation. It is suggested that these represent specialization and are therefore indicators of functional differentiation rather than centrality. Theoretically one could make a case for assessing each occupation listed in the directory on this basis, that is whether one considers it a central function or a specialist one. However, occupational titles in the early modern period seldom give any indication of the scale or range of business pursued by individuals. Dual occupations were common, and in many cases overlapped from one occupation to another. For example, mercers, haberdashers and drapers would all have a number of common goods for sale. The detailed differentation of occupations has not therefore been pursued on the grounds that categorization as a central or specialist function would introduce a degree of unjustified subjectivity. By dispensing with unique functions this exercise introduces a simple arbitrary measure as a further test of the applicability of the central place pattern to the urban network in Shropshire.

When the new set of functional indices were plotted on the graph (figure 4:2) it was seen that the distribution of towns through the four groups was closer to that suggested by central place theory. Shrewsbury remained at the top of the hierarchy as county town, but

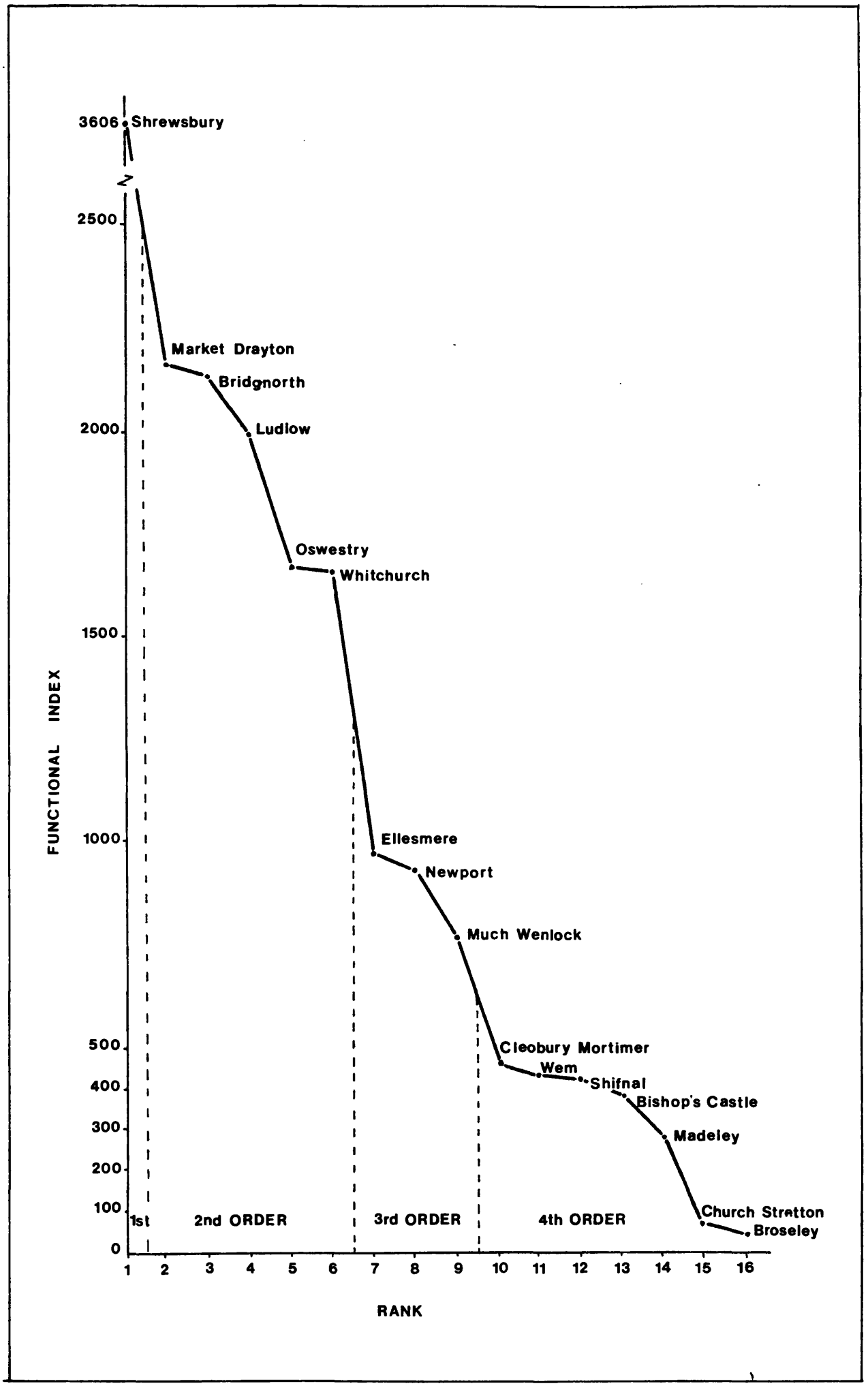



Fig 4:1 Functional index and urban rank in 1797

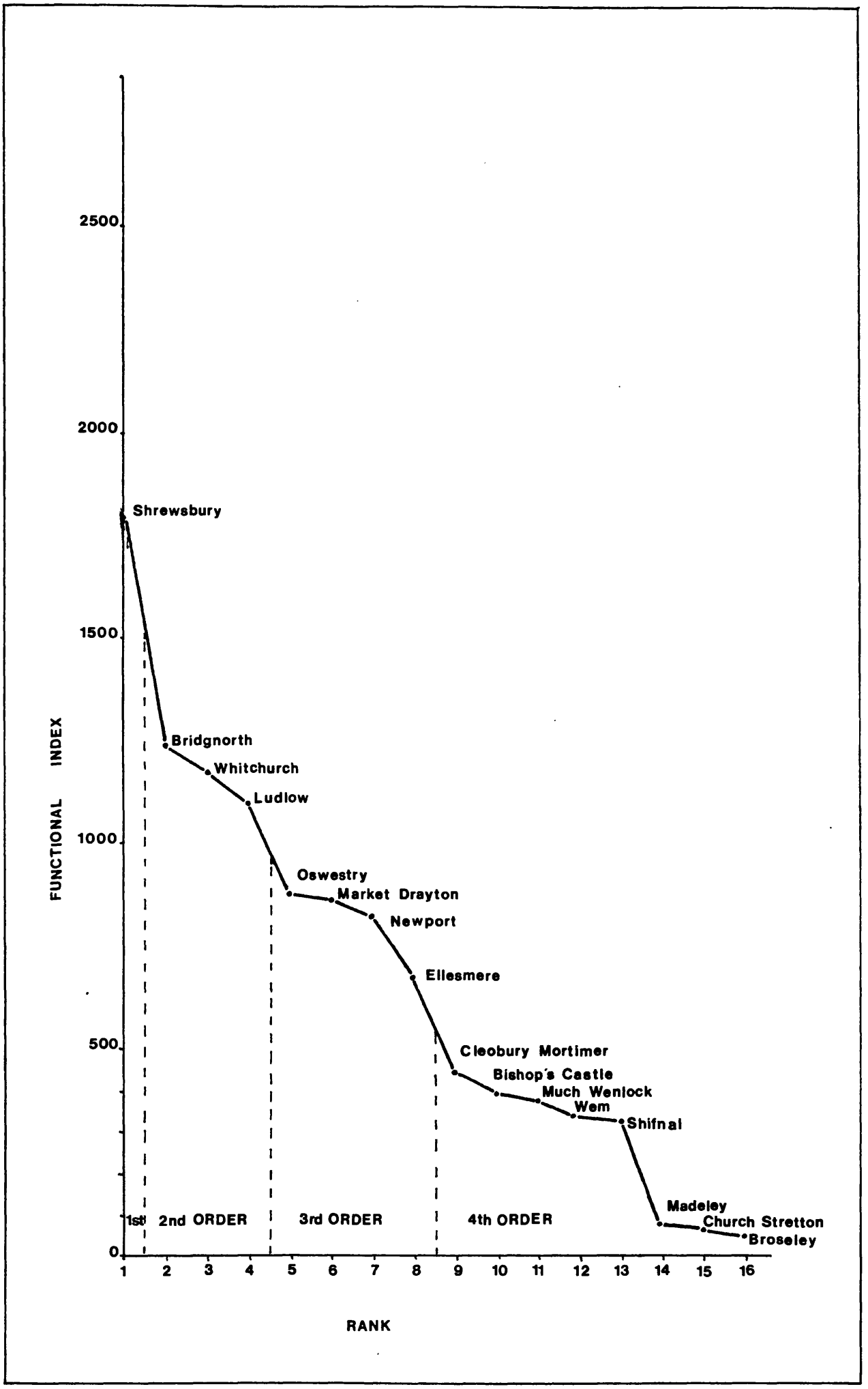



Fig 4:2 The urban hierarchy in 1797: central functions

Market Drayton and Oswestry moved down from the second to the third order, that of the lesser market centres. This left only three central market towns and increased the number of lesser market towns to four (Much Wenlock also fell a rank to become a minor market town) leaving eight towns in the bottom rank of the hierarchy. The existence of a stepped hierarchy of similar dimensions to that of Christaller's model suggests that the processes described in the model could well be operating on the urban network of Shropshire.

Was this still the case in 1828 though? When the functional indices for this date were displayed in graph form like those of the Universal British Directory, the nature of the hierarchy was seen to change (see figure 4:3). Shrewsbury shows a much greater degree of primacy than previously, but the rest of the towns are arranged along a more continuous hierarchy. The identification of steps and the categorization of towns into the four orders used for the 1797 data is much more problematic. Four possible breaks have been identified on the graph. These are listed below:-

| | |
|---|---|
| Regional capital: | Shrewsbury |
| Central market town: | Ludlow |
| Lesser market towns (6): | Bridgnorth, Wellington, Whitchurch,Madeley, Newport, Oswestry |
| Minor market towns (9): | Ellesmere, Bishop's Castle, Wellington, Market Drayton, Cleobury Mortimer, Shifnal, Broseley, Church Stretton, Much Wenlock |

The same exercise of removing unique occupation from the functional index scores was carried out (see figure 4:4) but no clear stages in the hierarchy emerged. It is suggested then, that the urban system had achieved a higher degree of integration by 1828 than it had at the end of the eighteenth century. The differences between towns were less extreme with the exception of Shrewsbury which acquired a greater proportion of functions. Also noticeable is the fact that the second and third order towns have a lower functional index in 1828 than in 1797. Towns of ranks 2, 3, 4 and 5 & 6 see a substantial decrease in functional index, an indication that some of of their functions are perhaps being taken over by Shrewsbury. The opposite is true of the towns at the bottom of the hierarchy which

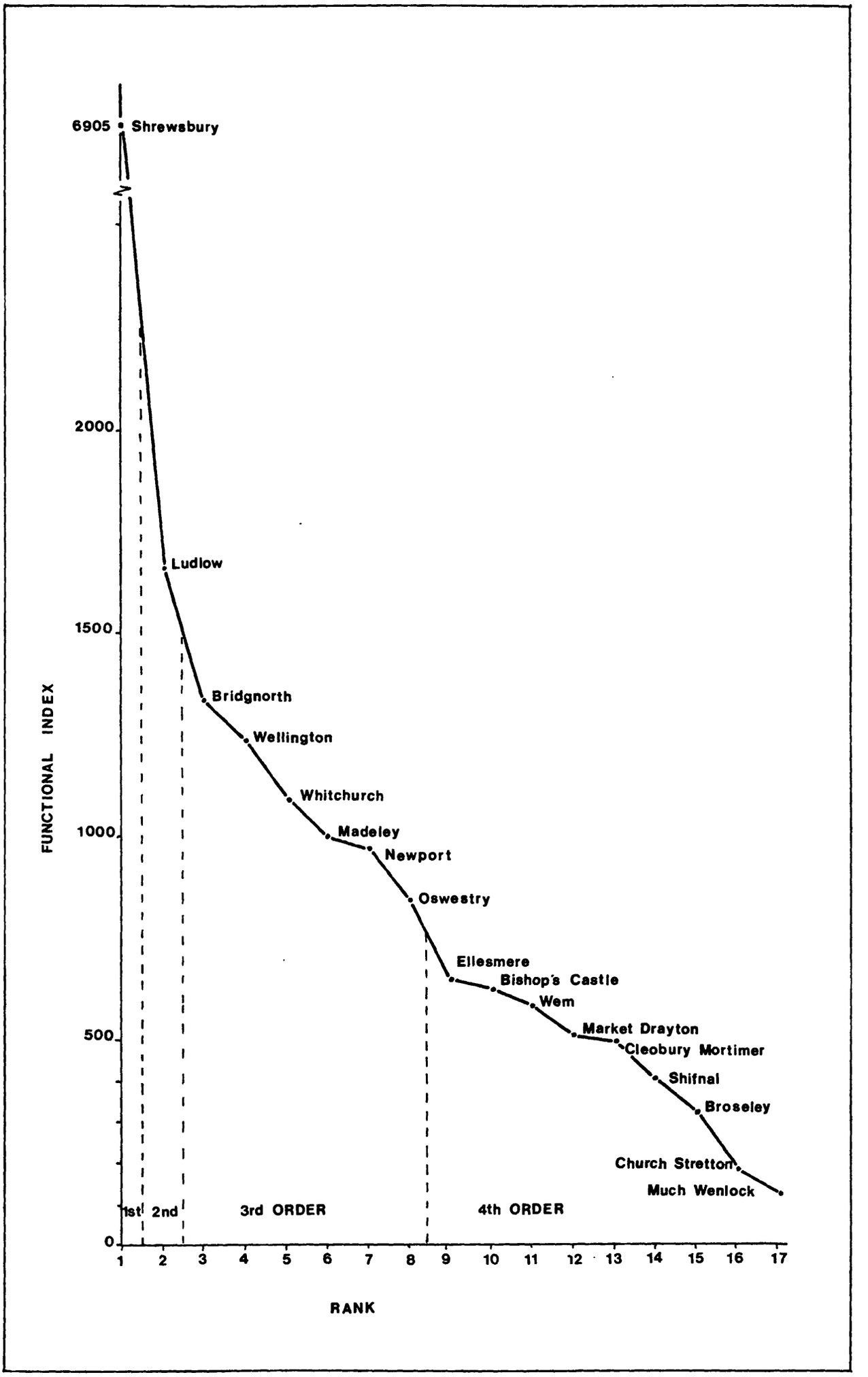
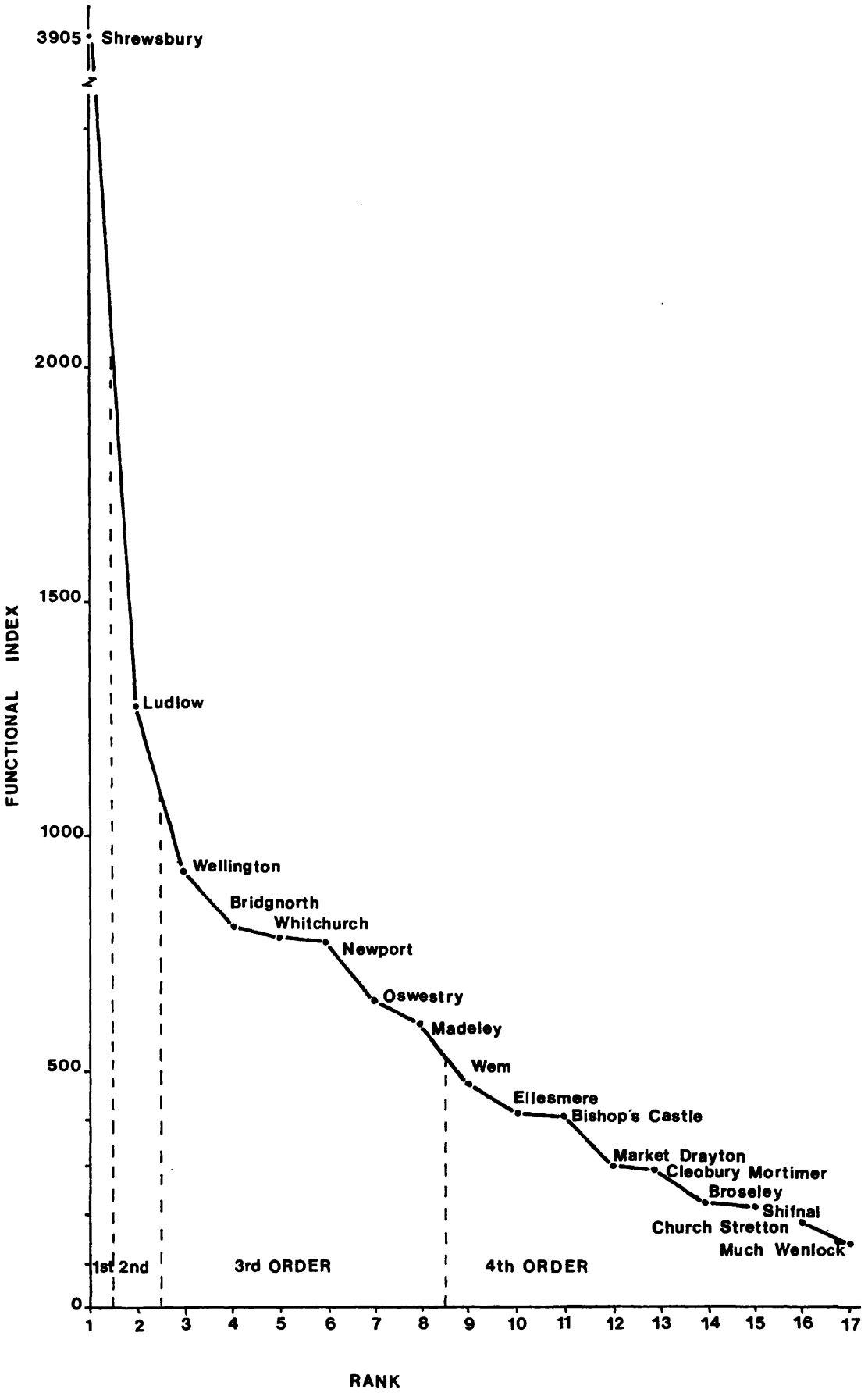



Fig 4:3 Functional index and urban rank in 1828

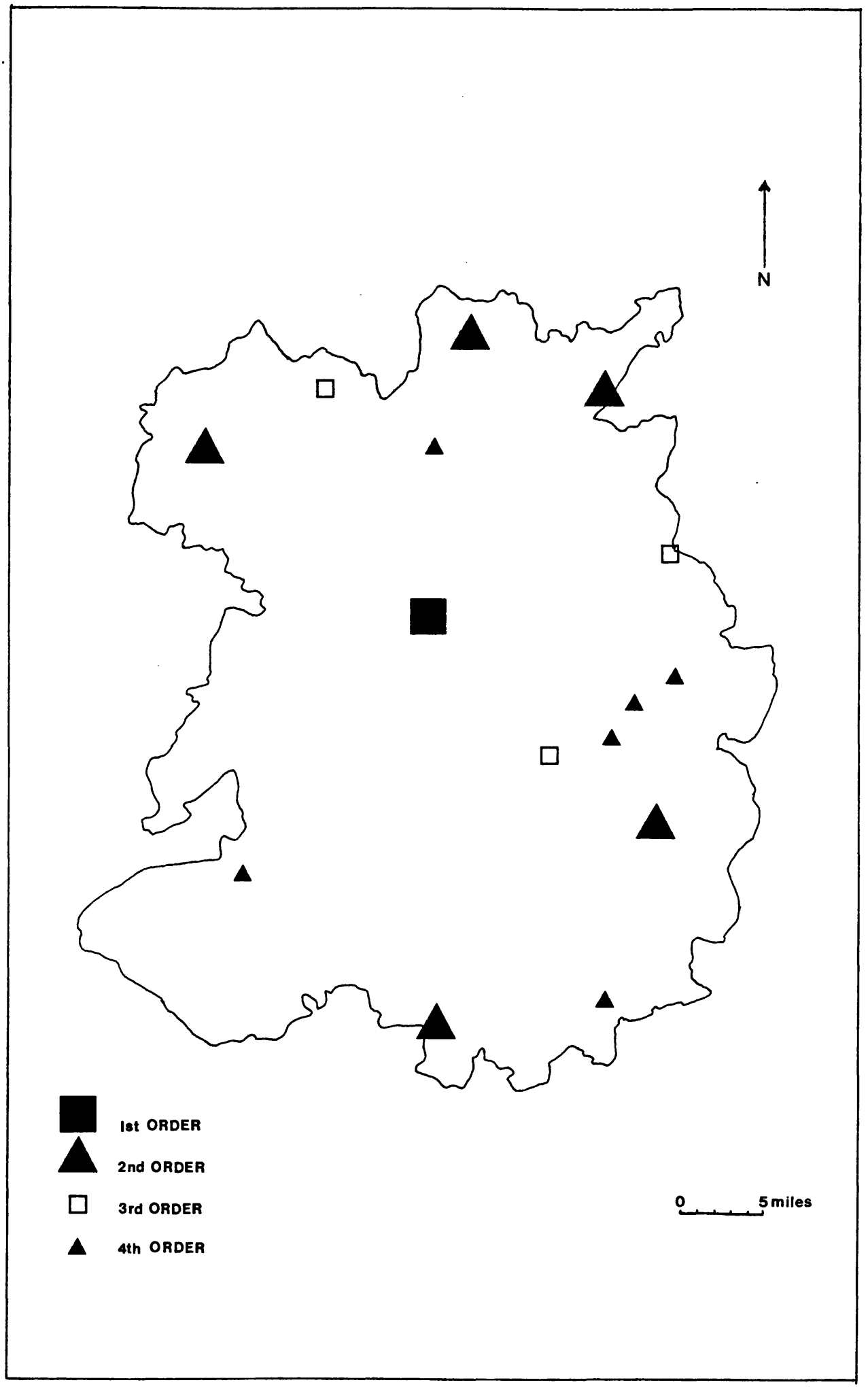



Fi; 4:4 The urban hierarchy in 1828: central functions

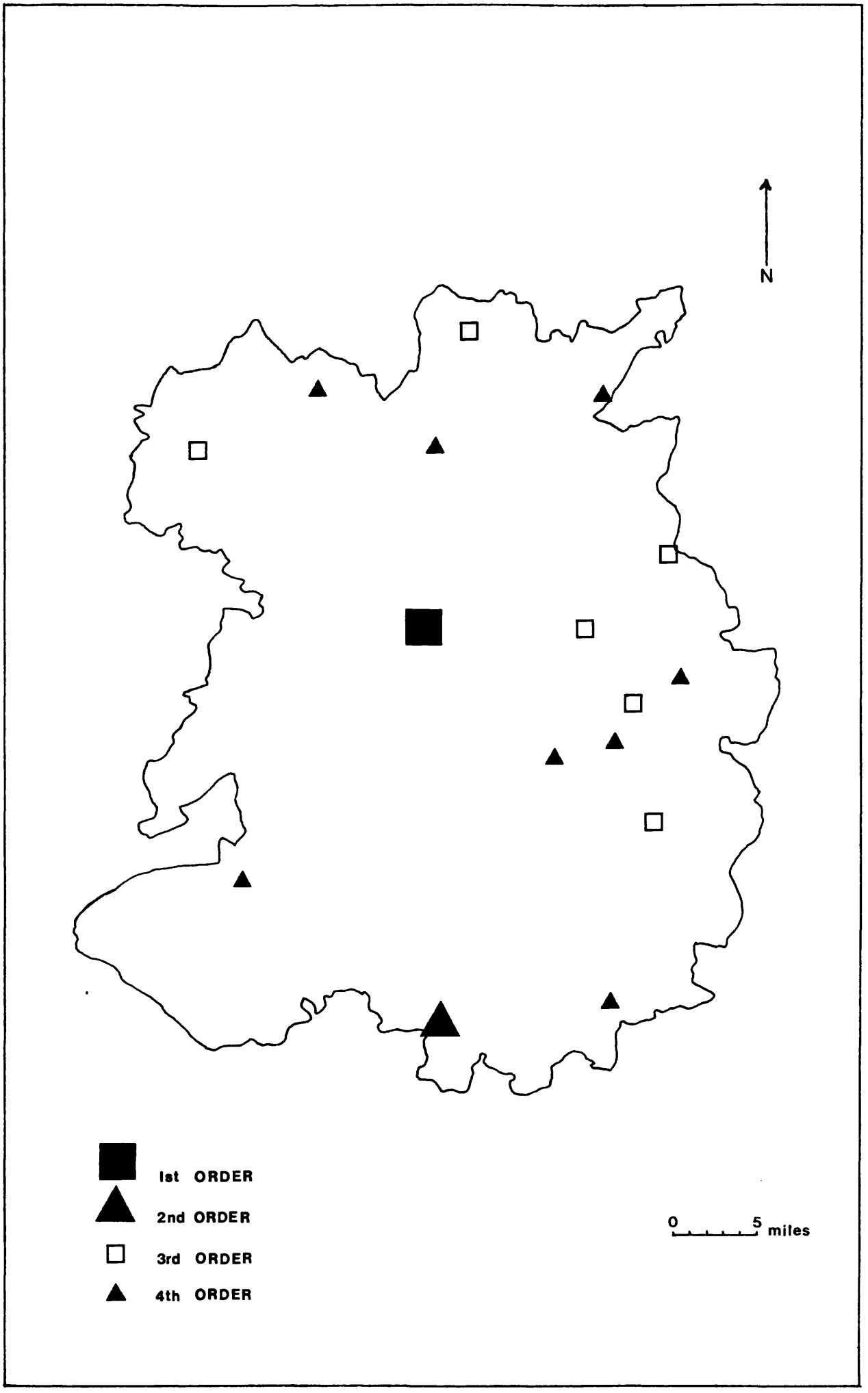
for the most part gain in functional capacity. It is these two trends which transform the stepped hierarchy of 1797 to the more continuous one of 1828.

A further measure of the reliability of the urban pattern identified so far is its correlation with population statistics. A Spearman's rank correlation coefficient can be used to compare the rankings of the towns in terms of functional index and population at 1811. A further correlation of this type was made using the Universal British Directory data and figures taken from the House and Window Tax of 1781 used as a proxy for wealth (see table 4:2). A positive correlation of 0.48 with the former and 0.74 with the latter showed that while both may be used as indicators of urban status, the relationship between functional index and wealth or prosperity is closer. As the functional index increased so did the taxable value of the town. One can therefore suggest that the more important a town is in functional terms, within the network, the wealthier it will be. Comparisons of this type have to be qualified however, and on closer examination it may be found that larger, more important centres also attract the poor in greater numbers.

By mapping the ranks of towns one introduces a second dimension, that of space, to the investigation of the urban network. Map 4:1 shows the distribution of central places derived from the Universal British Directory. Shrewsbury as the highest-ranking town is located at the centre of the county in accordance with the pattern suggested by Christaller's model. The second order, or central market towns, are dispersed around the county town and tend towards the borders of neighbouring counties. The spheres of influence of these towns are obviously not constrained by the political boundaries of Shropshire but freely extend beyond them. The construction of concentric market areas around the second order towns will clearly leave some areas of the county unserved. Even the inclusion of such centres outside the study area: Welshpool, Wrexham, Newtown, Eccleshall, Kidderminster and Knighton - does not solve this problem. For various reasons the market areas of these towns have been distorted from the hexagonal ideal to describe alternative shapes. By 1828 the pattern distortion is even more apparent, Ludlow being the




Map 4:1 Functional index and the rank of towns in Shropshire 1797




Map 4:2 Functional index and the rank of towns in Shropshire 1828

Table 4.2: A comparison of the urban hierarchy of Shropshire in terms of functional index, population and wealth circa 1800

| Towns | RANK ORDER OF TOWNS | | |
|---|---|---|---|
| | Functional Index | Population | Wealth (House & Window Tax) |
| | 1797 | 1811 | 1781 |
| Shrewsbury | 1 | 1 | 1 |
| Market Drayton | 2 | 9 | 8 |
| Bridgnorth | 3 | 7 | 3 |
| Ludlow | 4 | 8 | 2 |
| Oswestry | 5 | 2 | 4 |
| Whitchurch | 6 | 5 | 5 |
| Ellesmere | 7 | 3 | 7 |
| Newport | 8 | 11 | 6 |
| Much Wenlock | 9 | 12 | 15 |
| Wem | 10 | 10 | 16 |
| Cleobury Mortimer | 11 | 16 | 12 |
| Shifnal | 12 | 13 | 10 |
| Bishop's Castle | 13 | 14 | 13 |
| Madeley | 14 | 4 | 9 |
| Church Stretton | 15 | 15 | 14 |
| Broseley | 16 | 6 | 11 |

only central market town to be identified (see map 4:2).

To define the market areas of small towns of all orders with greater accuracy, it becomes necessary to consider the flows of people and goods between them. The work of August Losch, a German colleague of Christaller's, has helped to clarify the ways in which patterns of spatial demand are derived.[9] Losch identified the same concepts of threshold and range of good hexagonal market areas on the isotropic plain, but in addition realized that the population necessary to support a commodity or service would vary depending upon the type of commodity. He concluded that if each good has a different threshold and range, and can be offered at a variety of centres, there is no reason why a chaos of different demand meshes should not develop rather than ordered market areas. By centering all meshes which can be equated with the Christaller's different 'K' networks on one point which then becomes the highest ranked centre, in our case Shrewsbury, some degree of order could be introduced. By further rotating the meshes round this point an even greater degree of order was produced and resulted in the emergence of city rich, city poor sectors. Under these conditions however, Losch showed that a strict hierarchy of towns; that is one with an equal and regular addition of places at each level, would not occur. Steps in the urban hierarchy are therefore difficult to identify and where found they may be seen to contain their own range of centres, perhaps even a hierarchy of their own illustrating a particular section of the continuum. In Shropshire the category of 'small towns' exemplifies this point, an internal hierarchy having been clearly shown.

Losch's work was couched in predominantly economic terms; the introduction of social and political functions to the central place further emphasises the effects he identified. These types of function do not of course rely on economic location factors, their spheres of influence could consequently be quite different to those of commercial goods and services. From this we conclude that in fact, no town has only one sphere of influence. It seems instead that certain functions become associated in distinctive complexes and that these complexes may be associated with ranks in a hierarchy.[10] Towns of the same rank may have similar sized complementary regions

and will incorporate the spheres of influence of the ranks below. However, the search for the single complementary region has to be recognized as fruitless and a greater degree of fluidity incorporated in the model. This is especially the case when one considers the increasing mobility of a population through time.

Spheres of influence or market areas depend upon the assumption that people travel to the nearest place at which the service or good they require is offered. As mobility increases the adoption of this course of action is no longer automatic. The result is a reorganization of urban centres into patterns less and less like those identified by Christaller. The effects of this are illustrated in the changes occurring in the urban network of Shropshire in the 1797-1828 period of the directory based investigation.

FOOTNOTES

1. BARFOOT and WILKES, Universal British Directory (1779-1797); TIBNAM, The Salop Directory (1828).

2. These are to be found in the appropriate parish and corporation records held in the Shropshire Record Office (henceforth S.R.O.).

3. BARFOOT and WILKES and TIBNAM ibid.

4. For a discussion of compilation techniques and the reliability of directories as sources for urban history cf. DAVIES, W.K.D., GIGGS, J. A. and HERBERT, D. T. "Directories, Rate Books and the Commercial Structure of Towns", Geography Volume 53 (1968) also CHILTON, C. W. "The Universal British Directory - a Warning", Local Historian XV (1982).

5. BARFOOT and WILKES op.cit. l.f. appendix on Wellington.

6. NORTON, J. Guide to the national and provincal directories of England and Wales, excluding London published before 1856 (London 1950).

7. TIBNAM op.cit.

8. SMAILES, A. E. " The Urban Hierarchy of England and Wales ", Geography, Vol. 29 (1944).

9. For a discussion of Losch's work see:- CARTER, H. The Study of Urban Geography. Chapter 5, pp.69-87 and, HAGGET, P. Geography, a Modern Synthesis pp.367-368.

10. BERRY, B.J.L. and HORTON, F. E. Geographic Perspectives on Urban Systems (U.S.A. 1970). This theory is applied in Nigeria and classes of towns are identified by hospital, universities, technical colleges, schools and courts etc. in particular combinations.

## CHAPTER 5 - Cartographic, Connectivity and Flow Structure Analysis in the Study of Small Town Nodality and Market Area.

It appears that the consideration of flows between the central place and its region is of increasing importance in assessing its position in a network. Nystuen and Dacey have suggested that "a hierarchy of cities may be reduced to an abstract network of points and lines. The points represent the cities while the lines represent the functional associations. Though a myriad of lines exists in the network, there is present a basic structure of strongest associations which create the nested nodal regions and the hierarchy of cities".[1] By distinguishing groups of cities with maximum numbers of direct linkages a rank order can be established. Linkages can be measured in terms of transport routes such as roads and rivers, or in mediums of transport, in the early modern period these would be coaches, mails and carriers. Links can also be measured in terms of commercial exchange and population movement for example, where people go to buy and sell produce, where they go to look for work and so on.

Modern studies have been plagued by the problems of what form of interaction to measure and how to measure it without introducing poorly justified arbitrary distinctions. In the historical context some of these problems are absent as the historian is forced to make use of whatever material survives. Arbitrary decisions are thus made outside the compass of the historian's control. This does not render the use of such techniques invalid, it merely requires admission of the shortcomings of the data and that allowance be made for such in the drawing of conclusions.

Maps by Rocque 1752 and Baugh 1808 provide dates at which a survey of roads can be made at county-level.[2] Cartographic accuracy, particularly at the county scale, has to be questioned in the pre-ordnance survey period. Many county maps were published in the latter half of the eighteenth century, usually to accompany the burgeoning number of regional guides and gazetteers, however they display a disquieting dependence on the early surveys of Saxton and inaccuracies abound.[3] Shropshire however, is exceptional in being re-surveyed by Rocque, a recognized and reliable map-maker, in 1752

much earlier than most counties, and again by Baugh in 1808. Early map-making techniques were not of course infallible and mistakes and omissions can be found. Trinder in his introduction to Baugh's map, considers the accuracy with which roads and turnpikes are depicted and shows it to be of good quality and up to date[4].

Turnpikes are distinguished by a bold line on one side which makes the assessment of major and favoured routes through the county relatively easy. The existence of a direct turnpike route between a pair of small towns is taken as evidence of significant link between the two. Direct links only are recorded on a connectivity matrix, these are routes which connect small towns while passing through intermediate settlements of lower status only. The same process was undertaken for the 1752 map (see tables 5:1 and 5:2). Main roads are more difficult to identify on this map and use was therefore made of Mordens contemporary map which, though rather limited, provides valuable supplementary evidence of recognized major routes.[5] Tortuous routes passing through numerous villages and hamlets and traversing difficult terrain were dismissed as being in all probability of too poor quality to constitute an important link.

In both 1752 and 1808 no more than one direct link between a pair of towns was recorded. The total number of flows or links for each town was ranked and is shown in figures 5:1a and b. A further count of the number of major roads and turnpikes converging on each town was made. The total number of roads thus recorded sometimes varies from the registered number of direct links a town may have because of the branching habit of some routes. The results of this second analysis are shown in figs 5:2a and b. By dividing the resultant hierarchies into settlement orders and mapping these it was possible to see the spatial implications of the transport system on the small town network.

When maps 5:1 and 5:2 are compared it is seen that the development of the network has produced changes in the status of some towns. Shrewsbury remains the first order town from which routes radiate rather in the way that the spokes of a wheel would. However, by 1808 Wellington has also become a first order centre in terms of

Table 5:1 A connectivity matrix for the urban system of Shropshire 1752

| | Shrewsbury | Bishop's Castle | Bridgnorth | Broseley | Church Stretton | Cleobury Mortimer | Clun | Ellesmere | Ludlow | Madeley | Market Drayton | Much Wenlock | Newport | Oswestry | Shifnal | Wellington | Wem | Whitchurch | Total out-flow |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Shrewsbury | | 1 | | | 1 | | | 1 | | | 1 | 1 | 1 | 1 | | 1 | 1 | | 9 |
| Bishop's Castle | 1 | | | | 1 | | 1 | | 1 | | | | | | | | | | 4 |
| Bridgnorth | | | | 1 | | | | | 1 | | | 1 | | | | | | | 3 |
| Broseley | | | 1 | | | | | | | 1 | | 1 | | | | 1 | | | 4 |
| Church Stretton | 1 | 1 | | | | | | | 1 | | | 1 | | | | | | | 4 |
| Cleobury Mortimer | | | | | | | | | 1 | | | | | | | | | | 1 |
| Clun | | 1 | | | | | | | | | | | | | | | | | 1 |
| Ellesmere | 1 | | | | | | | | | | | | | 1 | | | 1 | 1 | 4 |
| Ludlow | | 1 | 1 | | 1 | 1 | | | | | | 1 | | | | | | | 5 |
| Madeley | | | | 1 | | | | | | | | 1 | | | 1 | 1 | | | 4 |
| Market Drayton | 1 | | | | | | | | | | | | 1 | | | | | 1 | 3 |
| Much Wenlock | 1 | | 1 | 1 | 1 | | | | 1 | 1 | | | | | | 1 | | | 7 |
| Newport | 1 | | | | | | | | | | 1 | | | | 1 | 1 | | 1 | 5 |
| Oswestry | 1 | | | | | | | 1 | | | | | | | | | | | 2 |
| Shifnal | | | | | | | | | | 1 | | | 1 | | | 1 | | | 3 |
| Wellington | 1 | | | 1 | | | | | | 1 | | 1 | 1 | | 1 | | | | 6 |
| Wem | 1 | | | | | | | 1 | | | | | | | | | | 1 | 3 |
| Whitchurch | | | | | | | | 1 | | | 1 | | 1 | | | | 1 | | 4 |
| Total in-flow | 9 | 4 | 3 | 4 | 4 | 1 | 1 | 4 | 5 | 4 | 3 | 7 | 5 | 2 | 3 | 6 | 3 | 4 | |
| Rank | 1 | 5 | 6 | 5 | 5 | 8 | 8 | 5 | 4 | 5 | 6 | 2 | 4 | 7 | 6 | 3 | 6 | 5 | |

Table 5:2 A connectivity matrix for the urban system of Shropshire, 1808

| | Shrewsbury | Bishop's Castle | Bridgnorth | Broseley | Church Stretton | Cleobury Mortimer | Clun | Ellesmere | Ludlow | Madeley | Market Drayton | Much Wenlock | Newport | Oswestry | Shifnal | Wellington | Wem | Whitchurch | Total out-flow |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Shrewsbury | | 1 | | | 1 | | | 1 | | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 10 |
| Bishop's Castle | 1 | | | | 1 | | 1 | | 1 | | | | | | | | | | 4 |
| Bridgnorth | | | | 1 | | 1 | | | 1 | 1 | | 1 | | | 1 | 1 | | | 7 |
| Broseley | | | 1 | | | | | | | 1 | | 1 | | | 1 | 1 | | | 5 |
| Church Stretton | 1 | 1 | | | | | 1 | | 1 | | | 1 | | | | | | | 5 |
| Cleobury Mortimer | | | 1 | | | | | | 1 | | | | | | | | | | 2 |
| Clun | | 1 | | | 1 | | | | 1 | | | | | | | | | | 3 |
| Ellesmere | 1 | | | | | | | | | | | | | 1 | | | 1 | 1 | 4 |
| Ludlow | | 1 | 1 | | 1 | 1 | 1 | | | | | 1 | | | | | | | 6 |
| Madeley | | | 1 | 1 | | | | | | | | | | | 1 | 1 | | | 4 |
| Market Drayton | 1 | | | | | | | | | | | | 1 | | | 1 | 1 | 1 | 5 |
| Much Wenlock | 1 | | 1 | 1 | 1 | | | | 1 | | | | | | | | | | 5 |
| Newport | 1 | | | | | | | | | | 1 | | | | 1 | 1 | 1 | 1 | 6 |
| Oswestry | 1 | | | | | | | 1 | | | | | | | | | | | 2 |
| Shifnal | | | 1 | 1 | | | | | | 1 | | | 1 | | | 1 | | | 5 |
| Wellington | 1 | | 1 | 1 | | | | | | 1 | 1 | | 1 | | 1 | | 1 | 1 | 9 |
| Wem | 1 | | | | | | | 1 | | | 1 | | 1 | | | 1 | | 1 | 6 |
| Whitchurch | 1 | | | | | | | 1 | | | 1 | | 1 | | | 1 | 1 | | 6 |
| Total in-flow | 10 | 4 | 7 | 5 | 5 | 2 | 3 | 4 | 6 | 4 | 5 | 5 | 6 | 2 | 5 | 9 | 6 | 6 | |
| Rank | 1 | 6 | 3 | 5 | 5 | 8 | 7 | 6 | 4 | 6 | 5 | 5 | 4 | 8 | 5 | 2 | 4 | 4 | |

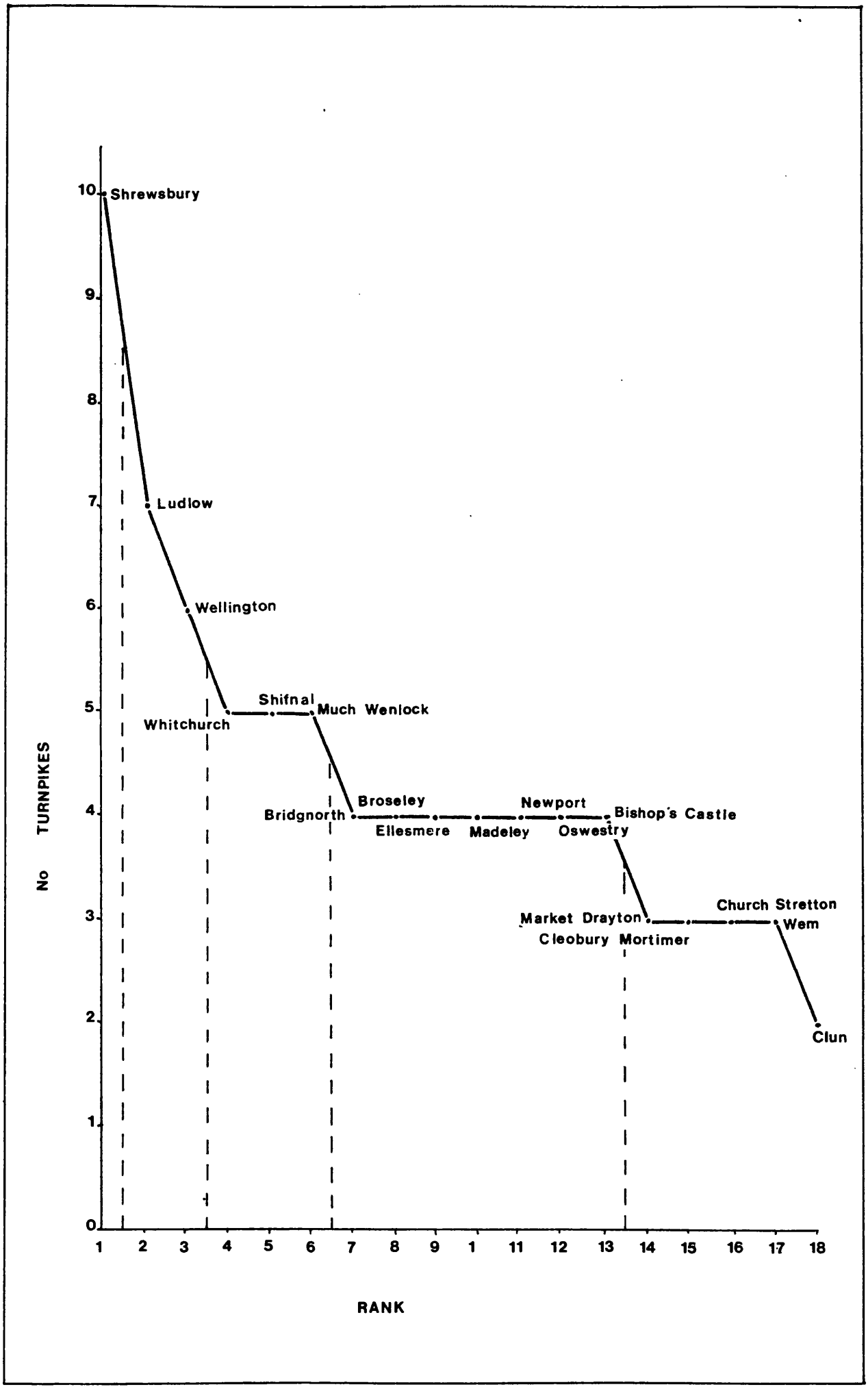



Fig 5:1a Tne hierarchy of Shropshire towns in terms of nodality, 1752

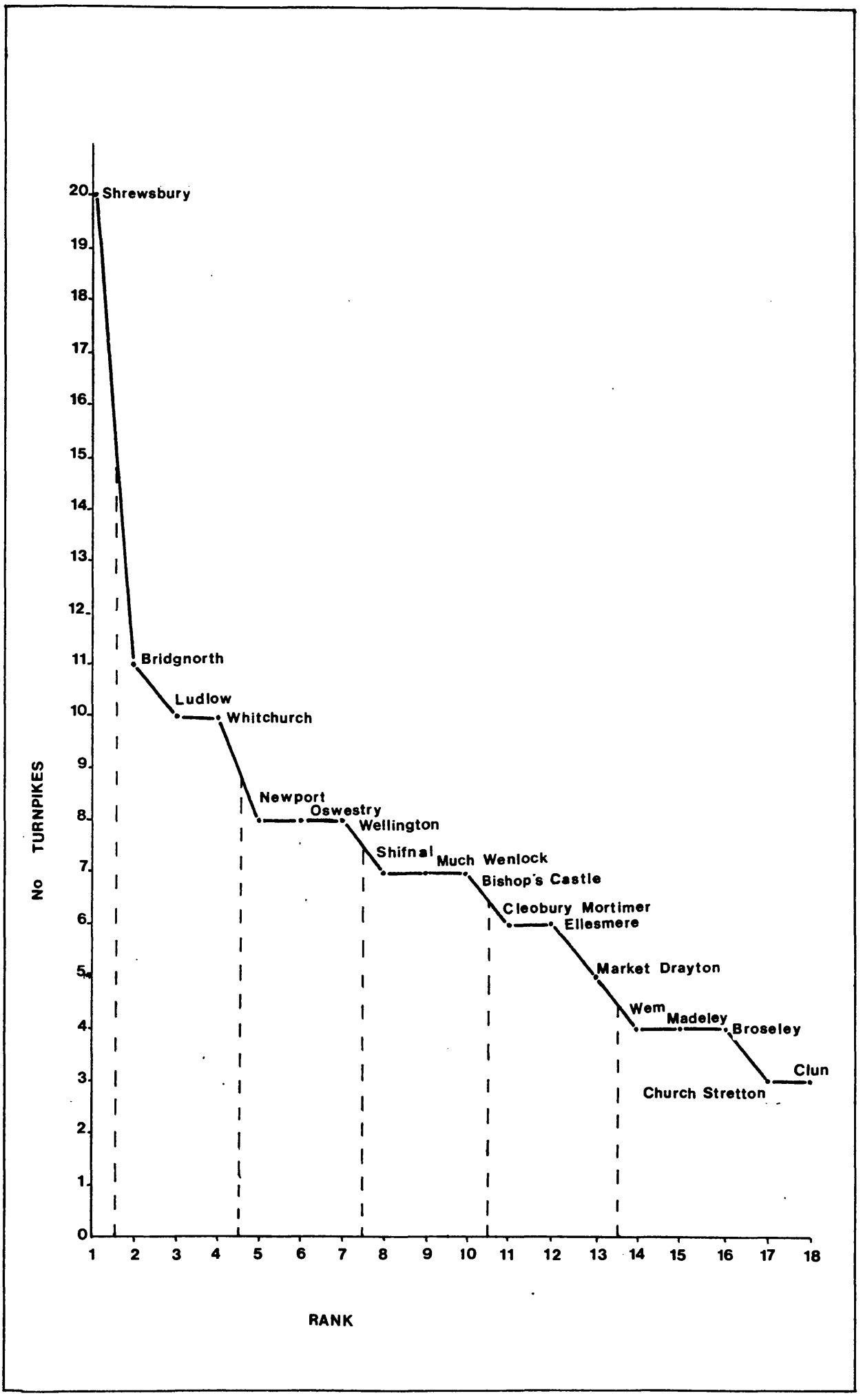



Fig 5:1b The hierarchy of Shropshire towns in terms of nodality, 1808

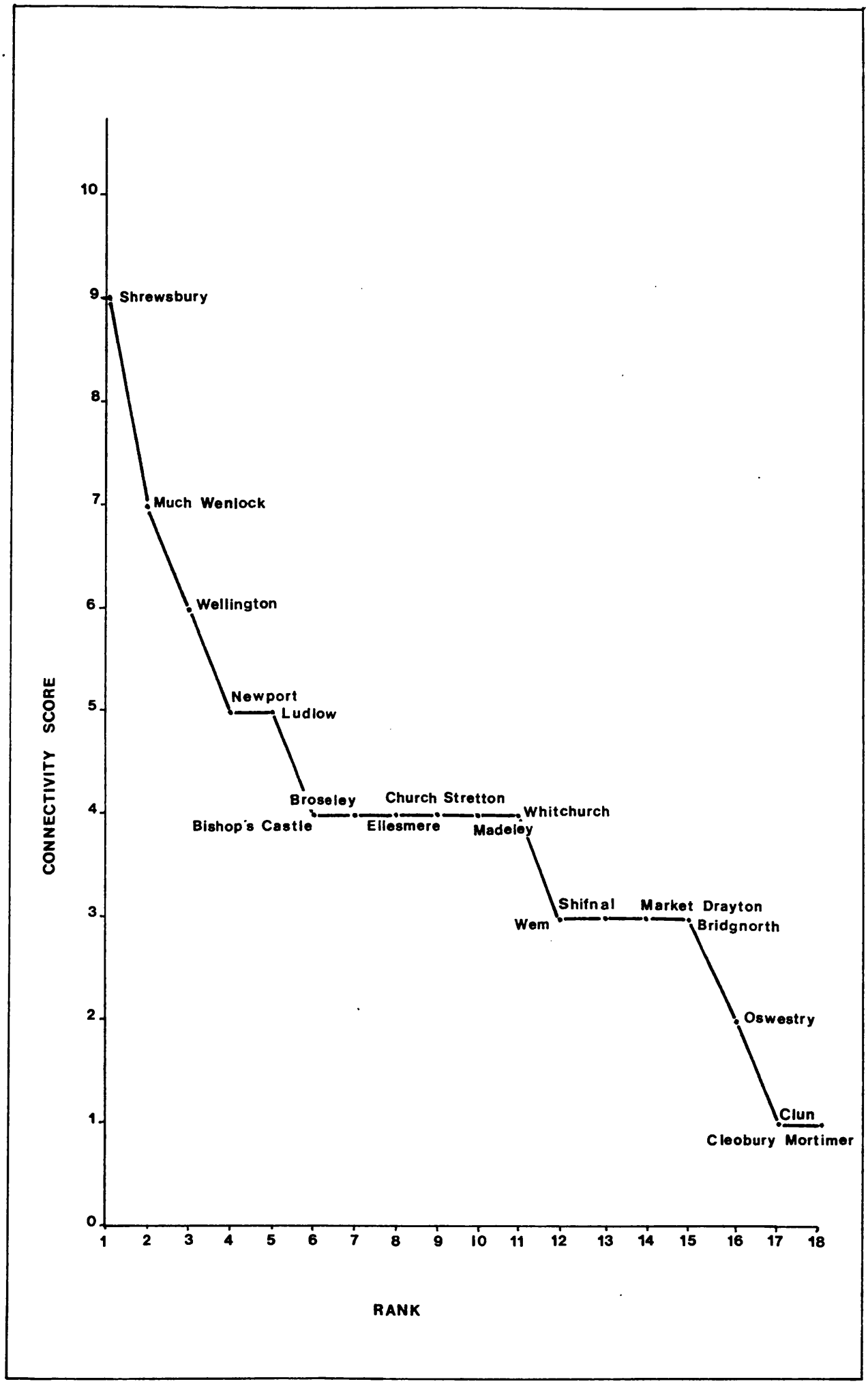



Fig 5:2a The hierarchy of Shropshire towns in terms of connectivity, 1752

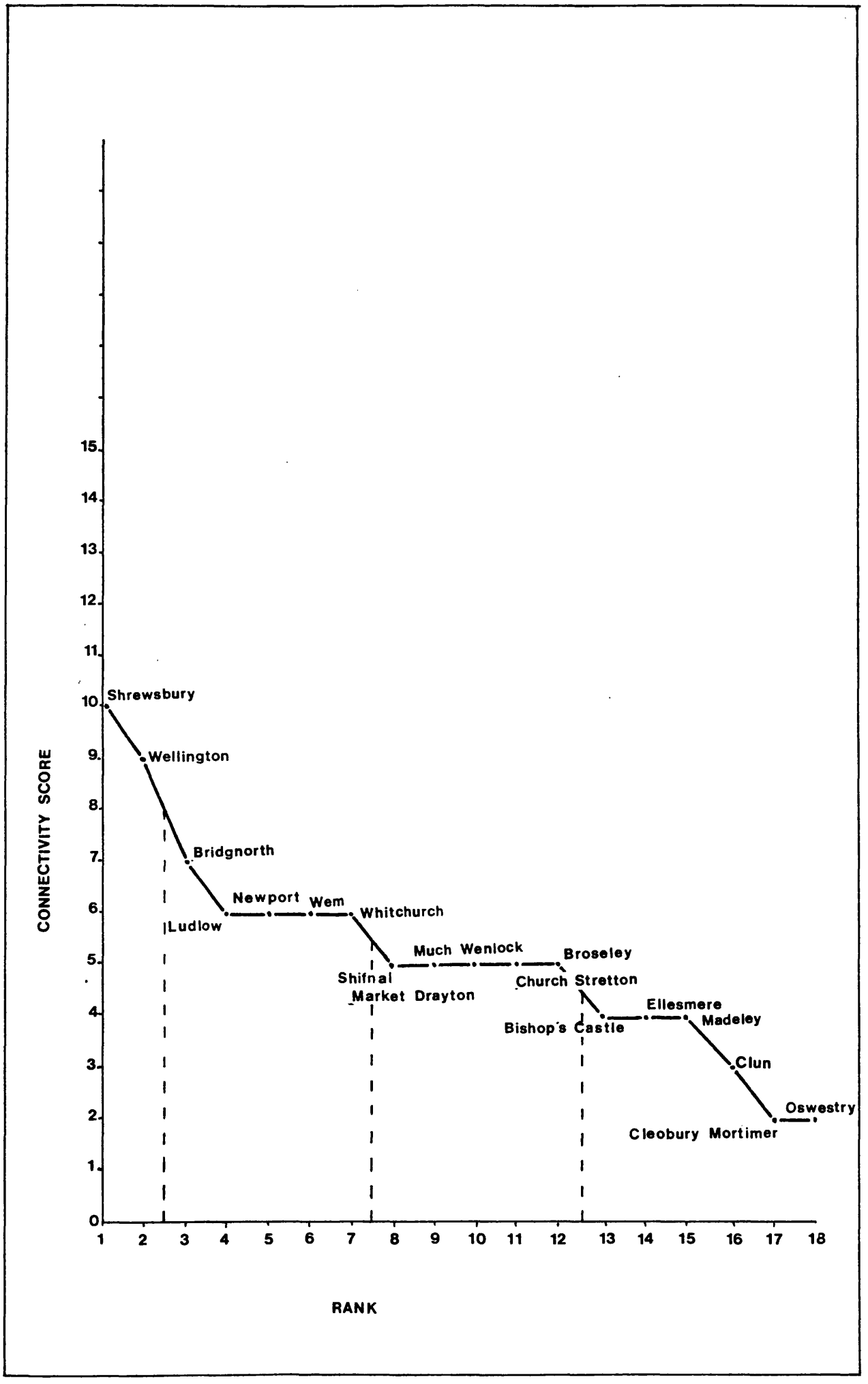
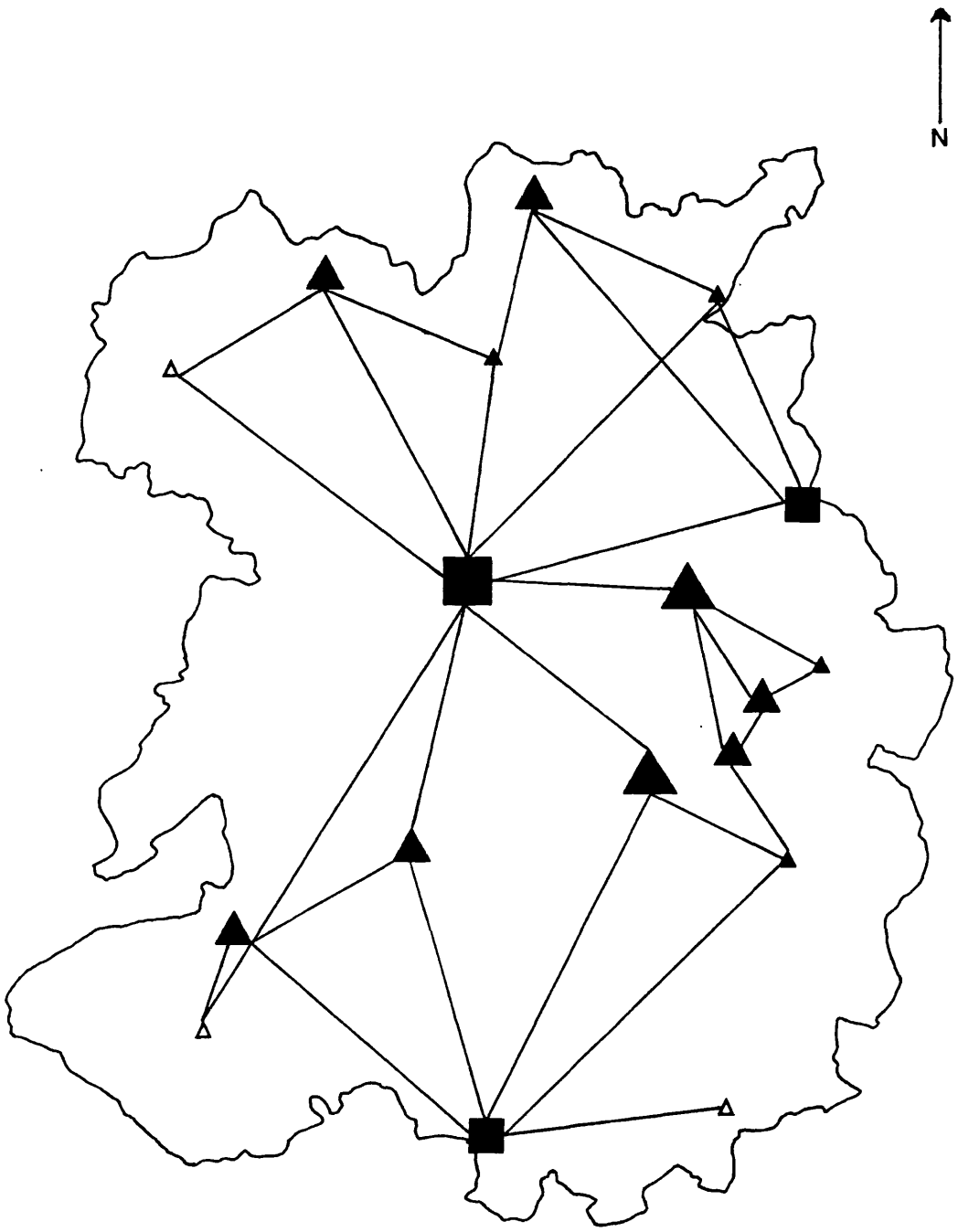
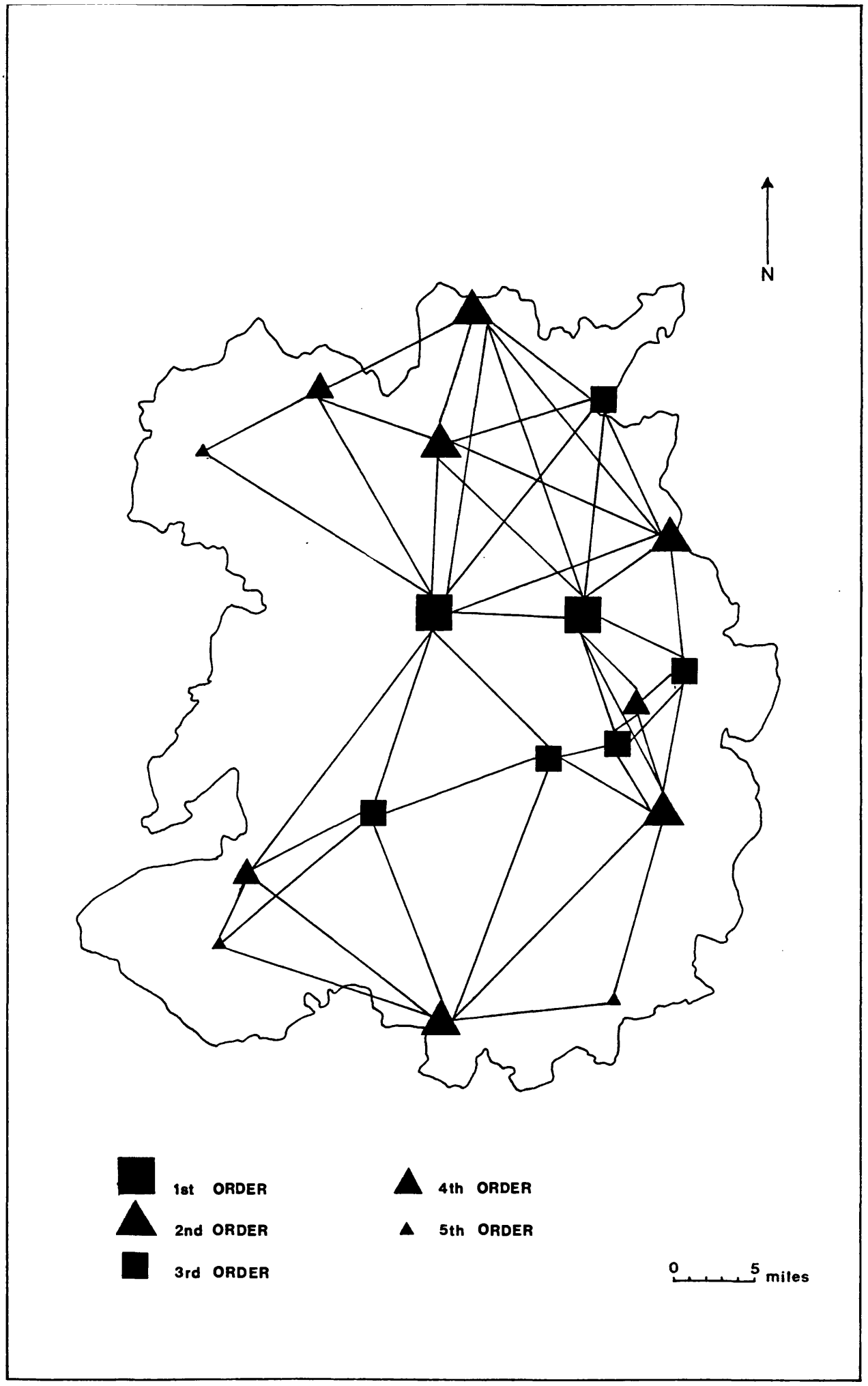



Fig 5:2b The hierarchy of Shropshire towns in terms of connectivity, 1808




1st ORDER
2nd ORDER
3rd ORDER
4th ORDER
5th ORDER
6th ORDER
0 5 miles

Map 5:1 A connectivity hierarchy in Shropshire 1752, showing direct linkages

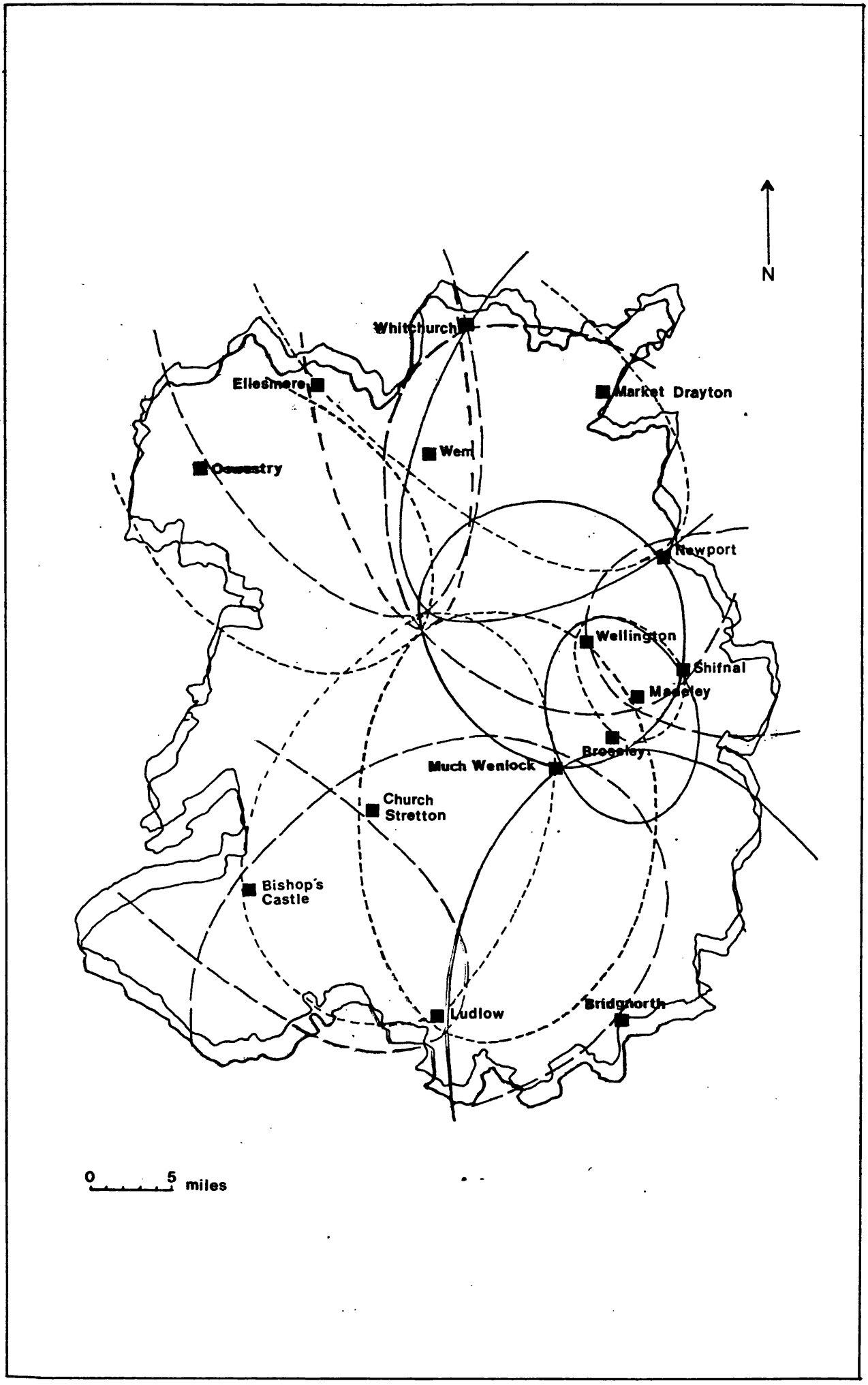



Map 5:2 A connectivity hierarchy in Shropshire 1808 showing direct linkages

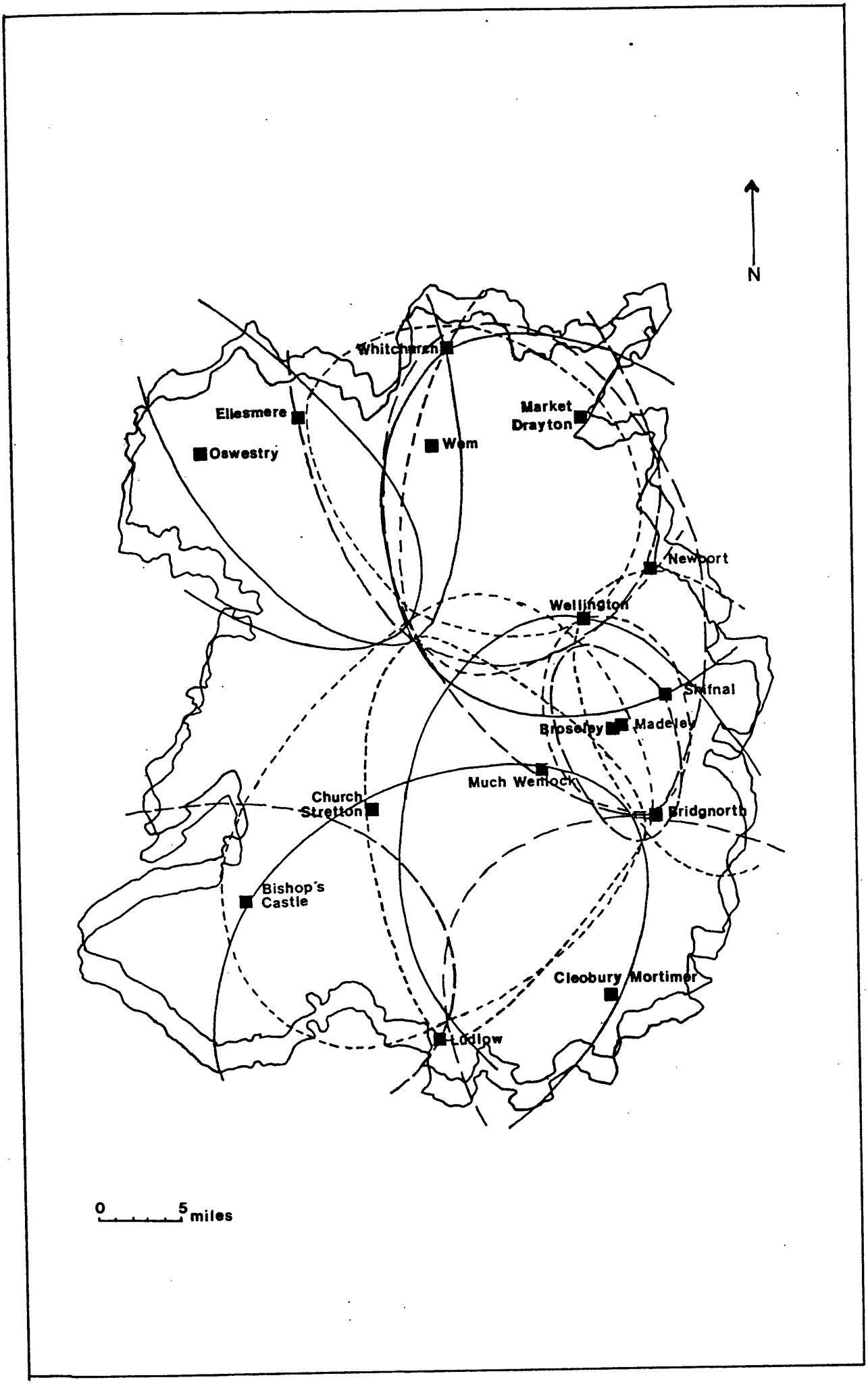
connectivity, largely because of the establishment of direct links with towns in the north: Wem, Whitchurch and Market Drayton. Likewise these towns have also risen in the hierarchy as they become more fully integrated into the system. Bridgnorth and Ludlow also achieve a greater degree of integration with the establishment of links to Clun, Cleobury Mortimer, Madeley, Shifnal and Wellington. Clun, Cleobury Mortimer and Oswestry remain at the bottom of the hierarchy. There is some improvement in the interlinkage of the first two but Oswestry remains in exactly the same position. The same is true of Ellesmere and Bishop's Castle. The filling out of the network elsewhere, particularly in the east, puts these formerly quite well connected centres, lower down the hierarchy.

The larger number of direct linkages existing by 1808 must to some extent be a product of a move towards through routes which is a feature of the establishment of longer distance trade. The emphasis was increasingly upon ease and speed of transport. Old roads which tended to go from village to village in a customer optimizing fashion were slow roads, obstructed by the settlements in their path.[6] They were also the products of a parish level of organization and were seen as a cost rather than an investment. The concept of turnpikes changed these attitudes, a road could be profitable if it was efficient, fast, unobstructed and reasonably maintained. Interests other than those of local parish surveyors could be brought to bear upon them and the result was the introduction of straighter, more direct, through-routes. This implies the existence of wider market areas and spheres of influence for the towns at which roads converged.

Hypothetical market areas have been drawn for the small towns using the connectivity information from the 1752 and 1808 maps (see maps 5:3 and 5:4). Direct links are seen as radii extending to points on the perimeter of a given town's sphere of influence, thus a line through these points describes the areal extent of the latter. One of the most immediately apparent characteristics of the market areas derived in this way is the high degree of overlap they display. Unlike the hexagons of the model which tesselate neatly together it appears that in reality one town's sphere of influence commonly




Map 5:3 Market areas, Shropshire small towns 1752




Map 5:4 Market areas, Shropshire 1808

coincides with parts of those of neighbouring towns. Thus on the 1752 map (map 5:3) the market area of Wem is completely encompassed by that of Ellesmere and those of Church Stretton, Bishop's Castle, Much Wenlock and Ludlow all overlap each other to a considerable extent. The same characteristics are seen in 1808.

It appears that as initially suggested, Christaller's assumptions may have to be relaxed; accessibility is obviously not uniform throughout the area and the complementary region is not always in proportion to the size or status of the urban area. Also apparent from the maps is that market areas are not constrained by county boundaries. For the small towns on the edges of Shropshire it is not therefore possible to show a complete sphere of influence. Discrepancies arising when the ranks of nodality are compared with those of functional index derived from the directories may also be accounted for in this way. For example, Much Wenlock ranks as a second order centre in the 1752 nodality data set, but only as third order in the functional index hierarchy of the Universal British Directory. The location of Much Wenlock, well inside the county boundary, allows all its direct links to be recorded. By contrast, a town like Bridgnorth, with a functional index rank of two but a nodality rank of only five, will have economically important links to perhaps Bewdley and Kidderminster, which are in effect invisible. This is of course a problem stemming from the politically oriented origin of the sources used. Maps were made of counties, not regions, and as already mentioned it is not possible to find properly re-surveyed maps for the neighbouring counties of the same date. Were it possible to find a source of equivalent quality for Montgomeryshire, Radnorshire, and Denbighshire, one would find that the market area of Shrewsbury extended well into Wales. Market areas of Oswestry and Bishop's Castle would spread south and north to Welshpool and Montgomery and further west into Wales as well.

Whitchurch, Bridgnorth, Oswestry, Market Drayton and Ludlow all rank as second order centres in the Universal British Directory data. In 1752 their transport links do not merit them such high status. This is only achieved by 1808 and then by only some of them. Even by 1808 none of them are able to compete with Wellington in terms of

nodality. Unfortunately Wellington is absent from the Universal British Directory so its functional index cannot be calculated. However, in Tibnam's Salop Directory of 1828 Wellington only ranks as a third order settlement. One concludes that while this town could compete with Shrewsbury in the specialized field of transport links, it was not so well developed in functional terms. Urban hierarchies are therefore seen to be dependent on the criteria chosen for their basis and may change according to the variable measured. It follows from this that the complementary regions of settlements in the hierarchy will also vary. This is a vindication of the Loschian theory that no town has just one complementary region, but has instead a whole range for each of the different functions it performs.

The models used suggest that there is a positive correlation between the rank of towns and the size of their market areas. In so far as Shrewsbury is the primate city and has the largest market area, this is in fact so. However, the same relationship is not consistently exhibited lower down the hierarchy. For example, in 1752 Wellington has the smallest market area but the highest number of direct links; Church Stretton and Market Drayton, fourth and fifth order towns respectively, both have larger market areas than Wellington. In 1808 similar discrepancies also exist. The second order towns of Ludlow, Bridgnorth, Wem, Whitchurch and Newport all have extensive market areas, as do Wellington and Shrewsbury of the first order. However, Church Stretton (third order) and Oswestry (fifth order) have just as extensive hinterlands. A range of factors contributes to this phenomenom; primary among them is the nature of the hinterland.

Towns cannot be analysed in isolation but must be seen in the rural context. For example, Church Stretton is consistently one of the lower ranking centres in both the functional and nodal hierarchies, yet its market area appears substantial in comparison with those of Broseley and Madeley or Shifnal to the east. When one considers the nature of their respective hinterlands, the pattern displayed can be explained. Church Stretton is located in a valley running north-south from Shrewsbury to Ludlow. On either side are the upland regions of the Long Mynd and Wenlock Edge, both sparsely

populated; the nearest towns being Much Wenlock, Ludlow and Bishop's Castle. By contrast, the three towns to the east are located in an area of growing population. Broseley and Madeley are both close to the river Severn, a major communications corridor, while Shifnal is located just to the south of the major London to Holyhead road. These features encouraged the establishment of a closer network of towns than that round Church Stretton. Bridgnorth, Much Wenlock and Wellington are close by, promoting a tighter mesh of direct links between centres. With hinterlands of denser population and greater accessibility than that of Church Stretton, a wider range of functions can be supported by a smaller area and the observed differential is thus explained. Important to note here is that the deviation from the theoretical relationship between urban status and market area is a product of unfulfilled theoretical assumptions. In the above mentioned case firstly population distribution is uneven and secondly accessibility is distorted by the existence of major road and waterways. The need to relax Christaller's assumptions will be further discussed as other functions are introduced in the attempt to delimit the small town market areas more satisfactorily.

The introduction of a temporal element attempting to identify transitional elements in the system is managed effectively by the comparison of linkage networks at different dates. It appears that while the market areas of small towns may experience stability or growth they are seldom subject to decline. The same can be said for their status. Over the period 1752 to 1808 Oswestry, Ellesmere, Bishop's Castle and Newport maintain the same market areas and urban ranks with the exception of Newport, which rises from third to second rank. This is largely a result of the fact that few new links are established around these towns, all the other centres see an increase in their market area, the most spectacular being that of Wellington and Wem. By 1808 Wellington had established new links with Bridgnorth, Wem, Whitchurch and Market Drayton, while Wem had developed them with Wellington, Market Drayton and Newport. The only centre to suffer a decline in market area is Much Wenlock, which lost a direct link with Madeley in the Buildwas bridge, when the turnpike through Broseley and over the Ironbridge was established. This is also the only centre to suffer actual decline in status from second to third

order. Others, like Cleobury Mortimer and Clun, may increase their market area but their status remains the same.

FOOTNOTES

1. NYSUEN, J. D. and DACEY, M. F. "A graph theory interpretation of nodal regions", Papers of Regional Scientific Association 7 (1961) p.31.

2. S.B.L. - ROCQUE. J. Actual Survey of the County of Salop (1752); TRINDER, B. (ed) Robert Baugh's Map of Shropshire 1808 (Shrewsbury 1983).

3. For further discussion of this point see HARLEY, J. B. "The Remapping of England", Imago Mundi Volume XIX (1965).

4. TRINDER, B. (ed) ibid.

5. Leicester University Map Library - Map of the County of Shropshire by Robert Horden c. 1749.

6. For a discussion of the turnpike road system see:- BUCHANAN, B. J. "The Evolution of the English Turnpike Trusts: Lessons from a Case Study", Ec.H.R. 2nd Ser. XXXIX, 2 (1986); CHARTRES, J. A. "Road Carrying in the Seventeenth Century: Myth and Reality", Ec.H.R. 2nd Ser. XXX (1977).

## Chapter 6 - An Analysis of Transport Services in Shropshire as the Basis for a Comparison of Transport Hierarchy Rankings with Functional Rankings

Further evidence of the flows and interaction operating between small towns and thus giving an indication of possible market areas is found in the directories. These give lists of carriers, mail coaches, water conveyances, carts, waggons and postal services for each town. In Pigot's 1822 directory these are listed at the end of the entry under the separate headings of 'carriers', 'coaches' and 'conveyance by water'.[1] The formal presentation of this information suggests a fairly rigorous collection policy. In the Universal British Directory the material is arranged in a less formal manner in prose form rather than in listings. Such an arrangement may indicate that services were less well organised than at the later date or that they were considered of less importance. It was mentioned earlier in conjunction with the calculation of functional indices and centrality values, that certain technical problems complicate the use of directories as historical sources. Similar problems persist in the new context of their use in the assessment of connectivity and the flow structure existing between small towns. As already suggested the degree of emphasis placed on an accurate listing of services by the authors and compilers is open to question. The extent to which services were organized to a level facilitating their inclusion in such a publication is also an important consideration. Among the less important towns entries such as the following for Cleobury Mortimer suggest that less official irregular services might well have existed. These would be familiar to and convenient for locals and contemporaries, but too irregular to be included in a directory. "There is no stage or mail-coach to or from this town - several waggons pass through to Bewdley, but the days are not regular".[2] This type of entry also complicates the calculation of flows on a number per week basis, so for the purposes of this study they are considered as operating once a week.

Aside from considerations of accuracy there is the fact that Shropshire directories are concerned only with services operating from towns within the county, resulting in a highly Shropshire-

centric picture. The relationship measured is therefore one from the town out to surrounding area. The return of outward bound coaches is given, but these are the only incoming services recorded and one should be aware that many more of these could exist. There is also a strong linear bias to the information; carriers and coaches used major roads, but would undoubtedly have been met along their routes by vehicles from the surrounding countryside, thus increasing the area they served.

The question of which route a given service took is therefore an important one, yet such details are not always given in the directories. The destination is frequently the only information given and this confuses the calculation of service flows once more. For example, consider a coach from Oswestry to London where only the origin and destination are stated. Should it be assumed that it will pass through Shrewsbury and go from thence to Wellington, Shifnal, Wolverhampton, Birmingham, Coventry and finally to London? An alternative would be a route through Oxford rather than Coventry or perhaps one through Shrewsbury, Ludlow, Leominster, Bromyard, Worcester and then London. Each option would give Oswestry links to a whole new range of destinations. Assumptions as to which route would be taken in such a case are therefore fraught with difficulties. In order to avoid these complications it has been decided to record links with only those places listed in the directory itself. This may result is a rather conservative view of the network but it is viewed as the more rigorous historical and statistical approach.

Supplementary sources do of course exist, for example the probate inventories surviving for the towns of Broseley and Bridgnorth list a number of 'trow' and 'bargemen' providing water-born transport.[3] The business records of Richard Payne, a Whitchurch cheesefactor, include lists of the barges and captains he employed to carry cargoes of cheese south to Ludlow and north to Frodsham.[4] Among the county records there is a list of licensed badgers and drovers 1613-1714.[5] This additional material is of such a piecemeal form, however, that in a county level survey it would only serve to distort the network of communications identified. The above sources shed light on the minor detail of transport service organization. They will

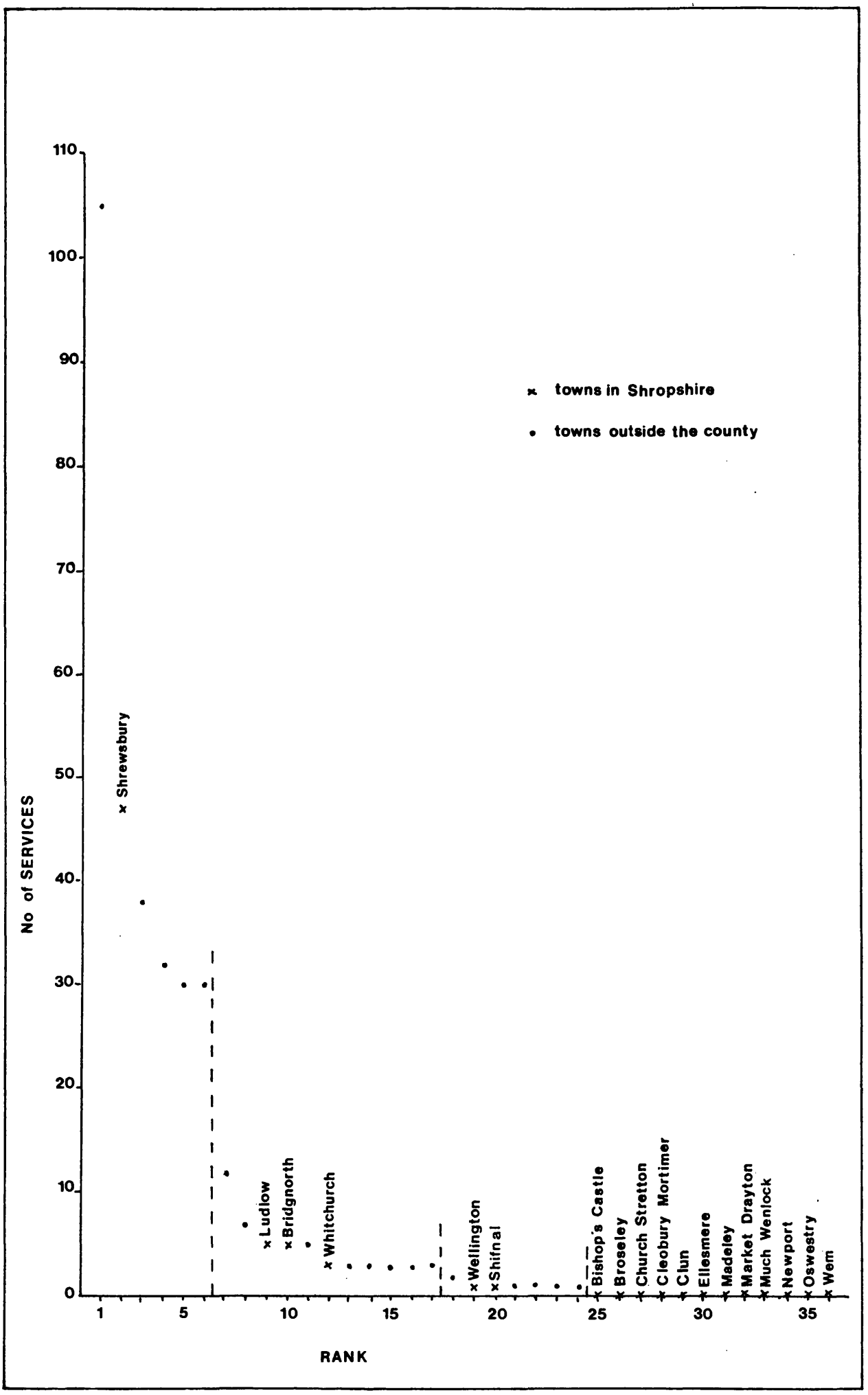



Fig 6:1 A hierarchy of towns derived from transport services in 1797

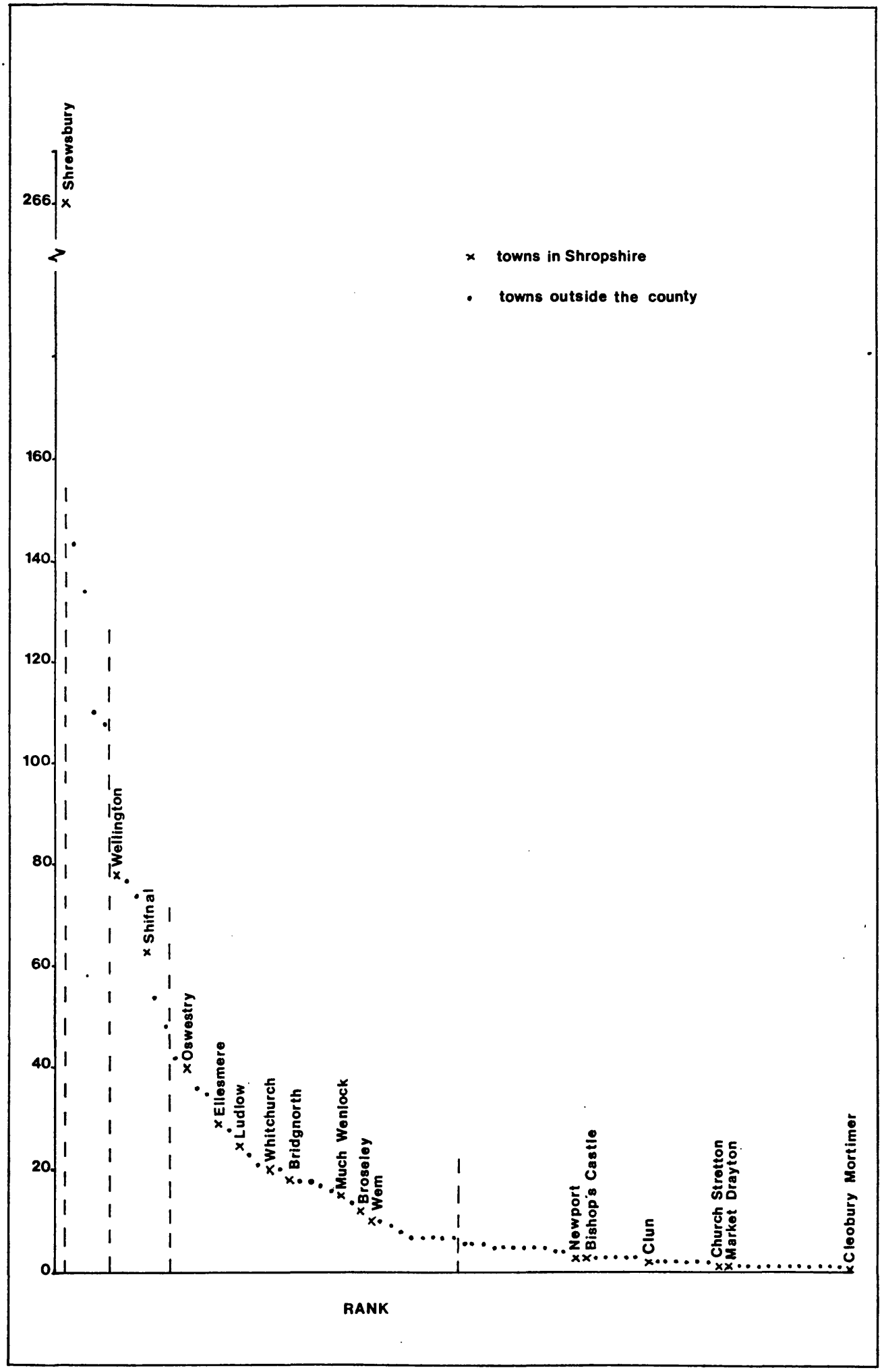



Fig 6:2 A hierarchy of towns derived from transport services in 1822

therefore be incorporated in subsequent case studies, but omitted from a chapter which attempts to illuminate larger scale features of inter-urban communication flows and exchange.

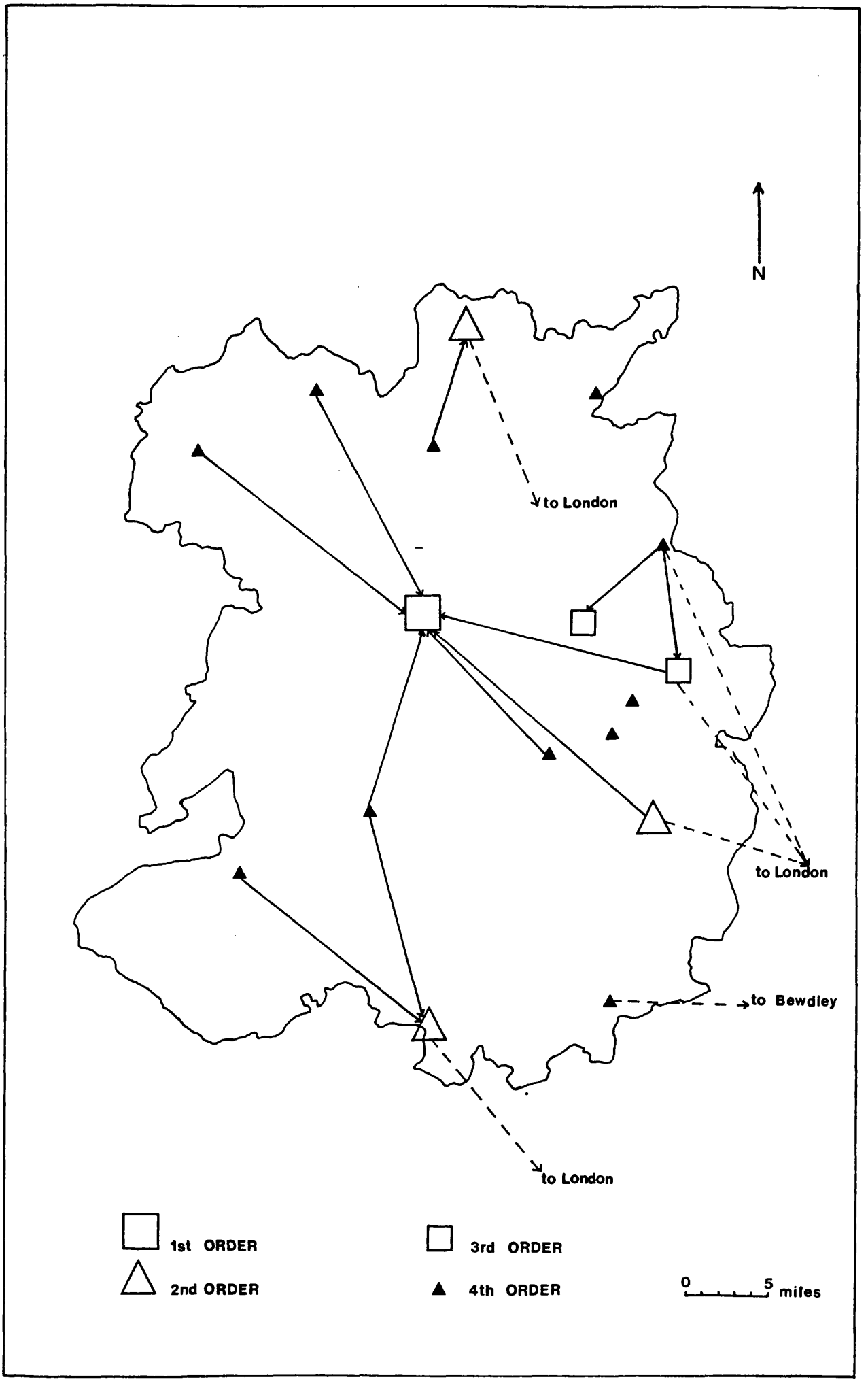
For each directory a matrix was designed with Shrewsbury and the small towns forming the vertical axis of rows and the destinations of services operating from them entered as columns. The total number of services of all kinds; water conveyance, coaches, mails, carriers etc per week was then entered. The sum of each column gives the degree of in-flow by which the settlements are ranked.[6] The sum of each row gives the degree of out-flow, this can be divided into flows within the county and flows to centres outside the county. Graphs were then plotted of all the in-flow statistics in rank order for each sample, and the towns were divided into hierarchical orders (see figures 6:1 and 6:2).

Four orders are appropriate for the towns in the Universal British Directory, five orders for those in Pigot's later directory (fig.6:1 and 6:2). The orders of small towns were then mapped and the dominant line of out-flow from each was marked by an arrow. This could be to a centre within the county, or to one outside (see maps 6:1 and 6:2). In this way the complicated picture of transport links between settlements can be reduced to a network of ordered points and major flow lines which illuminate the salient features of the system. The maps and graphs were then compared to assess the development in communications which had occurred over the 1797-1822 period. Further comparisons were made with the town hierarchies derived from the occupational material contained in the directories to investigate the degree of correlation between functional index and connectivity.

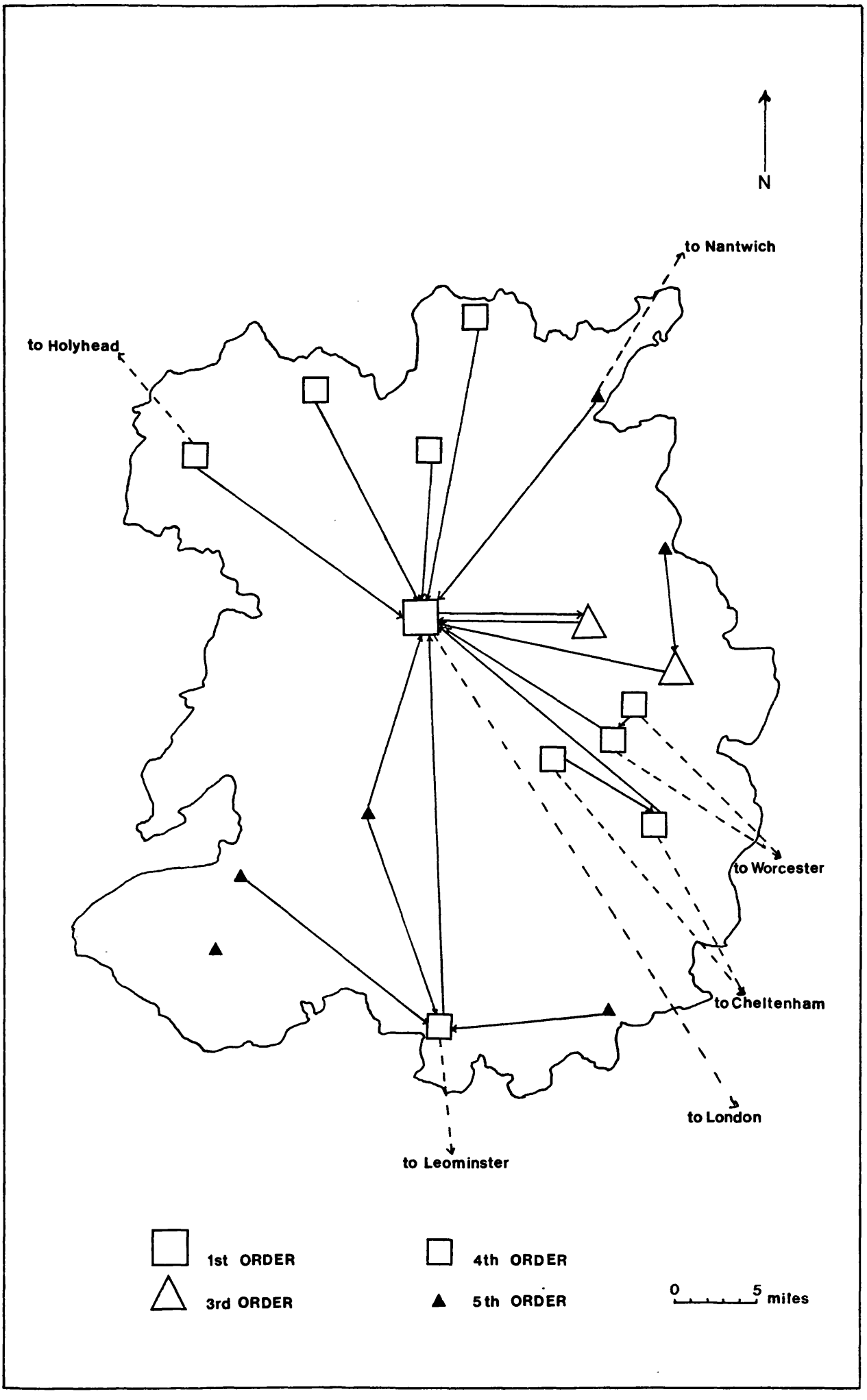
When the total system of towns is considered, that is the Shropshire towns and those outside the county, the data from both dates shows that all the small towns of Shropshire have more services issuing out from them than coming into them (see table 6:1). The exceptions are Clun, which has no services listed and Wellington which is absent from the Universal British Directory in 1797. By 1822 Wellington is included in Pigot's directory and like the other towns has a higher degree of out-flow than in-flow. Such a

Table 6:1 Carriers, carts, coaches, mails and water-born transport services operating from Shropshire towns in 1797 and 1822

| | No. services to Shropshire destinations | | | | No. services leaving Shropshire for destinations outside the county | |
|---|---|---|---|---|---|---|
| | Incoming | | Outgoing | | | |
| | 1797 | 1822 | 1797 | 1822 | 1797 | 1822 |
| Shrewsbury | 47 | 226 | | 150 | 154 | 435 |
| Bishop's Castle | | 3 | 7 | 16 | 18 | 8 |
| Bridgnorth | 5 | 18 | 3 | 22 | 14 | 103 |
| Broseley | | 12 | | 2 | | 12 |
| Church Stretton | | 1 | 2 | | 2 | |
| Cleobury Mortimer | | | | 3 | 6 | |
| Ellesmere | | 29 | 3 | 53 | 7 | 77 |
| Ludlow | 5 | 25 | | 6 | 9 | 43 |
| Madeley | | 11 | | 13 | | 12 |
| Market Drayton | | 1 | | 1 | | 3 |
| Much Wenlock | | 15 | 17 | 13 | 6 | 7 |
| Newport | | 3 | 2 | 13 | 13 | 22 |
| Oswestry | | 40 | 2 | 16 | 5 | 35 |
| Shifnal | 1 | 63 | 21 | 87 | 22 | 155 |
| Wellington | 1 | 78 | | 96 | | 160 |
| Wem | | 10 | 5 | 25 | 4 | 15 |
| Whitchurch | 3 | 20 | | 17 | 20 | 38 |
| Total | 62 | 556 | 62 | 533 | 28 | 1125 |




Map 6:1 Tranport services: showing dominant out-flows from orders of towns, 1797




Map 6:2 Transport services: showing dominant out-flows from ordered towns, 1822

characteristic is to some extent a product of the type of source material which concentrates on movement out from the towns. However, a different complexion may be put on the situation when only intra-county links are considered.

When only those links occurring within the county are numbered Bridgnorth, Ludlow, Shrewsbury, Wellington and Whitchurch all have more incoming services at the earlier date than out-going ones. This indicates a higher degree of interconnection with towns inside the county boundaries than outside them. This suggests a greater cohesion within the county than in the system as a whole. The same is true at the later date of 1822 at which time Broseley, Ludlow, Much Wenlock, Oswestry and Whitchurch are dominated by in-coming services. In each case there are five towns showing a high degree of integration in the county network. When links to towns outside the county only are numbered (external links) the system appears less well integrated. In 1797 only Wellington out of the 18 towns has a greater number of incoming than outgoing external links. This is once more a feature of its failure to merit an entry of its own in the directory. In 1822 Oswestry and Whitchurch are dominated by inward flowing traffic while Broseley and Cleobury Mortimer have equal numbers of services both in and out. The degree of interconnectivity in the external system is therefore less than that of the internal one.

Towns with hinterlands predominantly within the county are those where the sum of flows to destinations in the county is greater than the sum of those to external destinations. In 1797 Much Wenlock and Wem were the only towns for which this was the case. This is further illustrated by the fact that Much Wenlock was the only town with its dominant flow to a Shropshire destination (Shrewsbury). Other towns with no single dominant flow line display equally important connections to internal and external locations. For example, Bishop's Castle has two equally important connections: Ludlow and London; Wem: Whitchurch and London; while Chester, Shrewsbury and London were all destinations of equal importance for Ellesmere. In 1822 the importance of internal flows seems to have increased. Bishop's Castle, Cleobury Mortimer, Madeley, Much Wenlock and Wem all have a greater number of services operating to Shropshire

destinations than otherwise. Once again this trend is emphasized by the dominant flows from each small town. The five above mentioned towns all display dominant flows to destinations within the county. Madeley has an equal number of services operating to Worcester and Broseley; Much Wenlock has an equal number to Cheltenham as well as Bridgnorth. In addition, Ellesmere, Newport, Shifnal, Wellington, Whitchurch and Church Stretton also exhibit dominant flows to internal destinations.

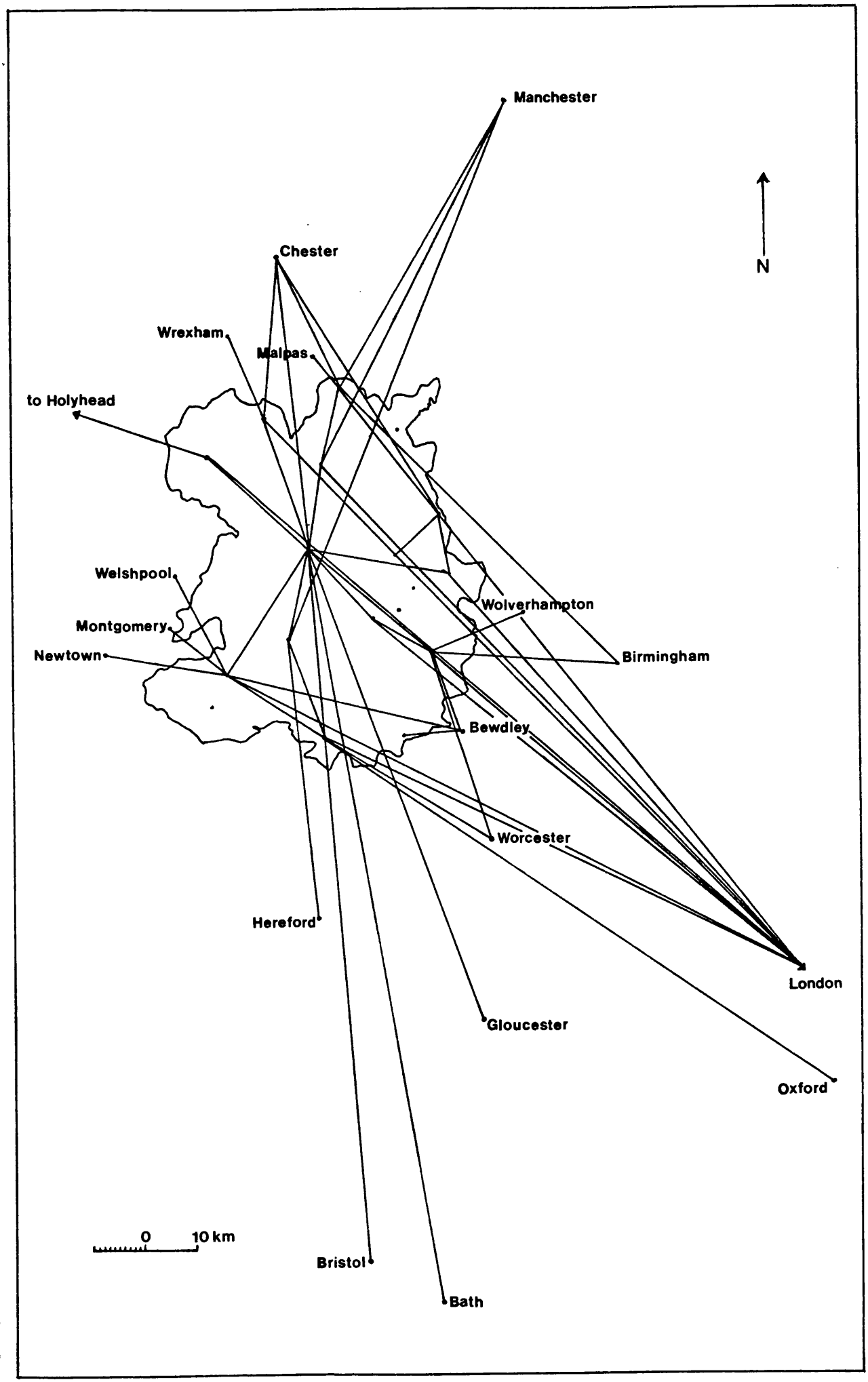
By 1822 the most important single lines of communication appear to exist within the county. This suggests an improvement in local services since 1797 and the development of Shropshire small towns as a differentiated urban system which requires the expansion of internal as well as external links. A given town may have a large hinterland and many services extending out within it, but the best served destination and therefore the one seen as of most immediate importance, will usually be a Shropshire one. This improves the internal integration of Shropshire. The importance of Shrewsbury as the county town and hub of the county's urban system is emphasized by the fact that it is the most common destination of dominant flow lines. Others include Ludlow, Broseley, Bridgnorth and Shifnal, but none of them compete with Shrewsbury, which is the most frequently served destination

Maps 6:1 and 6:2 clearly identify the main axes of movement as north-south through Liverpool, Chester, Whitchurch, Shrewsbury, Ludlow and Bristol; and north west-south east along the London to Holyhead road, passing through Shifnal, Wellington, Shrewsbury and Oswestry. All the towns mentioned are positioned quite well up the hierarchies shown in figures 6:1 and 6:2 for 1797 and 1822. Because of the existence of major national transport routes through them these towns have obviously specialized in communications facilities to some extent. This is more particularly the case with Wellington and Shifnal, which do not attain such high ranking positions in the functional index hierarchies. It is possible therefore to see the importance of Shropshire as a through route in the national communications network. It is clear that the urban structure of the county is influenced by these factors. Accordingly amendments have to

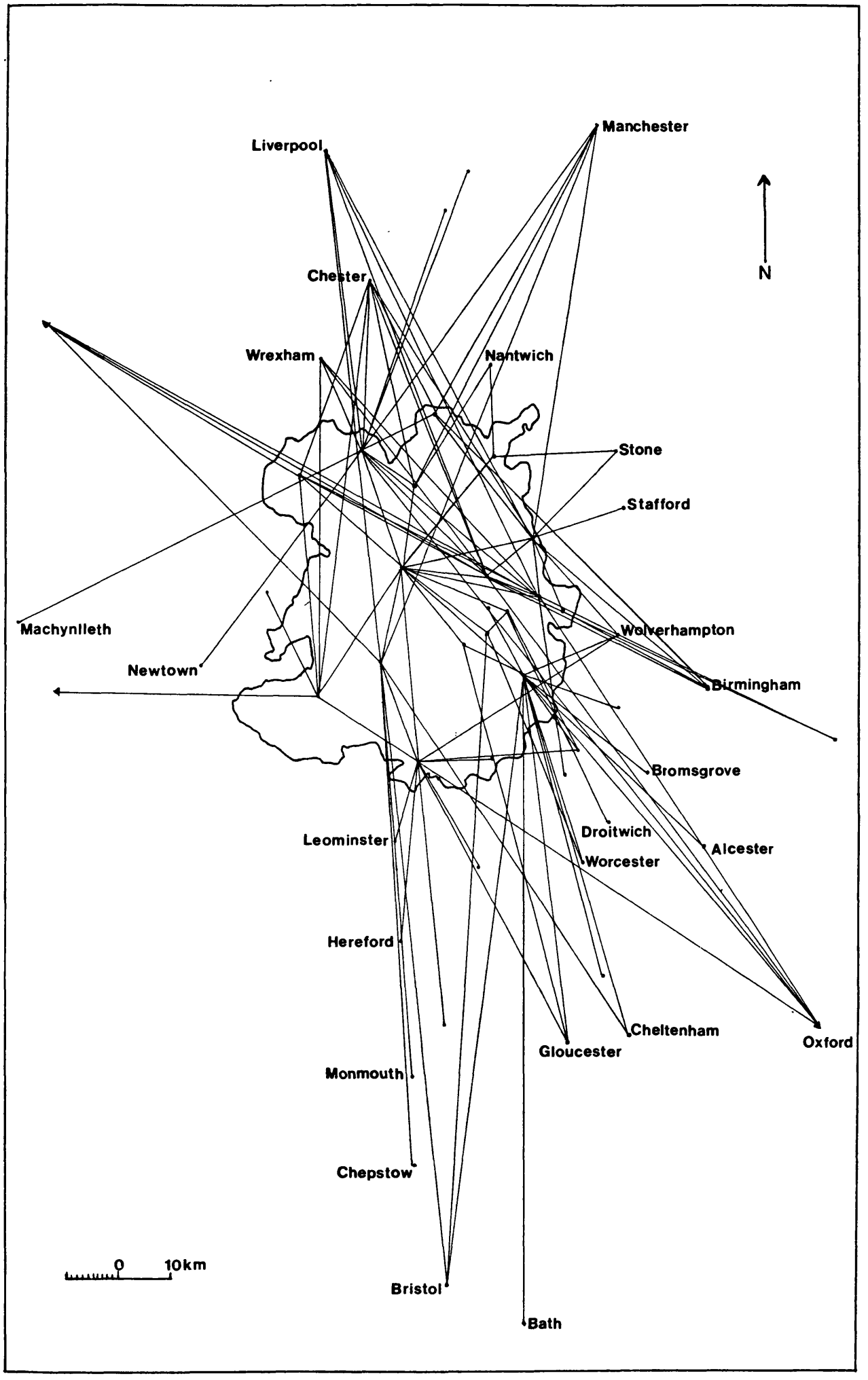
be made to the observed urban pattern. The necessity to relax the assumption of a closed system is made increasingly obvious when the potential market areas and spheres of influence of the towns, as indicated by transport services, are considered.

Maps 6:3 and 6:4 show lines of communication derived from the directory data. They indicate the importance of communications with London in both 1797 and 1822. Other important towns and cities are: Manchester, Chester and Birmingham. By 1822 Oxford, Wolverhampton, Liverpool, Bristol and Holyhead can be added to this list. The expansion of the system over the period by 1822 incorporates a much greater number of destinations, stretching the potential hinterland of any given town over a greater distance and wider area. Some basic trends are identifiable. For example, towns in the south such as Bridgnorth and Ludlow find their complementary regions extending further south to incorporate places like Worcester and Bewdley. By 1822 they incorporate also: Gloucester, Cheltenham, Bristol, Bath, Hereford and Leominster as well as London. To the north they reach only as far as Shrewsbury. Similarly towns in the north develop links with Chester, Liverpool, Manchester and Wrexham, meeting the hinterlands of southern towns at Shrewsbury. A rough divide of hinterlands following the line of the Severn can be postulated. Overlap is common on an east-west axis; it is not so prevalent between the towns of the north and south, an arrangement shown diagrammatically in figure 6:3.

Confusion is introduced to this pattern by the coalfield towns: Broseley, Madeley, Shifnal and Wellington. This group of towns ensures that the eastern half of the county is well served. By contrast the west is less well catered for; Bishop's Castle is the only town with substantial links into Wales. Between Bishop's Castle and Oswestry there are no other towns; it is likely that people from this area would have patronised the Welsh markets of Montgomery and Welshpool, just over the border, as frequently as the English markets. This seems more probable when one considers the frequency with which Welsh place names and anglicised Welsh names occur in this area of Shropshire.




Map 6:3 Destinations served by the transport services of Shropshire towns in 1797




Map 6:4 Destinations served by transport services, Shropshire towns in 1822

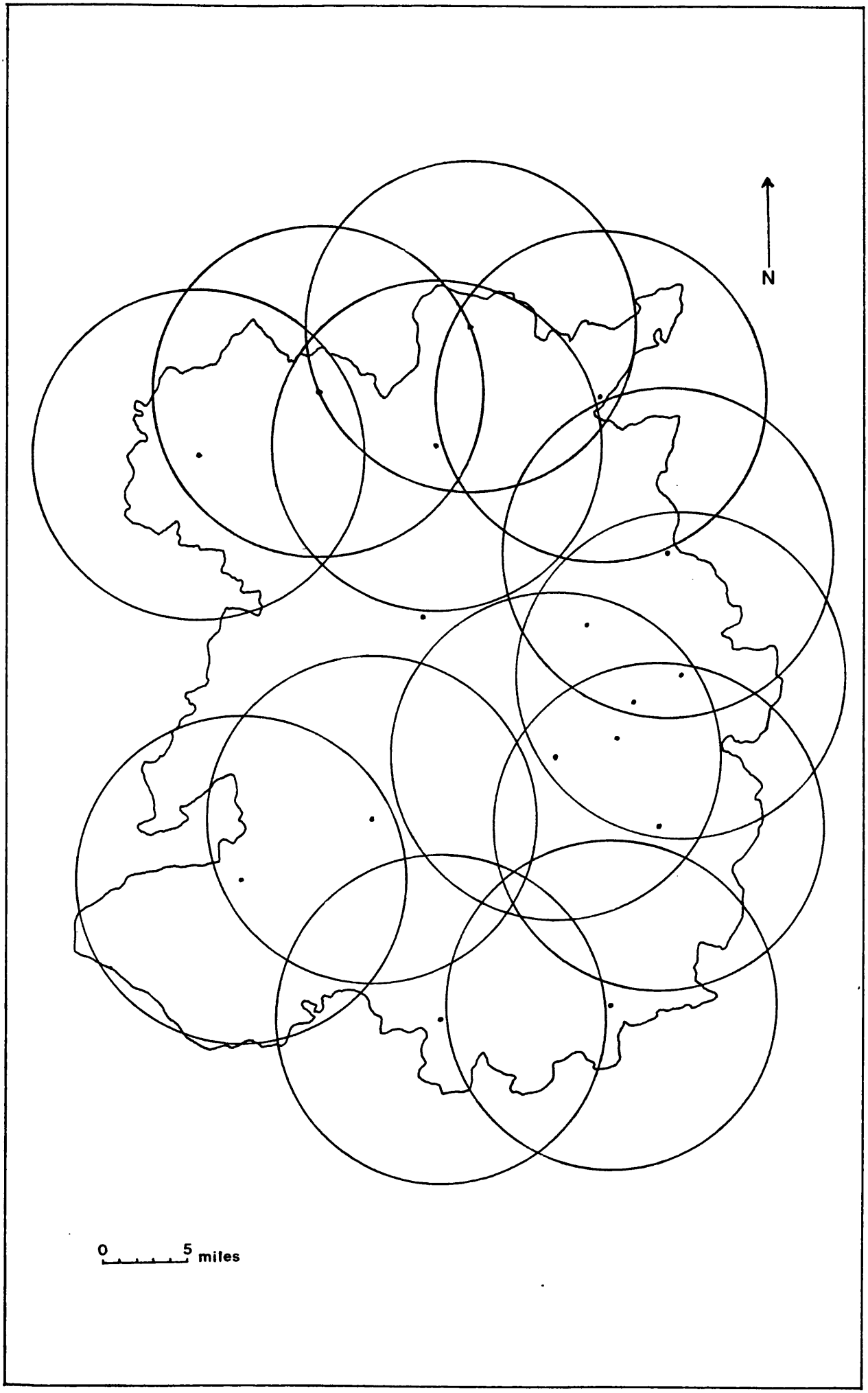



Fig 6:3 The overlapping market area areas of small towns in Shropshire

The material from the 1822 directory shares the same basic characteristics as those outlined above. However the linear, directional distortions to the circular market areas of most towns have increased in number. The market areas of Ludlow, Bridgnorth and Whitchurch, encroached upon, and led to a relative contraction in those of smaller centres. Cleobury Mortimer, Clun and Market Drayton were particularly affected as these towns are not situated on any of the major through road or water ways.

A comparison between the hierarchies of towns derived from transport links and from occupational data, shows a fair degree of correlation at the top and bottom of the hierarchy, but a number of discrepancies in the ranks of the middle order towns. The higher ranks of Wellington and Shifnal in terms of transport services have already been mentioned. It is suggested that this represents specialization in response to the external influence of the London to Holyhead road. In 1797 Oswestry, Much Wenlock, Ellesmere, Newport and Market Drayton are considerably lower in transport rank than in functional index. The fact that there are no recorded services operating from Market Drayton may account for the discrepancy in this case. However, one has to assume that the other towns were less developed in terms of communications. This assumption is supported, in the cases of Oswestry and Ellesmere, by the low nodality scores they exhibit in the data set taken from Baugh's map of 1808.[7]

The reverse is true of Much Wenlock; the functional index of this town in 1828 puts it lower down the urban hierarchy than its transport services would. In this case it may be that the route of the 'Hibernia' (a coach from Shrewsbury to Cheltenham which passed through Much Wenlock and Bridgnorth every day) has distorted what would otherwise be a lower total of communication link. The thoroughfare function of Much Wenlock puts the town further up the hierarchy, similar to Wellington and Shifnal. Among the other towns, the correlation between the two data sets is good; so to is that with the road network information taken from the 1808 map; though on this basis one might have expected a slightly more extensive service from Wem.

FOOTNOTES

1. PIGOT and COMPANY London and Provincial New Commercial Directory (London 1822).

2. BARFOOT and WILKES (1797) op.cit. Appendix p.39.

3. For example Bridgnorth inventories from the Hereford Record Office (H.R.O.) include those of Richard Hagar 1638, T. Preene 1666, R. Ashbury 1666, Richard Easthope 1700 and John Andrews 1704, all barge or trowmen. Among the Broseley inventories sampled (also in H.R.O.) those of John Robinson 1612, George Roberts 1662, F.Benboe 1710, T. Holmes 1702, J. Oakes 1744, J. Rowley 1750 and William Yates 1748 were just a few of the bargeowners and trowmen listed.

4. (S.R.O. 1416/81).

5. (S.R.O. Q/254).

6. This is the same technique as was used in Chapter 5 to derive connectivity hierarchies.

7. TRINDER, B. (ed) Robert Baugh's Map of Shropshire 1808, (Shrewsbury 1983); see also Chapter 5 and maps 5:1 and 5:2 and figures 5:1 and 5:2.

## CHAPTER 7 - The Relationship between Urban Status and the Size of the Complementary Region as Revealed by an Analysis of Settlement and Market Data

The sources used in analysis so far have been county wide, and have risked sacrificing quality for comparability. They have also concentrated on links extending out from the towns, and have therefore tended to emphasize the linear qualities of the network. The less comprehensive sources are market toll books, poor law documents, and private family and business accounts. Where they survive for the county they are suggestive of rural-urban links from the perspective of the hinterland. A brief consideration will be given of these sources at this stage. They will be considered in greater depth in later chapters.

Poor law documents recording the settlement and removal of migrants survive for seven of the small towns and span the period 1620-1780. They indicate the distances over which individuals would move in search for work and are thus an indication of urban spheres of influence. However, long distance travellers, of which there are surprising numbers, may well have arrived in a town by chance rather than design, it being in their path to a more distant destination. A detailed assessment of urban spheres of influence could take this point into consideration by noting the personal histories of migrants. Settlement examinations often state reasons for travelling, intended destination and deviations from the route made in the course of a journey. For the purposes of the present survey the problems raised by these issues will be avoided by concentrating on shorter range movements. Those of greater distance will be considered if they occur in sufficient numbers to indicate a significant trend.

The settlements of immigrants and the destinations of emigrants were mapped for each town. Concentric rings of 6 miles (traditionally recognised as the market area of medieval towns), 12, 18 and 24 miles were constructed and the number of people moving to and from the town within these zones was then calculated.[1] A ring at 3 miles was added as a measure of immediately local movement (table 7:1).

Table 7:1 Population migration as a measure of urban hinterlands using data generated by settlement laws in the seventeenth and eighteenth centuries

| | No. of people moving to and from towns within the various zones | | | | | | |
|---|---|---|---|---|---|---|---|
| | less than 3 miles | 3-6 miles | 6-12 miles | 12-18 miles | 18-24 miles | Further than 24 miles | Total |
| Bridgnorth | 176 | 39 | 31 | 25 | 20 | 38 | 329 |
| Broseley | 48 | 21 | 12 | 7 | 7 | 20 | 115 |
| Cleobury Mortimer | 30 | 26 | 46 | 29 | 32 | 23 | 186 |
| Ludlow | 56 | 30 | 64 | 63 | 39 | 128 | 380 |
| Madeley | 39 | 9 | 9 | 12 | 3 | 4 | 67 |
| Much Wenlock | 65 | 99 | 93 | 18 | 11 | 48 | 334 |
| Whitchurch | 9 | 88 | 133 | 36 | 37 | 27 | 330 |

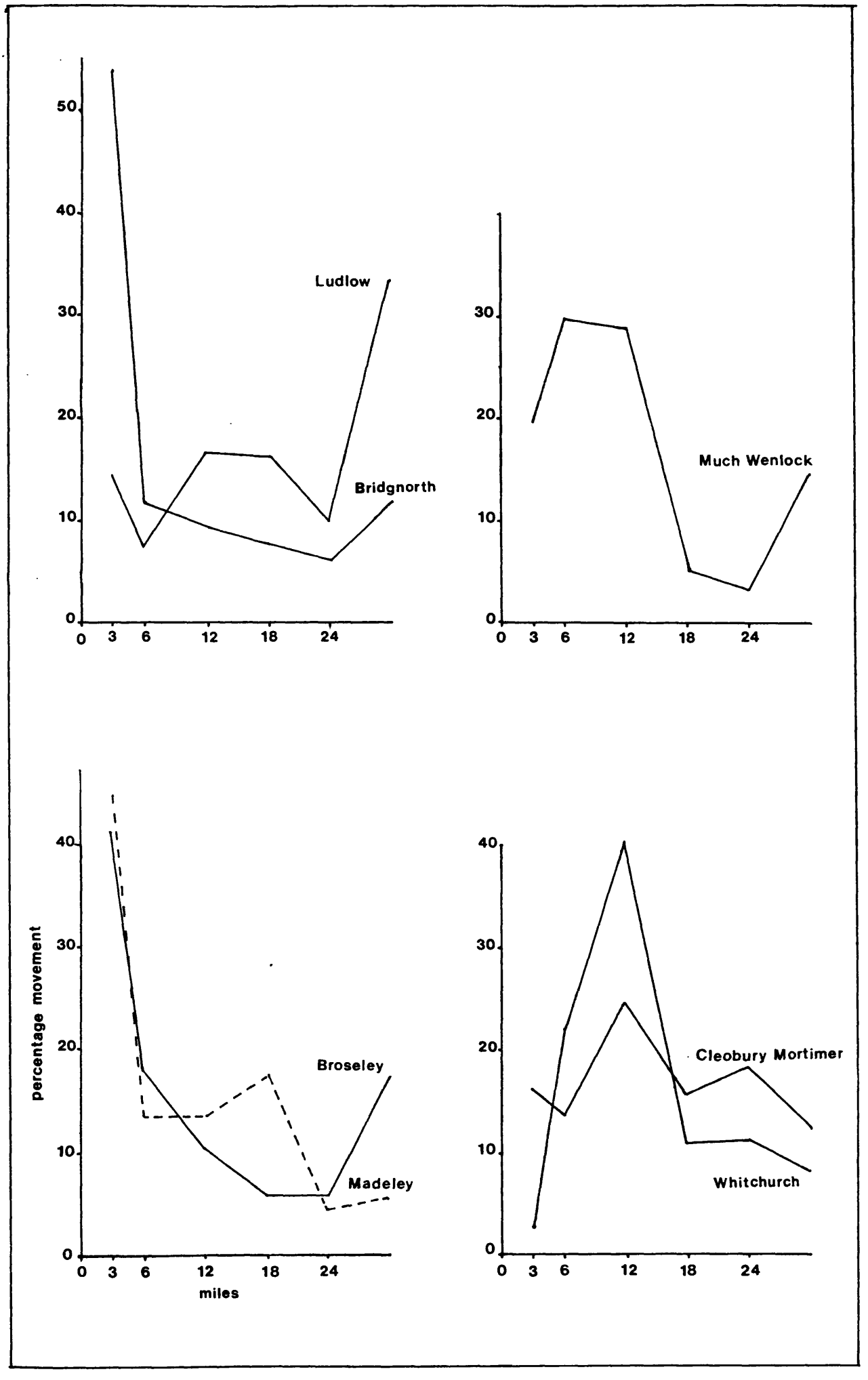



Fig 7:1 Migration profiles for seven small towns in Shropshire

The figures were then converted to percentages of the total number of settlements recorded and the towns were compared on this basis.

Ludlow, Bridgnorth and Whitchurch are the largest towns for which settlement papers survive, but as the graphs in figure 7:1 show, their population movement profiles vary considerably. Data for Ludlow survives in greatest abundance and records the movement of 380 people over a discontinuous 130 year period from 1650 to 1780.[2] As the graph shows, there is a considerable amount of local movement within the 3-mile zone. Approximately 15% of all movement occurs within this area. Stanton Lacy and Bromfield are the villages from which many of Ludlow's migrants originate. The former is the nearest village to Ludlow up stream in Corvedale; the latter occupies the same position in the valley of the Teme. Therefore both were in positions to facilitate movement towards the small town. Few people move from between 3 and 6 miles from Ludlow and the most significant distances are between 6 and 18 miles from the town. This zone accounts for 33% of all population movement. The majority of people (56%) moving through Ludlow and coming into contact with poor law come from within 18 miles of the town.

A threshold has been identified at 18 miles but it appears that long distance movement was also important to Ludlow. One third of all migrants are seen to move over 24 miles; many move to and from major towns such as: Bristol, Birmingham, Chester, Dudley, Liverpool and Worcester. The north-south road running through Ludlow from Bristol to Shrewsbury, Chester and Liverpool is marked by pockets of concentrated movement along its course. The industrializing Midlands also generates population mobility. Birmingham has already been mentioned; Dudley, Bromsgrove and Rowley Regis are all places from which significant numbers of people travelled to Ludlow. Otherwise no marked distortions occur to suggest that the concentric rings favoured by model makers do not adequately describe the sphere of influence of this town.

Bridgnorth has a very different profile and one which demonstrates the classical ideas of distance decay incorporated in Christaller's model.[3] Indeed, of all the towns for which this

type of data survives, Bridgnorth is the one which typifies these principles. As the profile shows (see figure 7:1) over half the movement between Bridgnorth and its hinterland occurs within 3 miles of the town. The threshold identified is therefore considerably smaller than that of Ludlow. This may be a function of the fact that the town consists of two parishes. Movement between the two accounts for many of the entries plotted on the graph. In towns of only one parish this degree of local movement would go unrecorded. However, the sample size of 329 entries for Bridgnorth over the period 1690 to 1760 is greater than that of Ludlow and in this respect the data probably constitute a satisfactory and representative sample. Rural migrants are more important in Bridgnorth and ensure that directional features in the hinterland are minimised. This emphasis also contributes to the pattern of distance decay, a pattern which is only disrupted by pockets of high urban mobility. Movement over distances greater than 24 miles is concentrated on towns. It occurs in all directions: Devon, Middlesex, Northampton, Cheshire and Wales; but, unlike Ludlow, only accounts for 11% of all movement.

Whitchurch displays yet another pattern of mobility with movement rising to a threshold at 12 miles after which a pattern of distance decay is observed.[4] Local movement occurs between the settlements of Prees, Marbury, Malpas and Hanmer, all of which are over 3 but less than 6 miles away. The first stage therefore sees less mobility, while the second accounts for just over a quarter of all movement. Movement centring on Whitchurch from 6 to 12 miles away is clearly most important and accounts for 40% of all movement. The small towns of Wem, Ellesmere, Market Drayton and Nantwich are all within 12 miles of Whitchurch and frequently appear in the settlement documents.[5] Unlike Ludlow and Bridgnorth movement to and from Whitchurch over distances greater than 24 miles is of only limited significance, accounting for only 8% of the total. Long distance movement tends to be isolated; Birmingham which has six people recorded as moving between it and Whitchurch, is the only place to record more than two. Whitchurch had a good system of roads radiating from it and points along these are marked by high mobility. Like Ludlow this is the case with the north-south road; Chester, Wem, Prees and Shrewsbury are all settlements linked to Whitchurch by

greater than average mobility; so too are Newport, Birmingham, Ellesmere and Nantwich.

Much Wenlock is similar to Bridgnorth in that movement between the town and the local rural area is important. Nearly half the people moving do so within a radius of 6 miles. Of these a third travelled either to or from Broseley, making it the single most important urban centre in Wenlock's hinterland.[6] Middle distance movement between 12 and 24 miles away was of little importance to Wenlock. Bridgnorth, Church Stretton, Shrewsbury, Wellington, Broseley and Madeley, are all within a 12 mile radius and these were the towns with which it had best communications. The relief of the area also affected these links. There is northeast-southwest orientation to movement; an orientation shared by the roads and valleys around Wenlock, following the line of the limestone ridge, Wenlock Edge. The Edge terminates at its northern extremity in the transverse valley of the Severn, through which links with the industrializing towns, and with Bridgnorth to the southeast, were maintained. The evidence of functional diversity and nodality also suggests that the influence and reputation of this small town was essentially local, by comparison with that of larger centres like Bridgnorth and Ludlow.

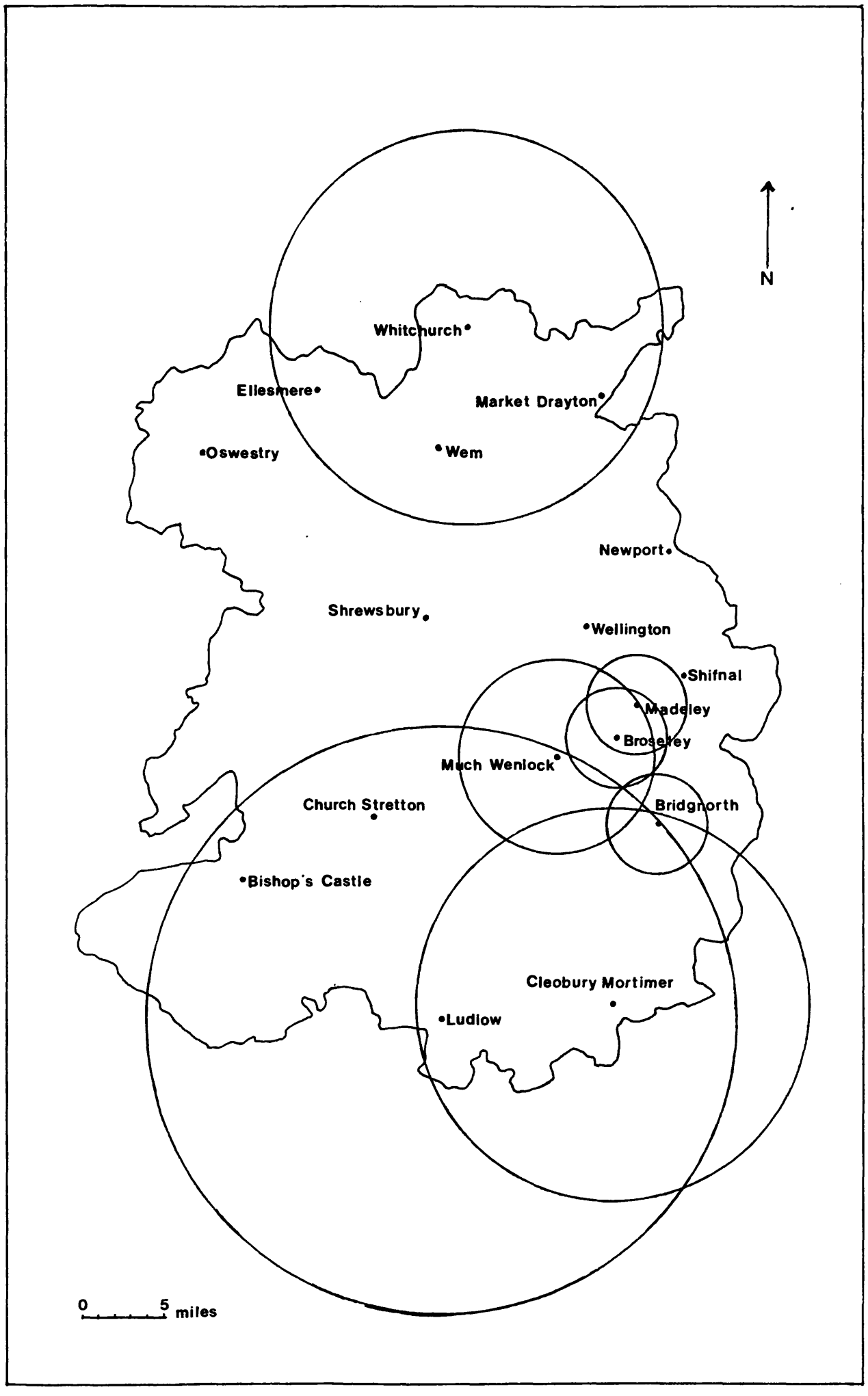
The same pattern could apply to Church Stretton. This town is even lower down the hierarchy than Much Wenlock but occupies a similar geographical position, in this case on the eastern flank of the Long Mynd. The Mynd is another ridge feature which follows the same line as Wenlock Edge and is separated from the latter by Ragleth Hill, Caer Caradoc, and a series of brooks running northeast-southwest. Indeed, the position of Church Stretton is more extreme that that of Wenlock; its sphere of influence could therefore be even more restricted. However, as no settlement documents survive this had to remain a hypothesis.

Movement to and from Much Wenlock over distances greater than 24 miles occurs over greater rather than lesser distances. It occurs to the southeast and north, rather than west to Wales, or east to the Midlands. Four people are recorded in London, and one each in Leeds,

York, Newcastle on Tyne and Bradford. Before drawing any conclusions it is necessary to consider the individual circumstances of each migrant. Such considerations might yield illuminating information. Clearly migrants would sometimes travel very great distances in the early modern period.

Broseley has also been identified as an important town for Much Wenlock migrants. Short distance local movement is equally important to the two industrializing towns of Broseley and Madeley.[7] In both cases 40% of all movement occurs within 3 miles of the towns and much of this is actually between the two towns. More than half the recorded movement occurs within 6 miles of each town. The local centres of Madeley Wood, Benthall, Ironbridge, Dawley, Barrow and Much Wenlock are important for both towns. Much of this mobility could perhaps be accounted for by the movement of casual labour from one industrial work place to another. During the early modern period production rates in the iron and coal industries fluctuated in response to uneven and periodic demand. Therefore labour also had to be flexible and mobile, even if this meant moving only from one furnace or mine to another in the same local area.

In the case of Broseley, middle distance movement was relatively unimportant. Though the industrializing centres of the Midlands were within 24 miles of the town there was little movement in their direction. A more important link is seen with the potteries in Stoke on Trent and Burslem, over 24 miles to the north. This was probably an industrial link as Broseley parish incorporated a tile works and its own pottery industry by the late eighteenth century. By contrast Madeley displays a closer link with the West Midlands. Wolverhampton, Dudley, Stourbridge and Harborne were nearly all within 24 miles of the town and the graph shows a corresponding rise at this point (see figure 7:1). Some middle distance movement also occurred along the main road to Shrewsbury through Sheinton, Cressage and Cound. The Severn could itself of course have formed a transport link, but as with Bridgnorth, it seems to have little effect on the areal extent of the hinterlands of either Broseley or Madeley. As table 7:1 shows the data sets for both small towns are the smallest of any used so far. Broseley has records for 115 individuals over the




Map 7:1 Urban spheres of influence delmited by population migration

period 1630-1770, while Madeley has only 67 over the 160 years between 1620 and 1780. The observed pattern of movement must therefore be seen in the context of these limited data sets.

Cleobury Mortimer is the only other small town for which settlement documents survive. The movements of 186 individuals over the period 1699 to 1833 have been recorded.[8] A 12-mile threshold is identified for this town and 54% of all movement takes place within this area. Within the 6-mile zone local villages such as Kinlet, Stottesdon, Neen Savage, Neen Sollars and Hopton Wafers provide Cleobury Mortimer with many of its immigrants and indicate that rural-urban migration is a significant factor. Within the 12-mile zone the small towns of Ludlow, Tenbury, Bridgnorth, Bewdley and Kidderminster are found. With the exception of Bewdley and Kidderminster these generate fewer migrants than the rural villages mentioned above. The former records five, the latter eight migrants; hence inter-urban movement, especially to the east, does play a part in the formation of Cleobury's complementary region. In addition the urban centres of Bilston, Dudley and Rowley Regis are largely responsible for the increase in migrant numbers seen in the 18- to 24-mile concentric zone. As with Whitchurch, people moving distances over 24 miles have a less significant role to play in this town's hinterland. Those that are recorded are found only in neighbouring counties.

Cleobury Mortimer also has industrial features. The Clee Hills just to the north of the town had long been mined for iron ore and coal to be used in the forges and furnaces in the valley of the river Teme.[9] It is possible that the pool of industrial skills in this area was similar to that of the Black Country towns to the east. This promoted movement in an easterly direction. If this is so, then it shows that external influences are capable of distorting the concentric rink pattern of an urban hinterland. Map 7:1 summarises the threshold spheres of influence for each of the towns considered. It shows that areal extent is not always positively correlated to urban status as measured by the other variables of functional index and nodality. For example, the substantial town of Bridgnorth has a complementary region with a radius of 3 miles while Cleobury Mortimer (a much smaller town), has one of 12 miles.

It is clear therefore, that the principles of distance decay, enshrined in the assumptions made by Christaller, are subject to distortion. The assumptions must therefore be relaxed. The isotropic plain in which the towns are theoretically located does not exist. Instead it is characterized by forms which may promote movement in one direction while discouraging it in another. Accessibility is not therefore even throughout the plain. Local features, such as rivers and mineral deposits, promote the specialized development of some areas so that opportunities for individuals vary through the plain. This also gives rise to directional bias in movement. In addition the plain is subject to external influences and cannot be considered as a closed system. In this case the industrializing Midlands, London and the urban centres to the north, such as Liverpool and Chester all have to be considered. Lastly, it becomes increasingly apparent that different urban functions result in the development of different spheres of influence for each town.

A brief consideration of economically determined market areas will now be made for the three towns of Ludlow, Bridgnorth and Whitchurch. A comparison with the spheres of influence generated by settlement documents will show exactly how important Losch's development of Christaller's theory was.[10]

Horse fairs took place in both Ludlow and Bridgnorth during the seventeenth and eighteenth centuries. All transactions made were entered in a book recording the names and places of origin of vendors and customers. The extensive nature of the source for both towns required the institution of a sampling technique. Samples of one year in every twenty were taken. The intervals were approximate because care was taken to select years in which a significant number of transactions took place, thus giving the best indication of the market area. Six sample data sets were taken for Ludlow between 1646 and 1800. The records for Bridgnorth did not cover such an extensive time span and four samples were made between 1644 and 1700.[11] The system of concentric rings was then used to assess the distances travelled to market by vendors and purchasers. The results are shown in figures 7:2 and 7:3 and describe an essentially similar picture.

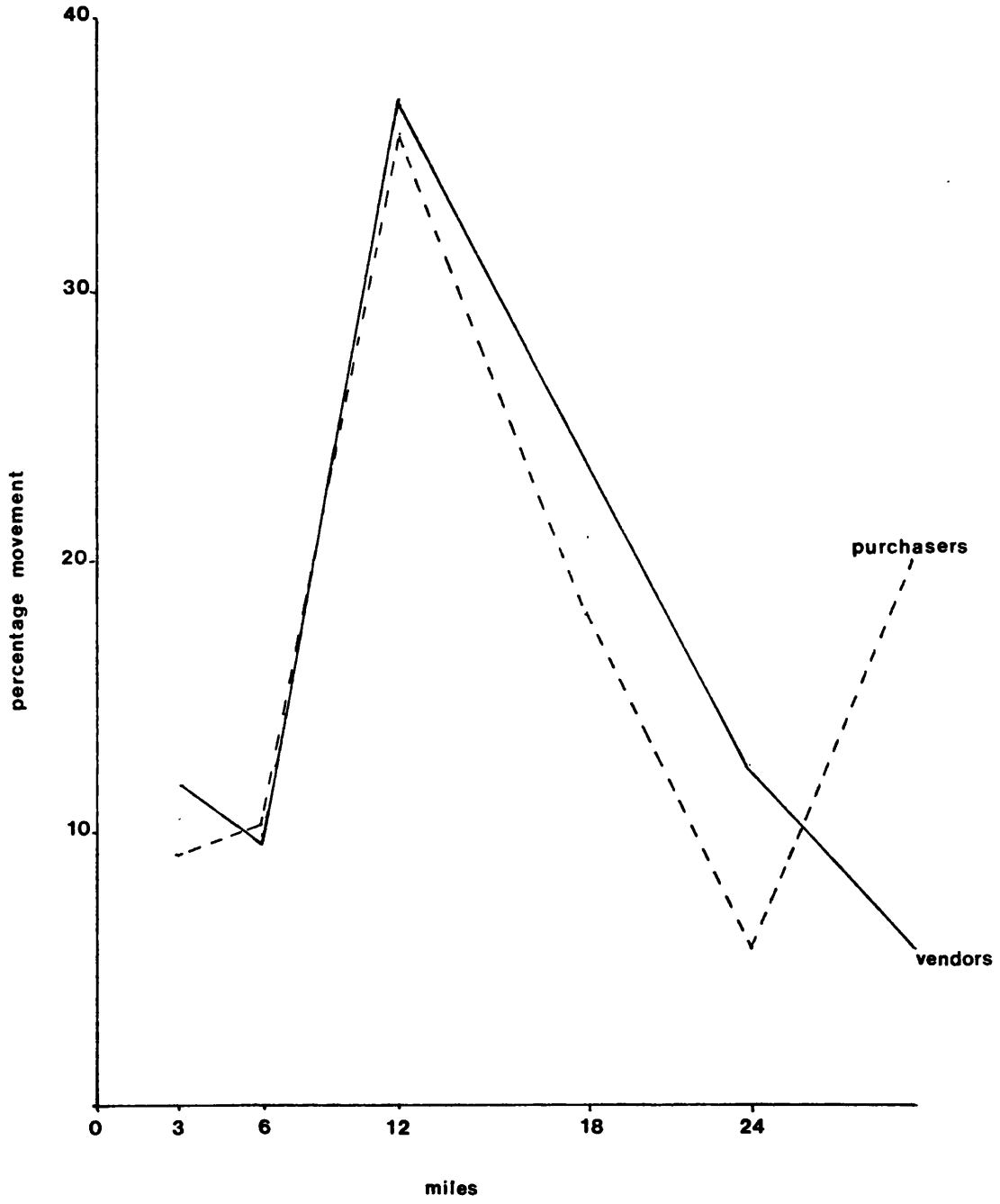



Fig 7:2 Distance to market travelled by vendors and purchasers at Ludlow horse fair, 1646 - 1800

In the Ludlow records it appears that over half the people attending the fair travelled 12 miles or less. A threshold has therefore been placed at this distance. Beyond 12 miles the number of attendances falls off, and in the case of vendors it does not rise again. Purchasers display a slightly different pattern as their numbers rise again at distances over 24 miles. Indeed 20% of all customers attend from such a distance, while only 5.9% of vendors do so. This indicates that the function of a horse fair has its own complementary region. This may be divided into two sub-groups of purchasers and vendors; the latter generally travel shorter distances.

It appears that the two groups also come from different locations; vendors travel predominantly from the west and northeast, Wales and the Shropshire Hill country: the breeding grounds of the horses. They find their market in customers from the east and south-east, particularly from towns such as West Bromwich, Halesowen, Pershore, Bewdley, Tenbury and Cleobury Mortimer. The larger numbers of long distance purchasers over vendors is a function of the development of specialist horse traders; men of an almost foot-loose character who travelled from one fair to another, buying and selling horses over long distances for profit.[12] Horse traders are also a feature of the Bridgnorth Fair, which follows the same pattern as that of Ludlow, except that the decline in attendances after 12 miles is much less steep. Large numbers of purchasers and vendors still travel from within 18 miles; only after this point do their numbers really fall off sharply.

The threshold for Bridgnorth must therefore be placed slightly further from the town than is the case with Ludlow. Vendors and purchasers come in almost equal proportion to the fair from between 12 and 24 miles away; after 24 miles the number of purchasers is greater. Similarly, the number of vendors attending from 3 miles away or less is greater than that of customers. This indicates that the local population has a greater propensity to sell than buy horses, though local markets also certainly exist. A directional bias is again seen in the market areas of both purchasers and vendors; one that complements that displayed in the Ludlow data.

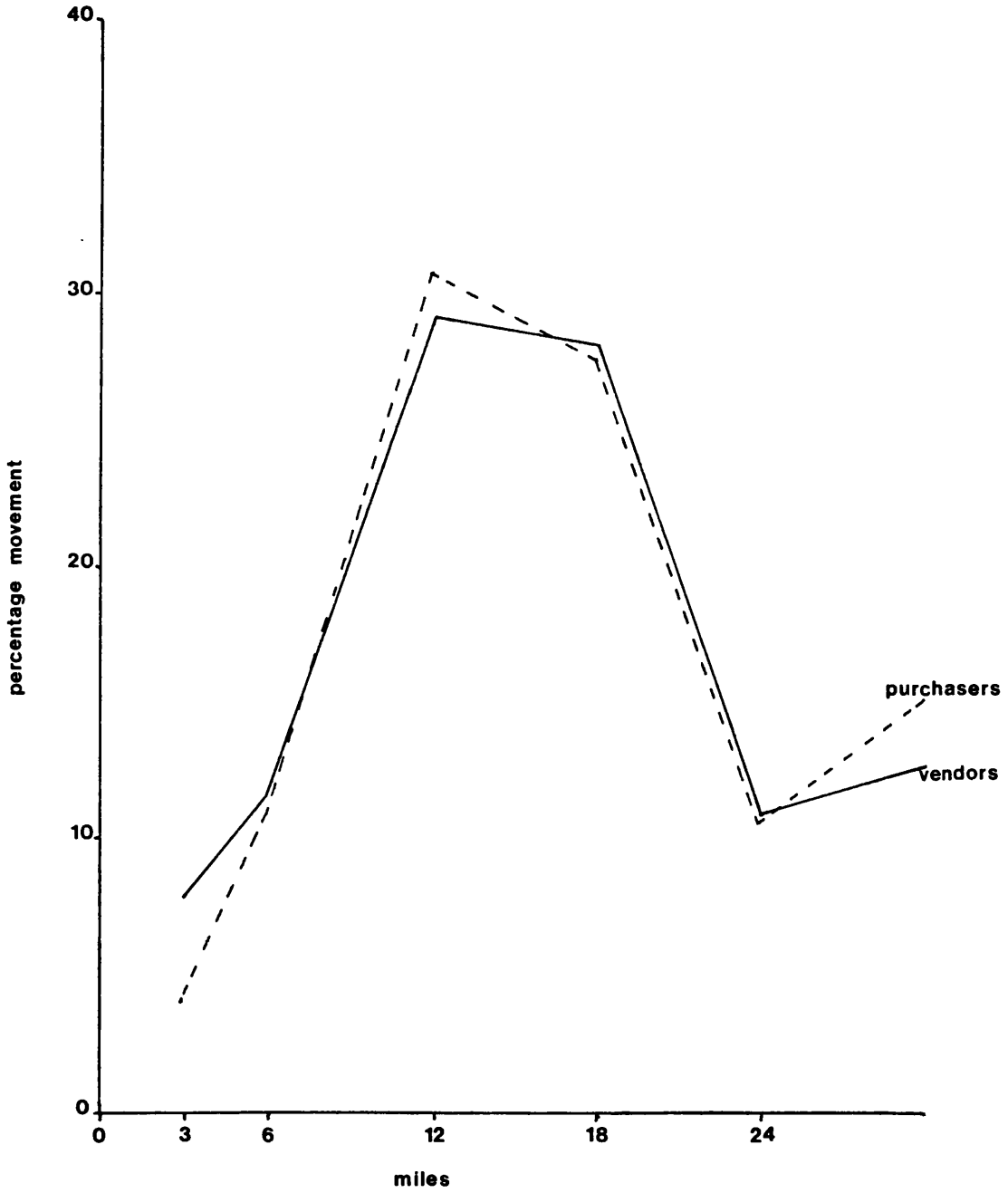



Fig 7:3 Distance to market travelled by vendors and purchasers at Bridgnorth horse fair, 1644 - 1700

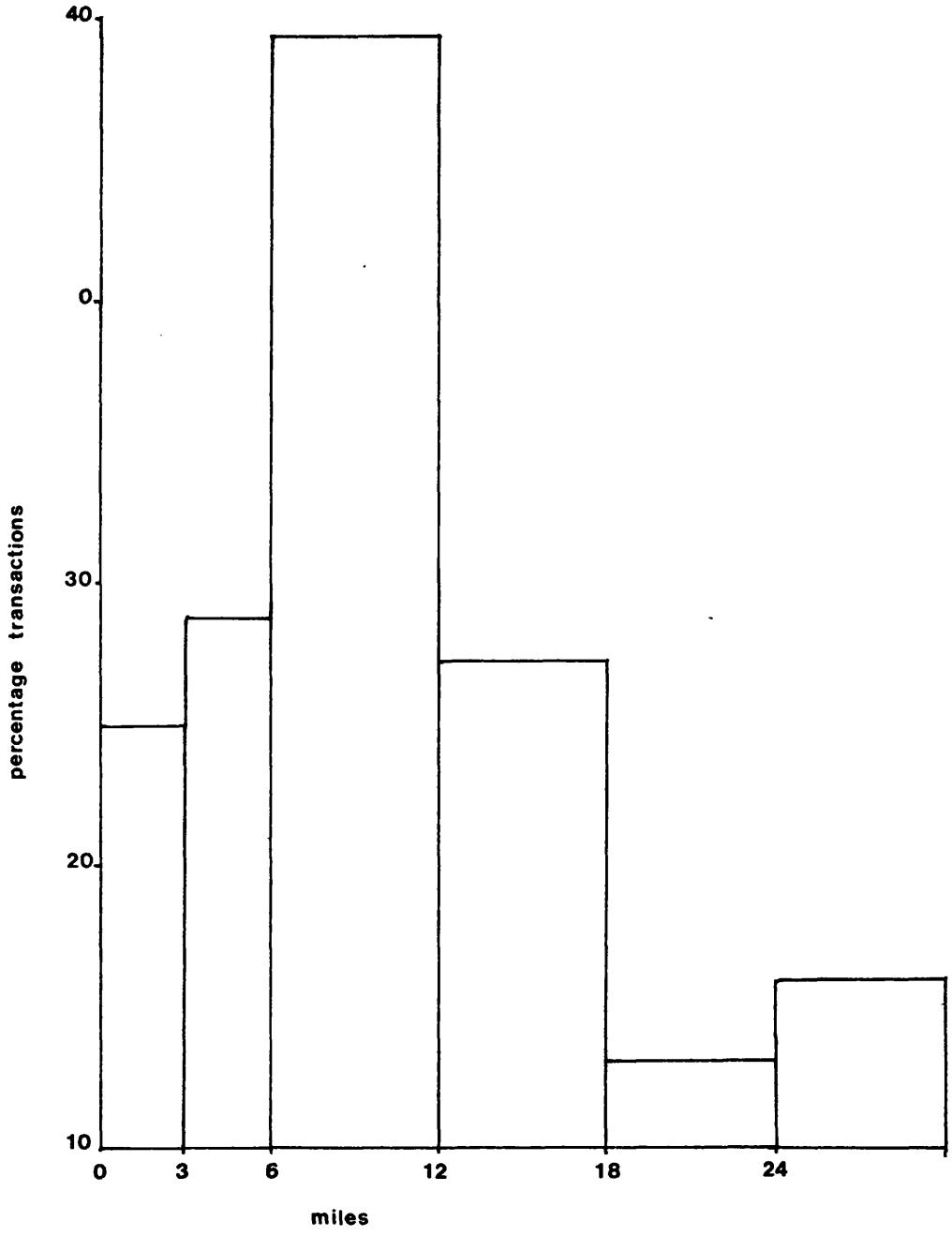



Fig 7:4 The market profile of Richard Payne a Whitchurch cheese factor, 1770 - 1775

Vendors come from hills to the west, especially from areas round the Long Mynd: Cardington, Rushton, Diddlebury and Church Stretton, and from towns in the north such as Shifnal and Newport. By contrast, purchasers attend most frequently from the Midlands towns of Kidderminster, Bromsgrove and Stourbridge and from the south: Worcester and Tetbury. Bridgnorth Fair sees no purchasers from Wales, and fewer from the southwest and Leominster. Its bias is more to the east than that of Ludlow and in this way the two fairs share the market potential of the regions they cover.

The final example to be used is that of the cheese trade of Richard Payne, a factor in Whitchurch. Records survive in the form of letters and lists of suppliers and customers.[13] This material was mapped and analysed in the same way as that of the two horse fairs. A similar pattern to that of the horse trade is observed; transactions rise to a peak at between 6 and 12 miles from the town. Beyond this the numbers decline reaching a low point between 18 and 24 miles distant, after which a slight increase is again experienced (see figure 7:4). If further concentric rings were added at 6-mile intervals beyond the 24-mile mark the distance decay characteristics would doubtless continue. It therefore seems that the increased number of transactions beyond this point is a function of the larger area covered by this category. Unlike the material from the horse fair that of the cheese trade shows no directional bias. Exchange occurs relatively evenly throughout the market area in the way indicated by Christaller.

FOOTNOTES

1. DODGSHON, R. A. and BUTLIN, R. A. (eds) An Historical Geography of England and Wales (1978) p. 109.

2. S.R.O. 356/504-508).

3. S.R.O. 3662/P/3.

4. S.R.O. 131/3.

5. ibid.

6. W.B.R. Q1/5/1-265 and Q1/3/1-2.

7. ibid.

8. S.R.O. 3959/P/135-315.

9. PAGE, R. "Richard and Edward Knight: Ironmasters of Bringewood and Wolverley", Transactions of the Woolhope Naturalists Field Club, Vol. XVIII (1979) passim.

10. Losch was aware of the fact that settlements create different market areas for different types of goods. He incorporated this into his development of central place theory by introducing city rich and city poor zones in the urban hinterland. See Chapter 4 for further discussion.

11. S.R.O. 4001/Mar/1/268-270 (Bridgnorth); S.R.O. 356/465-468 (Ludlow)

12. EDWARDS, P. R. "The Horse Trade of the Midlands in the Seventeenth Century", Agticultural History Review 28, No. 2 (1979) passim.

13. S.R.O. 1416/93/6; 1416/90/A; 1416/81.

## CHAPTER 8 - Conclusion to Part I

This section has made use of geographical location models in the historical context. These concentrate on two main themes in the urban system, that of an urban hierarchy and that of an urban sphere of influence. A number of assumptions tend to be incorporated into these concepts. For example, one tends to assume that there will be only one hierarchy and that this will be a function of population size. One assumes that a town has a single sphere of influence, the extent of which is positively correlated with its position in the urban hierarchy. Therefore similar sized towns have similar sized complementary regions. Further assumptions about the location of settlements have been made on the basis that greatly overlapping complementary regions or market areas make little economic sense. Larger towns will therefore be spaced further apart than smaller ones, and there will tend to be fewer of them.

The investigation of such concepts in the context of Shropshire's towns in the seventeenth and eighteenth centuries has attempted to show their strengths and weaknesses. A limited range of sources has been used in order to maintain comparability within the urban network as a whole. This has also led to a concentration on the latter half of the period under review, as few earlier sources survive which cover the complete system of towns. Once the principles behind the organization of the urban network have been investigated at the county level, they provide a platform on which to construct a more detailed and informed picture of the development of small towns. This will employ an inter-temporal perspective to examine the development of the network using a wider range of contemporary sources.

The survey has shown that the key concepts of hierarchy and complementary region have received a justifiable emphasis in theories of urban location and organization. However the assumptions necessary for their rigid enforcement must be relaxed. These assumptions reflect the preoccupation of such theories with economic criteria, behavioural patterns which are logical in only economic terms. A preoccupation with the service sector, and dismissal of

primary and secondary industry, have also led to the distortion of reality by the models discussed. The inclusion of these economic sectors, and of administrative, political, social and physical influences on the system, demands a modification of the assumptions made in the theoretical hypothesis.

Analysis of Shropshire small towns demonstrates the existence of hierarchies. These are dependent on the data from which they are derived. The measures of populations size, functional index, centrality and nodality employed yield independent though not entirely dissimilar hierarchies. Spheres of influence assessed in terms of threshold and range also vary for each town. This depends on whether migratory patterns, communication services, direct transport links or business accounts are used as the basis of measurement and analysis. Furthermore, the relationship between urban status and size of complementary region is not always straightforward. For example, Bridgnorth, which repeatedly attains high ranks in the hierarchies, has a correspondingly extensive market area measured in terms of horse sales, but one of the smallest when movements of migrants are considered. In the same way Wellington and Shifnal, which appear as middle to lower order towns in the hierarchy, have a specialized transport service function, because of their location on a major national through-route. Their complementary regions, when assessed on this criterion are correspondingly distorted.

Christaller's model provides a framework from which to begin an investigation of the location and status of towns in an urban system. It is the nature of the model building exercise to simplify complex realities. The economic and social factors not incorporated in the Christaller model become a feature of the analysis through the process of delineation and explanation. The patterns thus outlined remain essentially spatial in emphasis. Economic and historical theory may then be used to complement the spatial dimension and lessen the perceived inadequacies of the models so far considered. Geographical location theory is concerned not only with spatial concepts but with economic concepts: supply, demand, purchasing power and transport costs. The historical development of the economy in this period therefore has an essential role to play in the growth of

urbanization. The next section will therefore concentrate on economic aspects of the evolution of the urban system in Shropshire in the context of contemporary commercial, industrial, technical and fiscal developments.

# Part II

## The Urban System of Shropshire 1600-1830:

## The Economic Dimension

## Chapter 9 - Economic Classification Systems in Urban History

The emphasis in the previous chapter has been on the spatial arrangement of small towns and their existence as part of an urban system. The concepts of market area and functional specialization have been introduced in order to elucidate statements about the spatial conditions in which the small towns are situated. As Watkins[1] has pointed out, location theory and Central Place theory provide insights to, but not explanations of the processes of economic development contributing to such spatial evolution. Location is only one aspect of the order existing in an urban system. The status and size of towns changes over time, some towns disappear from the hierarchy while new ones are added altering the pattern of urbanization. Explanation of this phenomenon can only be achieved through a consideration of the processes of economic and social development operating on the towns in their historical context.[2]

One of the major problems with Christaller's theory is its preoccupation with tertiary and service activities and its failure to incorporate primary and secondary industry. Concessions are made to the influences of transport facilities and administrative policies via the alternative 'K' networks but even to contemporaries these seemed inadequate. Losch's development of a similar theory recognized the existence of manufacturing industries and allowed for the fact that cities of the same hierarchical level may have different industrial structures.[3] In Losch's system the place of a city in the hierarchy no longer predicts the industries to be found in it. Growth is still achieved through the addition of higher level functions but the addition of these becomes a stochastic and ahistorical process. Neither theory provides a clear explanation of the development or growth of towns in a system, or of which activities characterize urban expansion, and which decline. Both fail to consider the contribution to be made by economies of scale, agglomeration factors, import substitution and so on. These are the concepts which history has to borrow from economics to use with those of geography in order to explain as well as describe the urban systems of the past.

There is a tendency to differentiate cities purely in terms of their size and position in a hierarchy. As a consequence of this the observation of their fluctuating fortunes through time has been seen as, "a form of random noise in which the growth of one place is cancelled by the decline of another so as to maintain overall system-wide stability".[4]

The result is often little more than a statistical description of urban fortunes which fails to answer the question "why do some towns grow while others remain stable or suffer absolute or relative decline?" A fuller appreciation of urban differentiation and the differences between growth and development may help to avoid this.

Central place theory considers only central or service functions and therefore has little alternative to the use of status and size as the differentiating features in the urban system. The inclusion of the primary and secondary economic sectors introduces the possibility of a structural classification. Occupational classifications of towns are not uncommon in urban history, indeed Patten lists some seventeen or so alternatives.[5] No classification is without its critics, most although aiming for universal applicability are devised in response to a particular urban system and so seldom achieve their goal. For this reason it has been decided to adopt the simplest of the genre, that which considers towns in terms of basic (export) and non-basic (residentiary) functions. These concepts are again borrowed from economics and their use in the historical context will be supported by the incorporation of the Stages Model of economic development, a combination favoured by Stabler (1970) among others.[6]

Residentiary industries and activities are those which cater for the local market only and are therefore found where the consuming population resides. Typical examples would include baking and butchering. "Export" industries are those which cater for local and external markets. Vining has shown that employment in the former is directly related to that in the latter.[7] The export base, its development and growth, has a vital role to play in the levels of income and growth in the region. Regional incomes are important as

they influence regional demand for the products of residentiary activities. Thus the link between basic and non-basic industry is made.

Locational advantages lowering transfer and processing costs attract export industries and allow nodal centres to develop for the importing and exporting regional commodities. Subsidiary industries to service those of export develop at the nodes in the form of wholesaling, banking and brokerage. A sequence of stages of growth can be postulated for the process.[8] In the first stage agriculture dominates a self sufficient, subsistence economy in which population is located according to natural resources and where there is little investment or trade. In the second stage improved transport (a critical feature in eighteenth century Britain as Eversley has shown),[9] promotes trade and local specialization. This results in an additional stratum of population, people engaged in simple village production of processed goods and handicraft products for a market of local farmers. This may be referred to as the "hinterland" stage. Most of the raw materials for these activities are still based in agriculture so the industrial superstructure is located in reference to the agricultural substructure. This industrial structure may be referred to as the "Traditional Sector".

In the third stage interregional trade promotes agricultural development and further specialization allowing production rates to increase. New techniques encourage structural change and output growth. The introduction of wage labour and population increase, are historically associated with the development of the secondary activities of modern industry. Mining, manufacturing, the large scale industrial processing of products from agriculture and forestry and the development of mineral resources or combinations of these activities may be deemed to constitute the "modern" industrial sector. The final stage is that in which tertiary activities emerge to service the increasingly large scale primary and secondary ones and where not only goods but capital, skilled personnel and special services are exported to less developed regions.

This is a model which applies to uneven regional development

but equally well to uneven urban development. Towns become nodes and trade centres for the rural regions around them. The early modern period saw the increasing concentration of industry and inter- and intra-regional export activities in towns. The subsequent acceleration in the development of basic activities during the industrial revolution was to produce massive urban growth from the 1760s onwards. This was so much the case that the need to industrialize as the classic form of structural change in order to promote growth in total output has become a major tenet in theories of regional economic growth.[10] Its position as such has recently come under scrutiny however, and it is suggested that there is a danger of equating the expansion of basic activities with the growth of industrial output. North, the original propounder of export base theory draws attention to the existence of predominently agricultural areas where a low percentage of the work force are involved in primary agriculture while a high percentage are supported in the tertiary sector.[11] The region is still dependent on agriculture for the high per capita income enjoyed and it is the export of agricultural staples which provide this and therefore support the service activities. Employment in the tertiary sector is not therefore necessarily dependent for its development upon a prior shift from agriculture to "modern" manufacturing industry.

If one expects to see growth in towns with a predominance of basic activities, the relative size of the basic and non-basic sectors should provide a useful method of differentiating towns in an urban system. It is therefore important to know which activities are basic and which are non-basic. Watkins (1980)[12] advocates the use of the following location quotient to assess whether an industry is producing for export or not:

$$\frac{ei}{et} \Big/ \frac{Ei}{Et}$$

ei = local employment in industry i
et = total employment in the town
Ei = National employment in industry i
Et = total national employment

If the location quotient is greater than one then the town is producing a surplus for export, a value equal to one indicates self sufficiency, and a value less than one shows a local deficit and an

orientation towards importing.

The use of location quotients is normally based on the use of employment figures as an indication of the structure of output and incomes. This has the disadvantage that what is really being measured is the degree of labour force specialization. This is then assumed to reflect product specialization for export. Demand is also assumed to be even throughout the system, whereas in reality it could vary. Labour specialization would then reflect production in response to higher demand rather than for export. Alternatives are to look at the number of surplus workers (Mattila and Thompson),[13] or the production and investment of surplus value (Robson),[14] or the ratio of employment in each sector which would give a multiplier for economic growth i.e. if a third of employment is in basic activities and two thirds in non-basic, then the addition of one job in the former will provide two in the latter.

Pfouts and Curtis (1960) have assessed these and other techniques involved in economic base analysis and conclude that though of value, the theory does have limitations.[15] The main caveat they add is that though basic activities can often lead to growth, they rely heavily on residentiary activities to support them. Without sufficient development and growth of the latter, expansion in the export sector may founder. In a city with a poorly developed service sector residents may be forced to import the extra services they require thus retarding the expansion of their own town. Income is also an important factor; if wage levels are high and greater than the propensity to consume, then the tendency will be to save. There is no guarantee that savings will be invested in the local region, and their investment outside it will again retard local development. Even expansion in the export sector may not reverse this as the service sector will not be adequate to meet the demands of the increased population, the income of which will then be diverted outside the region. It seems that an increase in basic investment may lead to an increase in local-serving investment, but if the latter lags behind at all, the incentive for the former to continue to expand will decline, since it is difficult to attract a work force to a town with inadequate residentiary businesses. Where wages are

lower the propensity to consume will be relatively higher and demand for services will be maintained. Residentiary activities are therefore vital to the circular flow of income and to the future of the urban economy. Pfouts therefore recommends a greater appreciation of the effect of income flows in economic base theory.[16]

In the historical context some of these technical objections are waived because of the nature of the data. Most importantly there is no record of the total numbers actually employed in any given industry. Data about occupation is derived from the trade directories, a source discussed in a previous chapter , and from other contemporary sources such as probate inventories, freeman rolls, rent books and tax assessments. It was also suggested in the last chapter that as the directories provide the only consistent and reasonably complete series of information for the network of towns under review, this source was the most suitable for an initial network-wide survey. In the case studies of individual towns in subsequent chapters greater detail and a more extensive historical perspective will be achieved through the additional use of the other contemporary sources of historical data.

The grouping of occupations into categories for the purpose of classification has been a popular exercise among urban historians. Most methods originated in research on particular towns for example, that of Hoskins in his study of Leicester [17], Pound's classification of trades in Norwich .[18] Others were general classifications for example that of Laslett and of Clarkson ;[19] the subject has been discussed widely in articles and chapters by Patten and Armstrong but certain problems have still not been resolved.[20] The major drawback of any classification of trades by type, which is what all the above attempt, is the tiresome recurrence of trades and occupations which refuse to fit neatly into one group or another. For example, should a shoemaker be placed with the leather trades, the clothing trades or among the retailers? Where would his colleague the last maker fit, in the woodworking section or the clothing section?

The problems of categorization become apparent immediately one

embarks on a classification, less immediately obvious but more fundamental in nature, is the problem of defining occupational titles. The listings from which these are taken seldom, if ever, provide any information as to the exact nature of the business. Again using the example of the shoemaker: he could simply be an independent craftsman making and selling shoes, or he could own a workshop with a number of apprentices to make the shoes, while he supervises and concentrates on maintaining supplies of leather and keeping market contacts open. The two cases are very different types of operation, and it is clear that occupational titles may be only a poor indication of what activity people were actually engaged in. The tendency to adopt Booth's occupational listings of the nineteenth century does nothing to remedy the problem.

In the early modern period change was occurring in both agriculture and industry, but for the most part the level of production was essentially domestic. Booth's listings are the product of a more mechanized factory age when the scale of the production unit had increased. Mechanization was not of course complete but the techniques and organization of production had changed the definitions of many occupations. It is therefore unlikely that seventeenth and eighteenth century occupational titles will fit neatly into these nineteenth century categories, a more appropriate set for the age must be designed. The time span of two hundred years which incorporates extensive social and economic change makes it difficult to devise a classification which applies equally well in 1600 as in 1800. Indeed the static nature of occupational classifications has been a common criticism of their use. If one is to be used at all it must certainly embrace the domestic system of production. It must therefore also be one which concentrates on the individual economic agent as the basic and characteristic unit of production in this system until the latter part of the period. Ideally it would be a classification designed to illuminate change through time rather than obscure it.

It is suggested that in order to meet these requirements a combination of classifications should be used. Firstly a technique which avoids problems of occupational definition by employing a

frequency grouping. This method also avoids the loss of detailed information involved in grouping individuals under a blanket class heading. Occupations are recorded in terms of the number of towns in the system in which they occur. For example, if there are ten towns in the system, and bakers are found in all of them, then the occupation of baker is put in frequency group number ten. Other occupations likely to be found in this group may be such common trades as those of blacksmiths and shoemakers. If an occupation is only found in nine out of the ten towns it is entered in frequency group nine, and so on. This classification should therefore tell us something about the trades, as well as shedding light on the economic structure of the towns. It is expected that the most commonly occurring occupations will be from the residentiary group. They will probably be the occupations found in the "traditional" sector. Newer transitional forms of employment associated with industrial change and the "modern" secondary sector will occur less frequently. One could perhaps associate occupations in frequency group ten with low order central place functions. The lower the frequency the more specialized the occupation and the higher the order of function. If one then looks at how many times each occupation in each frequency group is recorded in each town this will tell us something of the system-wide characteristics of the different town economies and their place in the regional hierarchy.

In accordance with central place theory it is expected that the larger towns will contain representatives of most frequency groups. A large town will contain everything from a baker in group ten to an umbrella maker in group one. In addition it is expected that the large town will contain greater numbers of high frequency occupations. Smaller towns, on the other hand, will be restricted to occupations in a narrower range of higher frequency groups, and will have fewer representatives of each trade. Change through time can easily be incorporated in this system. A classification completed for the beginning of the period and one made at its end will probably have frequency groups of a different composition to each other. For example, by the end of the period it may be that the occupation of furnaceman has moved from frequency group one to group three while farm servant has moved down from group ten to group four. This would

be indicative of the spread of industrialization through the urban system and show an increase in wage labour with a decline in live-in workers who receive board and lodging instead of wage payment. The less frequent occurrence of the farm servants may also be a response to improvement and intensification in agricultural practices with resultant changes in the composition and size of the farm labour force.

This is a simplified example to show the flexibility of such an occupational classification in comparison with the more conventional types. However, the additional application of a conventional functional breakdown of urban economies might also help to describe, analyse and explain the differences between towns in the system. A second form of sectoral classification will therefore be employed. This will emphasise simplicity, in order to avoid some of the definitional problems mentioned earlier. It is accepted that all groupings of this type are conditioned to a certain extent by the data used and the period studied. It is not expected to succeed where others have repeatedly failed, so no attempt will be made to postulate a universally applicable analytical format.

FOOTNOTES

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2. LEWIS, C.R. "The Central Place Pattern of Mid-Wales and the Middle Welsh Borderland", in CARTER, H. and DAVIES, W.K.D. (eds), Urban Essays: Studies in the Geography of Wales (1970) pp.229-232.

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Ch.3 McKEE, D.L., DEAN, R.D. and LEAHY, W.D. (1970) op.cit.

8. NORTH, D.C. "Location Theory and Regional Economic Growth", in Ch.3 McKEE, DEAN and LEAHY (1970) ibid.

9. EVERSLEY, D.E.C. "The Home Market and Economic Growth in England 1750-1780", in JONES, E.L. and MINGAY, G.E. (eds), Land, Labour and Population in the Industrial Revolution (1967) p.232.

10. WATKINS, A.J. (1980) op.cit. pp. 154-159.
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12. WATKINS, A.J. (1980) op.cit. p.116.

13. MATILLA, J.M. and THOMPSON, W. "The Measurement of the Economic Base of the Metropolitan Area", Land Economics 31, 3 (1955) p.216, quoted in WATKINS, A.J. (1980) op.cit. p.118.

14. ROBSON, B.T. "The impact of functional differentiation within systems of industrial cities", in SCHMAL (1981) op.cit. p.120.

15. PFOUTS, R.W. and CURTIS, E.T. "Limitations of the Economic Base Analysis", in PFOUTS, R.W. (ed), The Techniques of Urban Economic Analysis (New Jersey 1960) pp.305-340.

16. ibid. p.335.

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CLARKSON, L.A. The Pre-industrial Economy in England, 1500-1700 (1972) quoted in PATTEN, J. (1977) op.cit. p.309.

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## CHAPTER 10 - An Occupational Classification by Frequency Group Analysis of the Urban System

The directories as a source have been discussed in chapter 4.[1] Neither the Universal British Directory or Tibnam's Directory makes any record of Clun, and the former neglects to mention Wellington. The data sample therefore consists of sixteen towns, although information on seventeen is available in the later sample from Tibnam's 1828 Directory.

There are fourteen frequency groups in the Universal British Directory data (see appendix 1) and one further group consisting of gentry and clergy. Gentry are recorded in all towns, clergy are not but this is a result of poor data collection. It is clear from other sources that all towns listed had a church with encumbent at this time so gentry and clergy have been designated as frequency group sixteen despite the apparent absence of the latter in Broseley, Cleobury Mortimer and Madeley (no occupations occur in fifteen of the small towns so there is no frequency group "fifteen"). The poor quality recording of Broseley and Madeley in this source was noted in a previous chapter and is the reason why no other occupations than those above are recorded in all sixteen towns. The second data set from Tibnam's Directory is more complete in this respect (see appendix 2).

Both sources show how the higher frequency groups are dominated by relatively unspecialized occupations some of which are not exclusively urban in character. One might well expect to find shoemakers, bakers and blacksmiths in a rural environment. In this case it is only the numbers in which they occur that render these occupations urban. They are the fundamental activities of any community, which develop in early stages of organization and are typical residentiary functions. Universal British Directory frequency groups 14 to 12 consist of this type of function, the only slightly unexpected occupations being those of surgeon in group 14 and attorney in group 12. Attorneys, like surgeons were among the less specialized members of their profession. Attorneys could act as estate agents, solicitors, lawyers and civic officers. One would

certainly look for them in the incorporated towns and their services were no doubt required by the manorial ones as well, hence their position in group 12.

As one moves down the frequency groups, more specialized occupations begin to appear. Groups 11 to 6 still tend to be standard residentiary activities; the leather, clothing and building trades feature, but the introduction of cabinet makers, hairdressers, druggists and timber merchants, all slightly higher order functions, indicates the greater diversity of activity occurring in certain towns. Specialist craftsmen, members of service activities and large scale retailers or merchants are not seen in the samller, less developed towns of Church Stretton, Cleobury Mortimer and Much Wenlock.

Still further specialization is revealed in the remaining frequency groups where occupations appear more selectively in only three or four towns. The occupations listed in these imply a greater division of labour, and their high location coefficients suggest their presence in only the larger towns with more extensive markets. However, there are of course anomalies often caused by the particular history or location of a town. For example the existence of a habit maker in Much Wenlock was probably the result of the powerful position the priory held as the main property owner in the town until the dissolution. Doubtless the habit maker was also a general tailor by this time but the occupational title has not been dropped. Similarly the existence of an organist and a musician in Ludlow must be ascribed to the presence of a large and prestigious parish church, built on the scale of those in Shrewsbury rather than that of a small town. Ludlow parish church, the largest in Shropshire, was built as a symbol of the town's prosperity in the fifteenth century.[2] It must have had an extensive staff of priests, and the presence of possibly professional musicians clearly merited a mention in the directory. It is probable that other towns were not without church musicians, but if they did exist they were obviously not thought important enough to be recorded, and in the case of smaller churches only part time musicians were employed.

Some of the less frequently occurring occupations are those catering for the luxury market, these begin to appear in group four and onwards. Confectioners, umbrella makers, perfumers and goldsmiths are found in Shrewsbury and the larger towns of Bridgnorth and Whitchurch. Wealthier towns hosting larger numbers of gentry like Shrewsbury, Bridgnorth and Ludlow contain activities and services catering for a more cultured populace. Booksellers, printers, and dancing masters are found only in these towns. Noticeably however, educational establishments are present in most small towns, many had grammar schools established by successful inhabitants returning to their place of birth having made money in business in London or elsewhere. The school in Market Drayton was founded by Sir Rowland Hill, one time Lord Mayor of London, by order of his will in 1551.[3] Oswestry and Newport also had grammar schools set up in this way in the fifteenth and seventeenth centuries respectively.[4]

In other instances the presence of low frequency occupations is a function of specialization rather than diversification. For example directory evidence for the expanding towns of Broseley and Madeley suggests they had relatively poorly developed bases as market towns. Many central place activities of high frequency are missing from them. Coal masters and oil refiners in frequency group one are present however, as is a timber merchant. Similar specializations are seen in Ludlow with the large numbers of glovers and leather workers recorded, and in Market Drayton which has hair weavers, hair bristle manufacturers and upholsterers from frequency groups 1 and 2. The lower frequency groups are therefore a good indication of both specialization and diversification. They contain a range of activities from the traditional high quality, low demand craftsmen like gold and silversmiths, to the industrial workers of a new age: the tin workers, oil refiners and so forth.

The presence of transitional occupations indicating structural change in the economy is particularly noticeable. Bankers and brokers are located in the bigger towns and are a product of the regulation of financial procedures which had been taking place through the latter half of the eighteenth century.[5] Glass factors,

tea merchants, seedsmen, corn merchants and cheese factors mark the expansion of retailing and the decline of the small scale transactions of the market place in favour of bulk buying and capital investment in permanent shops. Both proto-industrial and industrial occupations are found in the Universal British Directory, the former throughout the frequency groups, the latter only in those of lower frequency. The former with their lower location coefficients are found throughout the urban system; the latter still have high coefficients and are innovative activities locating in towns undergoing economic diversification and structural transformation.

By the 1820s when Tibnam's directory was compiled the process of change had advanced and the trends beginning to emerge in the earlier directory are confirmed. As suggested the occupational content of the different frequency groups has altered and the movement of individual occupations up and down the frequencies suggests their rise and fall in economic importance (see appendix 2). The complete absence of gentry and clergy indicates the increasingly commercial bias of the publication. It is now less a list of local notables and more a commercial and business reference book. Status is therefore of little importance and thus it seems probable that this directory is a more accurate record of urban traders. Still missing however, are the growing numbers of wage labourers in the workforce. These would feature in an occupational census but in a source of this type one must assume that the presence of an iron or coal master for example, implies the existence of a workforce for the foundry or mine.

As in the Universal British Directory the highest frequency groups are dominated by standard residentiary activities; maltsters, shoemakers, innkeepers, bakers and so on. The expansion or contraction of this category is largely a function of demand-side influences associated with population change. The size and composition of groups is not completely determined by population change however. Factors on the supply-side also played a part. For example the general purpose mercer found in twelve out of sixteen towns in the earlier period, by 1820 is found in only four. The same is true of breechesmakers and staymakers also from group 12, they

fall to groups 6 and 2 respectively. This is perhaps indicative of a trend of decline among the more traditional retailers and craftsmen/retailers in the face of competition from more innovative tradesmen. This was indeed a period when shops began to establish themselves in greater numbers and at greater levels of specialization.[6] The distance between producer and consumer increased with the finer division of labour and an increasing scale of production to meet rising demand. Articles of clothing and items of food etc. could now be made by one person and sold to another to distribute and sell, indeed this directory even makes a record of one "distributer" with no further details given.

Fashions also changed and some craftsmen must have found their markets disappearing on account of changes in taste in all but the most conservative of areas. The peruke makers found in Bishop's Castle in the 1790s have disappeared completely by 1820. Fashions in nomenclature also affect the frequency groups, for example tailors are replaced by dressmakers in the later directory and the use of the word merchant is increasingly replaced by that of dealer, there are dealers in tea, soap, hats and flour. The changes taking place in retailing are typified by the decline of the hucksters (from frequency group 7 to 1), and the rise of the specialist drapers (linen and woollen drapers rose from group 2 to 13). Retailing was diversifying at this time and shopkeepers, salesmen and dealers are all occupations which progressed upwards through the frequency groups occurring in greater variety. It is clear that this sector of the economy was of increasing importance to small towns as well as the larger county centres.

Some of these changes were also due to income effects and the consequent extension of the social depth of demand for consumer goods spreading through all levels of society. The movement of confectioners, tea dealers, cabinet makers, perfumers, druggists, upholsterers, glaziers and booksellers from lower to higher frequency groups, sometimes as high as group 14, is clear evidence of the spread of demand for products associated with a higher standard of living.These occupations are found in upper and middle order towns by 1820 and only the lowest order and declining and very small towns of

Much Wenlock and Church Stretton are without them.

Structural change in the economy of towns associated with the growth of modern industry is also a feature of data taken from Tibnam's directory. Coal masters and merchants. iron masters and founders, pipemakers, china manufactories and lime burners occur in greater numbers and in more towns. The extractive industries of the Shropshire coalfield had clearly begun to exert a major force on the economy of towns within it. Mines and works were often situated in the urban hinterland, obviously locating where raw materials dictated. However they still had great influence on the growth and development of their associated settlements. The small towns provided market facilities, food supplies for the workforce, and tertiary activities to support the industry such as banks, accountants, and attorneys. Planning and development decisions taken by the industrialists had to be made with reference to the infrastructure and superstructure of towns, for example the availability or construction of roads, turnpikes and bridges, and of local tertiary services and facilities. The growth of industry in the area attracted investment from outside the district, and the export of local products to other regional and national markets added to local income, savings and investment. Thus though the local and endogenous potential for growth had always existed in the form of raw materials, the motivating sources for capital mobilization were often exogenous to the local economy in terms of the point of view of both the supply of factor inputs such as capital and the demand for output.

FOOTNOTES

1. BARFOOT and WILKES. Universal British Directory (1779-1797)
   TIBNAM. The Salop Directory (1828)

2. PEVSNER, N. The Buildings of England: Shropshire (1958) p.177.

3. ROWLEY, N. and ROWLEY, V.S. Market Drayton: a study in social history (Shropshire 1966) p.23.

4. CATHRALL, W. The History of Oswestry (Oswestry 1855) p.85.
   PRENTICE, R. A History of Newport (Chichester 1986) p.51.

5. MATHIAS, P. The Transformation of England (1979) pp.88-115 and pp.190-207.

6. MITCHELL, I. "The development of urban retailing 1700-1815", in CLARK, P. (ed), The Transformation of English Provincial Towns 1600-1800 (1984) p.270.

## Chapter 11 - Occupational Frequency Groups within a Sectoral Framework: The 1797 Data

A categorization of occupations recorded in the Universal British Directory of the late eighteenth century will be employed to bring out the transitional qualities of urban employment prevalent at the time (see appendix 3). Four sectors are identified:

1. the traditional sector of craftsmen/producers
2. the proto-modern industrial sector
3. the retail/wholesale trade sector
4. the service/professional sector

Sector one (I) includes the primary sector of farmers and subsistence producers, farm servants and so forth, and also incorporates traditional secondary occupations (see appendix 3). Thus those involved in the dual economy of handicraft production and agriculture are placed in this group, so too are wage labourers, pure craftsmen, the processors of food (butchers and bakers) and people who make as well as sell their own wares: shoemakers, blacksmiths etc. The overriding feature of this group is the small scale, domestic nature of their occupations, the possible exception being large scale tenant and freehold farmers. It is designed to be a flexible category so as not to demand too rigorous a definition of occupational titles, since the division of labour has not progressed as far in this sector as in the proto-modern industrial sector.

The proto-modern secondary sector forms sector two (II). It is characterized by industrial workers who are distinguished by the division of labour. They work on only a part of the production process, unlike the craftsmen whose work encompasses the whole process from raw materials to finished product. Industrial workers are found in the reorganization of traditional trades and in the introduction of new ones. They seldom sell what they produce but are more typically employed rather than self-employed. They are therefore indicative of the spread of wage labour, the differentiation of the means of production, and the separation of the role of entrepreneur from the workforce. The unit of production becomes the workshop rather than the domestic home, though the latter may survive as the locus of production in cases where the putting out

system or some variant of it exists. The coexistence of industrial workers and craftsmen/producers is typical of the climate of change in both rural and urban economies at this time.

Sector three (III) is the retail/wholesale trade sector. The retailers are people who buy and sell only, there is no production of goods involved in their activities. This sector could perhaps be further divided into wholesale and retail categories. The emergence of wholesalers in particular is associated, in the primary sector, with the change from subsistence to commercial production, and within the tertiary sector itself, from production for the local market to production for an "export" market outside the county.

Sector four (IV) constitutes the service/professionals, this is a more stable group including the clergy, doctors, school masters and so forth (see appendix 3). They are engaged in the supply of service commodities which do not cross the counter but are provided in person and may or may not have professional status. This category includes the traditional occupations mentioned above, but also newer ones such as bankers, carriers, attorneys and solicitors auctioneers and other specialized service occupations. The use of this classification in conjunction with the frequency groupings, and with an approach informed by the distinctions between basic and non-basic activities and the opportunities for growth and development they bring, provides a substantial foundation from which to assess and explain the varying fortunes of the small towns under review.

The contribution to economic growth, stability or decline in the small towns of Shropshire's urban network made by the four structural groups of: craftsmen/producers, retailers, industrial workers, and service/professionals, can be assessed by constructing a hierarchy of towns within each group. A comparison of these hierarchies at the two dates, 1797 and 1820, will show change over time in much the same way as the central place hierarchies of the previous chapter.

The occupations in each frequency group were divided into the four functional sectors, totals for each town were calculated and

graphs of rank against numbers recorded were drawn out. Orders of towns were then distinguished from the clustering patterns on the graphs as they had been in the central place analysis. The characteristics of each order could then be assessed and the structural differentiation of the towns explored.

The craftsmen/producers recorded in the Universal British Directory form a six tier hierarchy suggesting successful diversification in these trades through the urban network (see fig.11:1). Shrewsbury as the largest centre dominates the system as the only first order town, as indeed it does in all sectors. There are two second order towns, Ludlow and Bridgnorth, both with a wide range of occupations in this group, 38 and 36 out of 77 possible categories respectively. Craftsmen/producers account for just over half their recorded workforce in this source and the higher frequency groups are well represented. These towns have among the highest numbers of maltsters, innkeepers, tailors and bakers etc. of any of the small towns. However, a good number of the more specialized craftsmen are also present. Confectioners, bookbinders, gunsmiths and peruke makers from the lower frequency groups with high location coefficients suggest demand for specialized goods and a wide market area. Both also have one or two occupations unique to themselves in this group. It seems that this sector of the economy in Ludlow and Bridgnorth is well developed serving all residentiary requirements. The processes of diversification and specialization have enabled the towns to develop a wider market and so maintain their position high in the hierarchy.

The three third order towns in this sector are Whitchurch, Market Drayton and Newport. These are quite sizable towns but, with the exception of Whitchurch, they are not such high ranking central places. They have slightly more of their workforce in this sector, again with the exception of Whitchurch (Whitchurch has 50% traders, Newport 55% and Market Drayton 56%). In terms of absolute numbers however, the converse is true and Whitchurch as the largest of the three has more people in this sector. This may perhaps be seen as a measure of Whitchurch's greater structural diversification. As before many of the occupations listed in these towns are from the

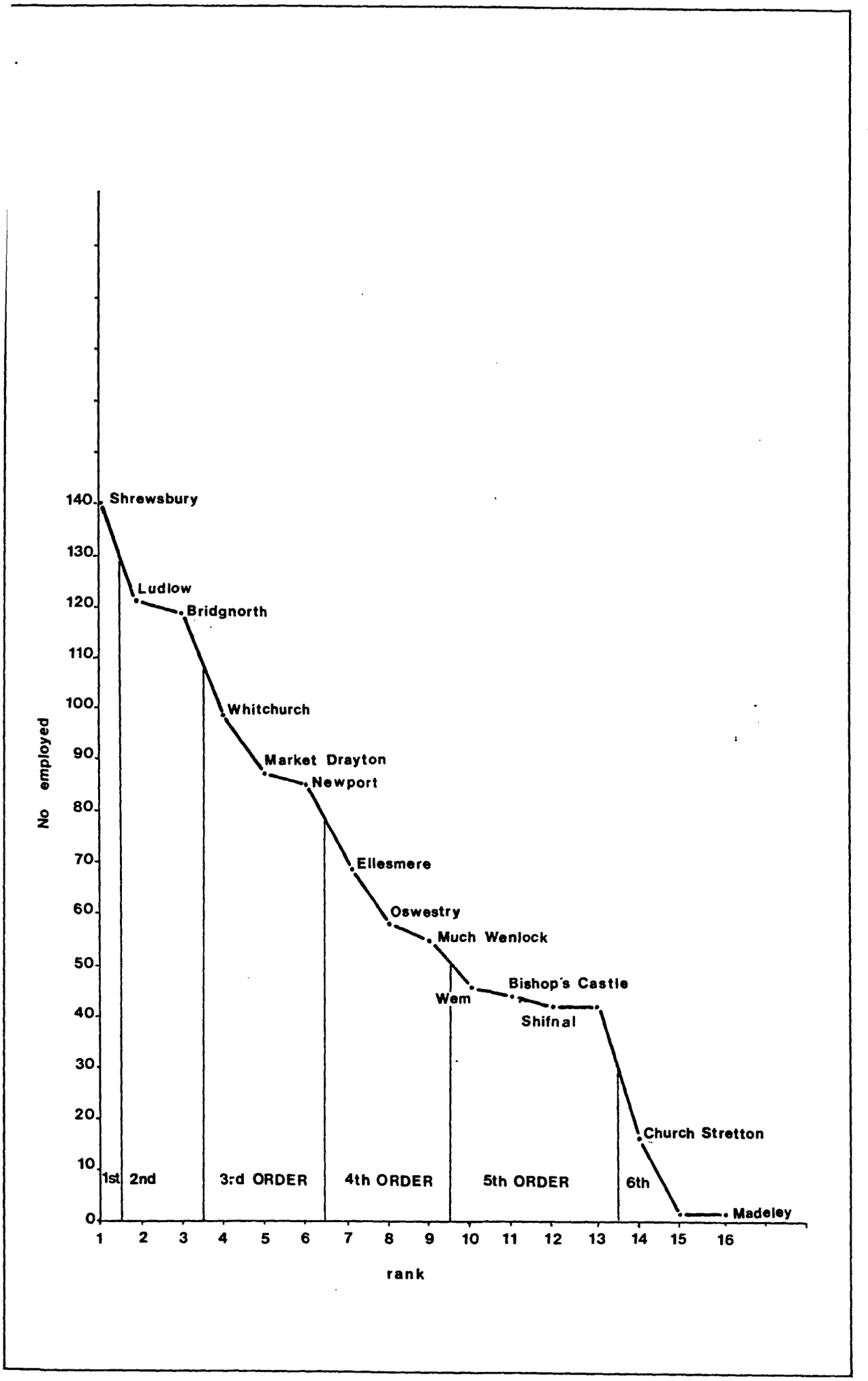


Fig 11:1 The urban hierarchy of Shropshire in 1797, Sector I

high frequency groups. Market Drayton is however, particularly well represented in frequency group 1 recording four different occupations in this group. Indeed despite its smaller size Market Drayton's range of occupations in the craft sector is not much smaller than that of Whitchurch; 37 as opposed to 41. Occupations in this sector in Market Drayton are not therefore restricted to those of a low order central place type but include those of a more specialized nature (the hair weaving and upholstery industries already mentioned) which may play a more decisive role in the town's development.

Fourth order towns are Ellesmere, Oswestry and Much Wenlock, the latter two both have a less than average total number of people involved in this sector, an indication that these towns are of less importance in this respect than those of the preceding orders. There are fewer low frequency occupations recorded and numbers in each occupation tail off rapidly after frequency group 9. The majority are therefore fairly low order central place, residentiary activities mostly of a small business nature. This sector of the economy in the fourth order towns is not an expansive one, it is instead a stable basis contributing to their survival as urban centres.

Only the craft and retail sectors have a group of fifth order towns. In the craft sector the gradient on the graph flattens out in this group suggesting that there is little difference in the four towns of which it is comprised. These are all quite low scoring central places and the range of occupations they contain shows how the scope for development and diversification in this sector is limited. The occurrence of low frequency occupations is erratic and most are to be found in groups 10 to 14. That these towns all have an above average proportion of their labour in this sector indicates the importance of the traditional production activities in their economies. A decline in these activities would clearly threaten the future of the four towns, Wem, Bishop's Castle, Shifnal and Cleobury Mortimer, in this group.

Church Stretton, Broseley and Madeley are often found at the bottom of the heirarchy. In this sector they constitute a sixth order of towns, a group not seen in any other sector. Broseley and

Madeley with only 5% and 6% of their workforce in this sector are particularly poorly developed, indeed it would seem that they must have some alternative base for their economic survival. It must be remembered however, that the data set for these towns is of questionable quality and conclusions based upon it may have to be revised in the light of evidence from other sources (see chapter 23). By contrast Church Stretton has 61% of its workforce in this sector though it has no occupation from a frequency group lower than 9. It must be seen as a more extreme case of the pattern observed in the fifth order towns where the economy has become dependent on one relatively diversified type of activity. It is therefore dependent upon the fortunes of this activity for its sources of economic expansion, with the risk of collapse or instability in the face of secularly declining or cyclically fluctuating demand for its staple product.

The industrial sector is poorly developed in 1797 and numbers twenty six different occupations. This is the only category to be excluded from the economy of some Shropshire towns, namely Wem, Shifnal, Bishop's Castle, Church Stretton and Broseley all in the fourth and bottom order (see fig.11:2). Production in these settlements is restricted to the craftsmen/producers and the more traditional methods they employ. Marketing and service functions are clearly more critical to the economic survival of towns in this group. It should be stressed however, that of all economic sectors this is the one most likely to suffer from poor recording practices and the selective nature of the directory as a source of occupational statistics. It is doubtful that all these towns were so completely without some form of organized industrial activity, Broseley especially, is known to have been active in this sector as other sources show.[1]

Shrewsbury again occupies a position of primacy in the hierarchy, brass, tin and wire processing activities and starch making feature while extractive industry is absent. The second order of towns is extensive incorporating six settlements. The most frequently occurring industrial occupation is that of the brazier (frequency group 8), which is found in most of the towns of this

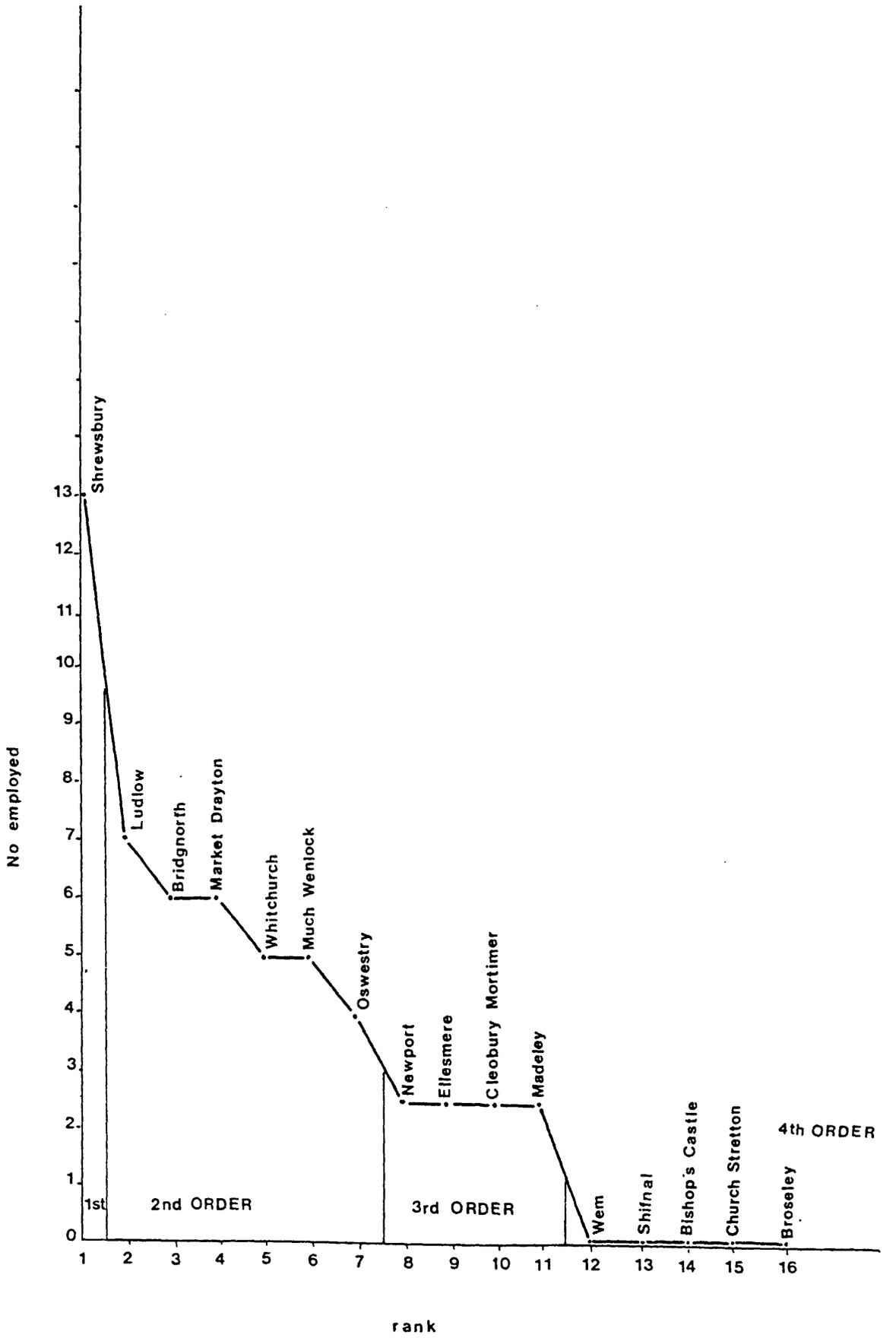


Fig 11:2 The urban hierarchy of Shropshire in 1797, Sector II

order. However, many occupations are of low frequency, twenty two out of the twenty six being from frequency group 1.

The industrial sector only really began to develop in the latter half of the eighteenth century and in 1797 in a basically agricultural county like Shropshire, its influence was only just beginning to be felt. The small numbers of industrial workers recorded are indicative of the marginal role they played in the small town economy at this time. They are also characteristic of the form and scale of organization in the industrial sector such that the work of many came under the supervision of a few and it is only the few who are recorded. It is therefore important to distinguish between those recorded, who were essentially entrepreneurs, and their workforces.

Newport, Ellesmere, Cleobury Mortimer and Madeley all have only two people recorded as economic agents in their industrial sector and together form the group of third order towns. Industry accounts for between 1% and 3% of the occupational structure in each town with the exception of Madeley where the proportion is 12%. This feature has to be viewed in the light of the small size of Madeley's data set. However, when one looks at the nature of the town's industrial occupations the pattern suggested by the above figures is not necessarily misleading. A coal master and an oil refiner indicate the presence of extractive, primary industries with unrecorded labour forces and a potentially significant role to play in a structurally developing local economy. Indeed with the exception of a lime burner in Much Wenlock, these are the only primary industrial activities listed. Elsewhere industrial manufacturing and processing are more typical, occurring on a smaller scale than the Madeley mines.

The <u>retail sector</u> (sector III) is the second largest in the urban economy of Shropshire. It forms a gentler gradient when plotted against town rank than that of sectors I or II (see fig.11:3) and the distinction between urban orders is therefore less extreme. The existence of five town orders, only one less than the sector I, indicates the development of this sector throughout the urban system.

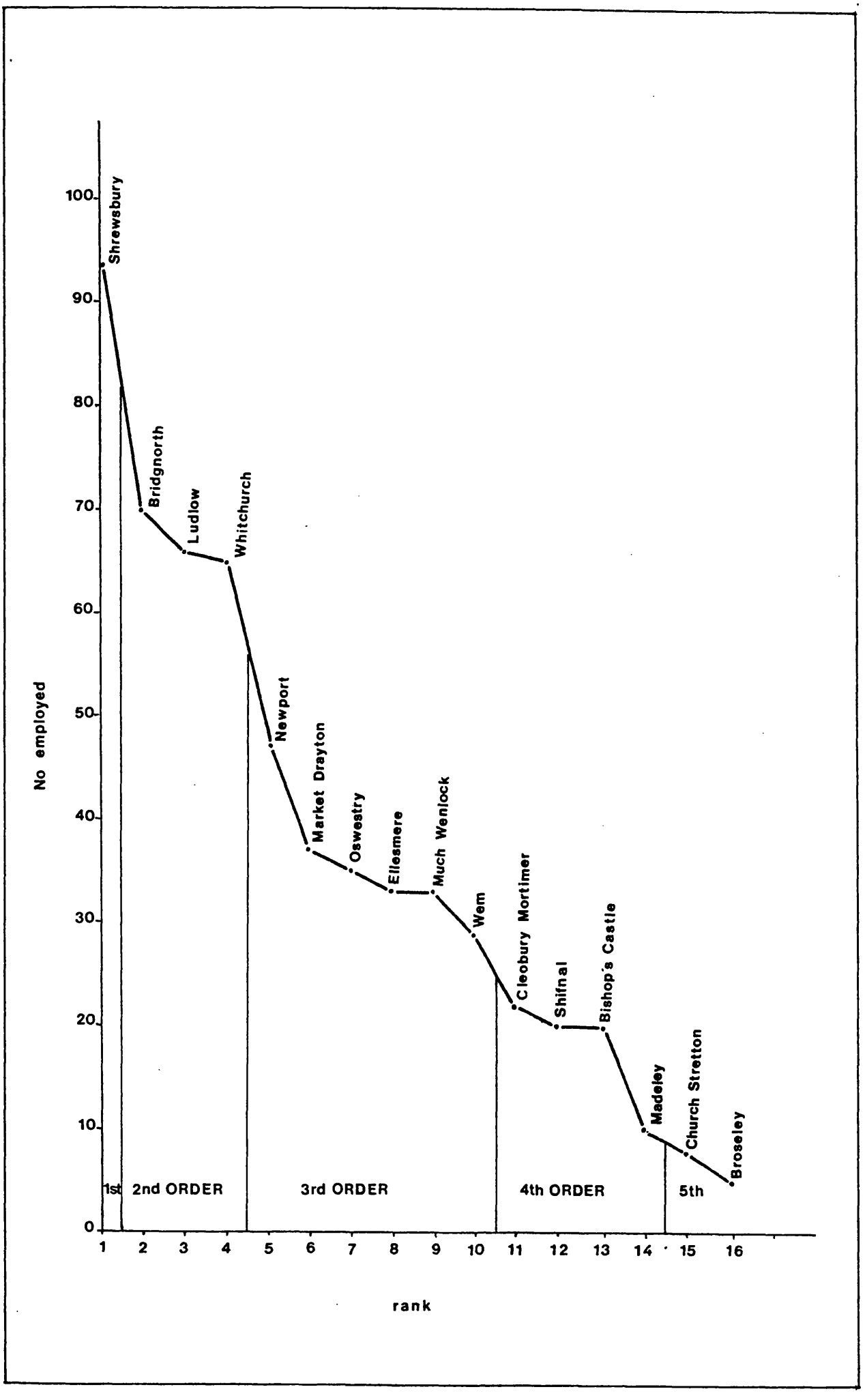


Fig 11:3 The urban hierarchy of Shropshire in 1797, Sector III

Shrewsbury is once more the only first order settlement, but in the next tier down Bridgnorth and Ludlow are joined by Whitchurch. Whitchurch has the greatest proportion of its workforce in this sector with 33% compared to Bridgnorth's 31% and Ludlow's 28%. The same pattern is seen in the range of retail functions performed, out of a possible 40 Whitchurch has 14, Bridgnorth 12 and Ludlow 10. The greatest ranges are found in Shrewsbury and Market Drayton both of which contain 18 of the 40, so in comparison the second order towns seem quite well differentiated. High frequency occupations such as grocers, innkeepers and victuallers are abundant as one would expect. These are typical residentiary functions serving the local population which in these towns is quite large, hence the large number of outlets. They have low location coefficients and only require a relatively small market. Where the market is larger they occur in greater numbers.

Occupations of lower frequency such as specialized retailers and wholesale dealers engaged in more advanced retail methods are also present in the second order towns. Whitchurch is particularly well represented in frequency group 4 which contains the cheesemongers; this town is also the only one to have a cheese factor. The specialized development of the cheese market in Whitchurch is associated with the growth of dairy farming and cheese production for regional and distant national markets, in the agricultural hinterland of the town. Located almost on the border with Cheshire, the market area of Whitchurch stretches out into the Cheshire plain by now famous for its high quality cheeses.[2] In Bridgnorth there are glass factors and seedsmen; in Ludlow, corn merchants and coal agents. None of these towns have any brokers as yet, but the evidence of warehouse storage and bulk dealing indicates the existence of sizable markets and sophisticated marketing techniques.

The group of third order towns is much larger in the retail sector than in sectors I and II. Market Drayton and Newport are again of this order and are now joined by Oswestry, Ellesmere, Much Wenlock and Wem. The percentage of population engaged in retailing varies form 24-33% suggesting that this sector plays a similar role

in all of the towns. Wem is the only one in the group with an above average percentage in retailing despite having a below average absolute number of people in the sector. This implies that retailing in Wem plays a potentially larger role in the economy than the size of the town might otherwise suggest.

All the towns have between 9 and 18 occupations out of the possible 40 in this sector. Market Drayton has the greatest variety though not the largest workforce and is therefore particularly well diversified in this sector. This town also has the greatest number of occupations in frequency group 1 including specialist dealers in high quality goods (silk dealers and mercers), and general dealers (shopkeepers). On the whole however, there are fewer bulk dealers in third order towns than in second order ones, and more small scale businessmen such as haberdashers and hucksters.

The penultimate stratum of this sector, the fourth order settlements, contains the three towns of Cleobury Mortimer, Shifnal and Bishop's castle. All have a less than average percentage of their recorded workforce in this sector, and the absolute numbers recorded are low; a maximum of 22 people. Few occupations from frequency groups lower than 7 are found and most are small scale retailers of a traditional type with low location coefficients. The only dealer on a larger scale is a china dealer in Cleobury Mortimer, otherwise mercers, victuallers, grocers and ironmongers predominate. With few of the elements of the transition to more highly capitalized, larger scale activity being present, retailing constitutes a stable but undynamic sector in fourth order towns. The occupations that are present suggest that they cater for a local market area only, and have not developed beyond the "hinterland" stage.

Church Stretton, Broseley and Madeley are found at the bottom of the hierarchy as they were in sector I. These towns have between 5 and 10 outlets of retail activity and none of them has a range of more than 4 out of the 40 possible occupations. Church Stretton supports only grocers and innkeepers from frequency group 14 and mercers from group 12. Broseley has mercers, drapers and a liquor

merchant the latter from group 6. Madeley with the most extensive range records mercers, drapers, timber merchants and a bookseller from as low as group 5. Despite the limited scope of the retail sector in these towns, it still constitutes a considerable proportion of the economy ; 24% in Broseley, 31% in Church Stretton and 59% in Madeley. Such a situation must be seen as volatile with much room for either growth or, as seems to be the case in Church Stretton, a propensity to decline.

Service and professional occupations of sector IV, form a top heavy hierarchy among Shropshire's small towns. Shrewsbury occupies a more noticeably primate position in this sector and is followed by seven second order towns: Ludlow, Bridgnorth, Oswestry, Whitchurch, Market Drayton, Newport and Shifnal (see fig.11:4). The inclusion of Shifnal in this group indicates the proportionately more important role the service/professionals play in the economy of this otherwise fourth or fifth order town. On average this sector is a less quantitatively important one than the previous two, accounting for only 18% of the workforce. However, in both Shifnal and Oswestry the percentage is above average at 25 and 23% respectively. The other towns are more typical with between 13-15% of recorded personnel in service/professional employment.

Many of the occupations in this sector are of a standard traditional type such as surgeons, apothecaries and teachers. Most market towns would expect to support at least one member of the medical and teaching professions, hence the large number of second order towns. None of the towns, not even Shrewsbury, display a particularly wide range of occupations. Bridgnorth and Oswestry have the most variety with 14 out of thirty 6 possibles, the others have ranges between 9 and 13. Many occupations are therefore present in some number, for example Church Stretton is the only town to have just one surgeon, the others all have at least three or four. The same is true of attorneys and school teachers, hairdressers and apothecaries. Occupations of a more specialist type, occurring singly tend to be found in the larger towns of the second order; Bridgnorth, Ludlow and Whitchurch. The smaller towns usually found in lower orders tend to be less well diversified, Shifnal for example

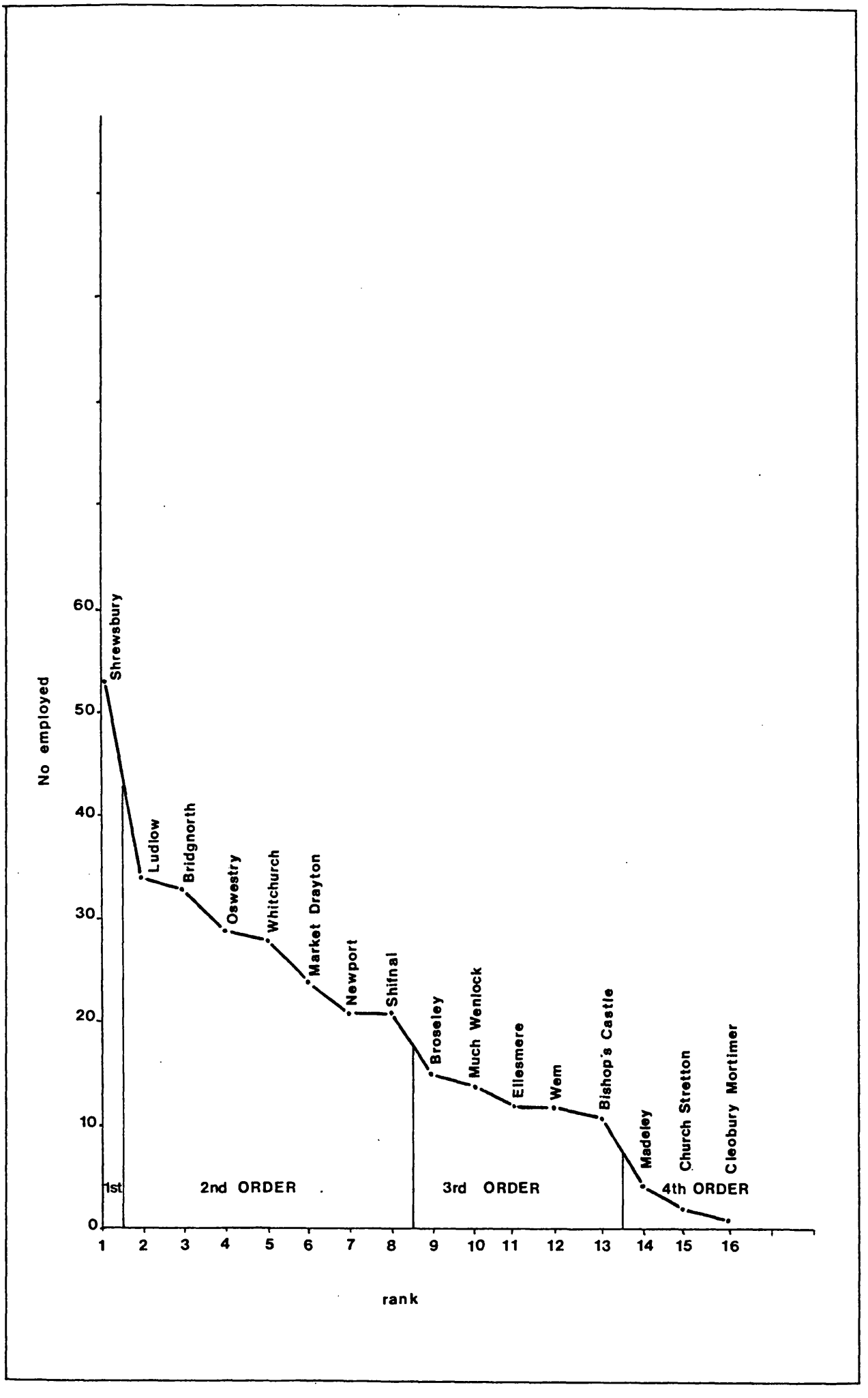


Fig 11:4 The urban hierarchy of Shropshire in 1797, Sector IV

has twenty one people in only nine different occupations most of which are from high frequency groups. Oswestry is an anomaly having both a wide range of occupations and a relatively large number of people employed in them. Oswestry, usually a third or fourth order town also ranks highly among the second order towns of this sector exhibiting a degree of specialization in sector IV compared with the other sectors.

A similar tendency to include smaller towns is seen in the composition of the third order in the service/professional hierarchy. Both Broseley and Bishop's Castle, normally located in the tier below are present, accompanied by Much Wenlock, Ellesmere and Wem. High frequency occupations again dominate as even lower order towns require some standard, central, administrative personnel such as teachers, postal services and so forth. Ellesmere is the only town with a frequency group 1 occupation, a navigator possibly associated with the construction of the Ellesmere Canal. Broseley is clearly the most specialized in this sector with fifteen people or 71% of its workforce involved. Unlike other towns with a high proportion of service/professionals, Broseley is poorly diversified with four surgeons, four apothecaries and seven bargeowners. The quality of the data has to be remembered of course, but it seems that in 1797,this sector was specialized possibly to cope with mining accidents, the ill health of an exploited industrial population and the need for bulk transportation of mined coal.

The general pattern of three towns at the bottom of the hierarchy is again observed though Broseley has lost its place to Cleobury Mortimer. Service/professionals form a small proportion of the workforce in these towns with the exception of Madeley. Like Broseley, Madeley has only a small recorded workforce but of the few, many seem to have occupations in this category. In this town there are four individuals in sector IV, two surgeons and two apothecaries, both members of high frequency groups. In Church Stretton this sector is restricted to one surgeon and one auctioneer, Cleobury Mortimer has just a postal service. The role of sector IV in the lowest order towns is therefore minimal. The craft/producer and retail/wholesale sectors are of much greater importance but it is

significant that as towns, these settlements do have representatives of sector IV as well.

FOOTNOTES

1. TRINDER, B. The Industrial Revolution in Shropshire (Chichester 1973). Industrialization in Broseley is also discussed in the case study of this town, Chapter 23.

2. The activities of Richard Payne a Whitchurch cheese factor formed part of the analysis of market areas in Chapter 7.

## CHAPTER 12 - Occupational Frequency Groups within a Sectoral Framework: The 1828 Data

A functional breakdown of the economy in the small towns thirty years later using the information from Tibnam's Directory paints a different picture. Shrewsbury continues to dominate the hierarchy in all sectors but among the other orders change has occurred.

The importance of the craftsmen/producer sector has declined slightly and on average accounts for only 42% rather than 48% of the urban workforce, though in absolute terms the numbers employed have gone up. Ludlow retains its place as ranking second after Shrewsbury but Bridgnorth has been replaced by Whitchurch and is no longer among the second order towns (see fig.12:1). The occupational representation of the frequency groups in second order towns remains similar to what it was thirty years ago.

While the upper part of the slope in figure 12:1 is steeper in 1828 than 1797, the lower reaches are gentler. There are now five third order towns; Oswestry, Wellington, Newport, Bridgnorth and Ellesmere. Newport is the only stable member of the group, the others having moved up or down the hierarchy. The movement of Oswestry and Ellesmere up from the fourth tier does not however, reflect relative growth in this sector, which now actually occupies proportionally less of their recorded population than previously. Rather it indicates that in relation to other towns the contribution made to the urban economy by the craftsmen/producers has increased.

The same is true in Wem, Bishop's Castle and Madeley which have all risen from fifth to fourth order. The range of occupations in this sector has increased in the towns which are rising relatively indicating a diversification of their production base and evidence of their enhanced economic maturity. The converse is true of Market Drayton, which having been almost as well diversified as Shrewsbury, now has representatives of only 19 out of the 75 possible occupations in this sector. The upward movement of Madeley is a statistical artifact produced by the more accurate representation of this town in the directory. However, it is probably also indicative of a filling

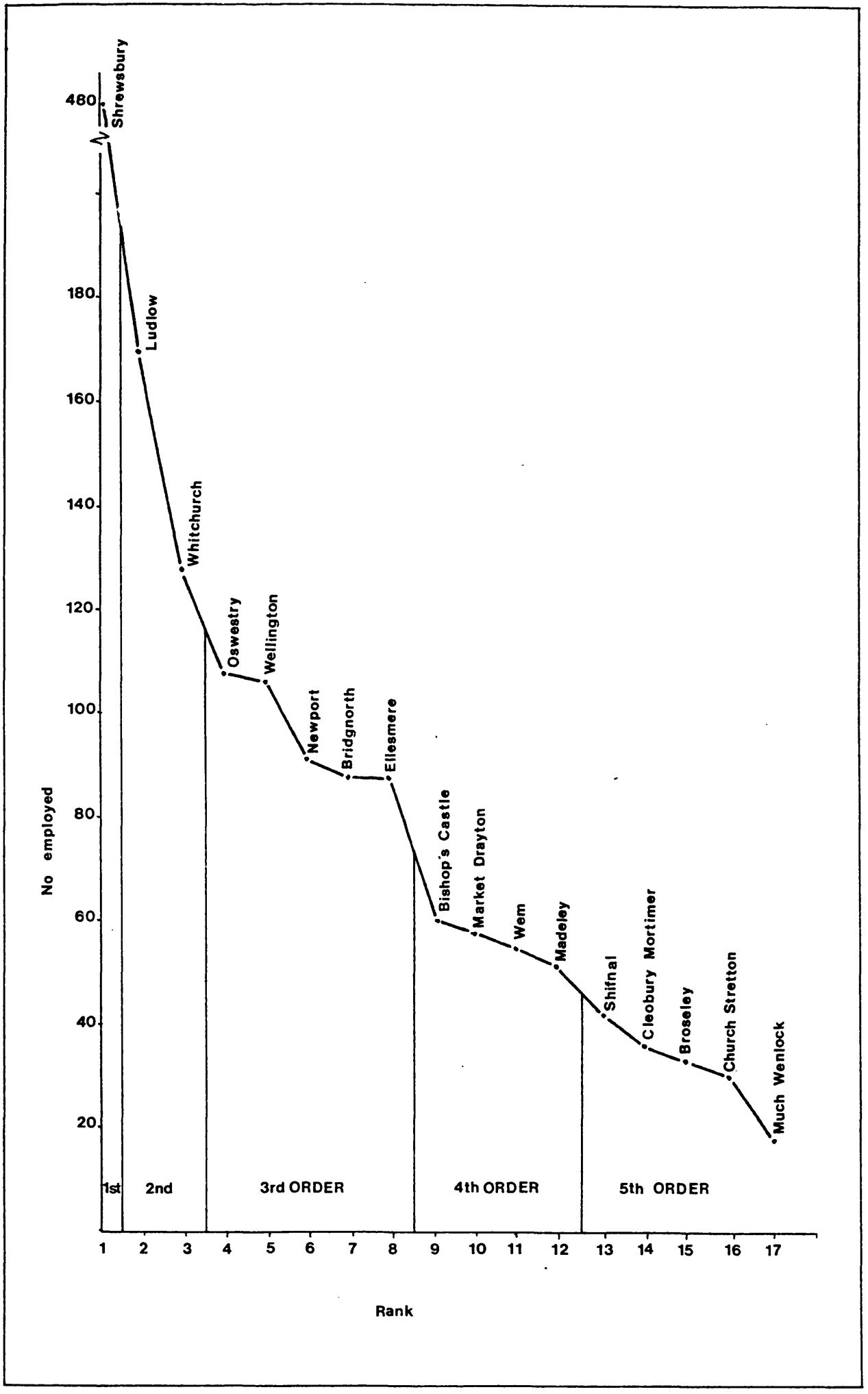


Fig 12:1 The urban hierarchy of Shropshire in 1828, Sector I

out of Madeley's production base and the development of this sector to provide residentiary facilities for a growing population engaged in industrial activities strongly oriented towards regional and national export markets.

Of the fifth order towns Shifnal and Cleobury Mortimer are the stable members, Broseley and Church Stretton having moved up from group 6 which now contains Much Wenlock only. The range of occupations in Broseley has increased for much the same reasons as in Madeley. That for Church Stretton has expanded slightly giving this town a broader base in this sector which exhibited low diversification a generation earlier. In Much Wenlock however, this situation has been reversed. Where this town once had an occupational range of 22 out of 77 it now has one of 11 out of 75 categories represented. The absolute number of people involved in this sector has also declined from 55 to 19. Absolute decline of this nature is a feature of all the towns which have moved down the hierarchy. Movement up the hierarchy however, is not assured by absolute increase, and is therefore more reliable analytically as a qualitative indicator of economic change than a quantitative one.

The industrial sector as revealed by the directories still does not have a major role to play in the economy of the small towns. Indeed, though the gentler gradient of the graph in figure 12:2 shows a fuller integration of industry within the system, it only accounts for 6% (on average) of the recorded urban workforce. The presence of so many towns towards the bottom of the slope in the graph in figure 12:2 illustrates the fact that in most towns industrial development is limited.

There are only four towns with an above average proportion of the workforce in this sector, of these Wellington and Madeley are both second order towns and Broseley and Market Drayton are high ranking in the third order. In the case of Wellington and Market Drayton their positions in the hierarchy are not unusual, but the positions of Broseley and Madeley indicate how important the industrial sector is in their economic development. The potential for expansion in this sector is also illustrated by the movement of

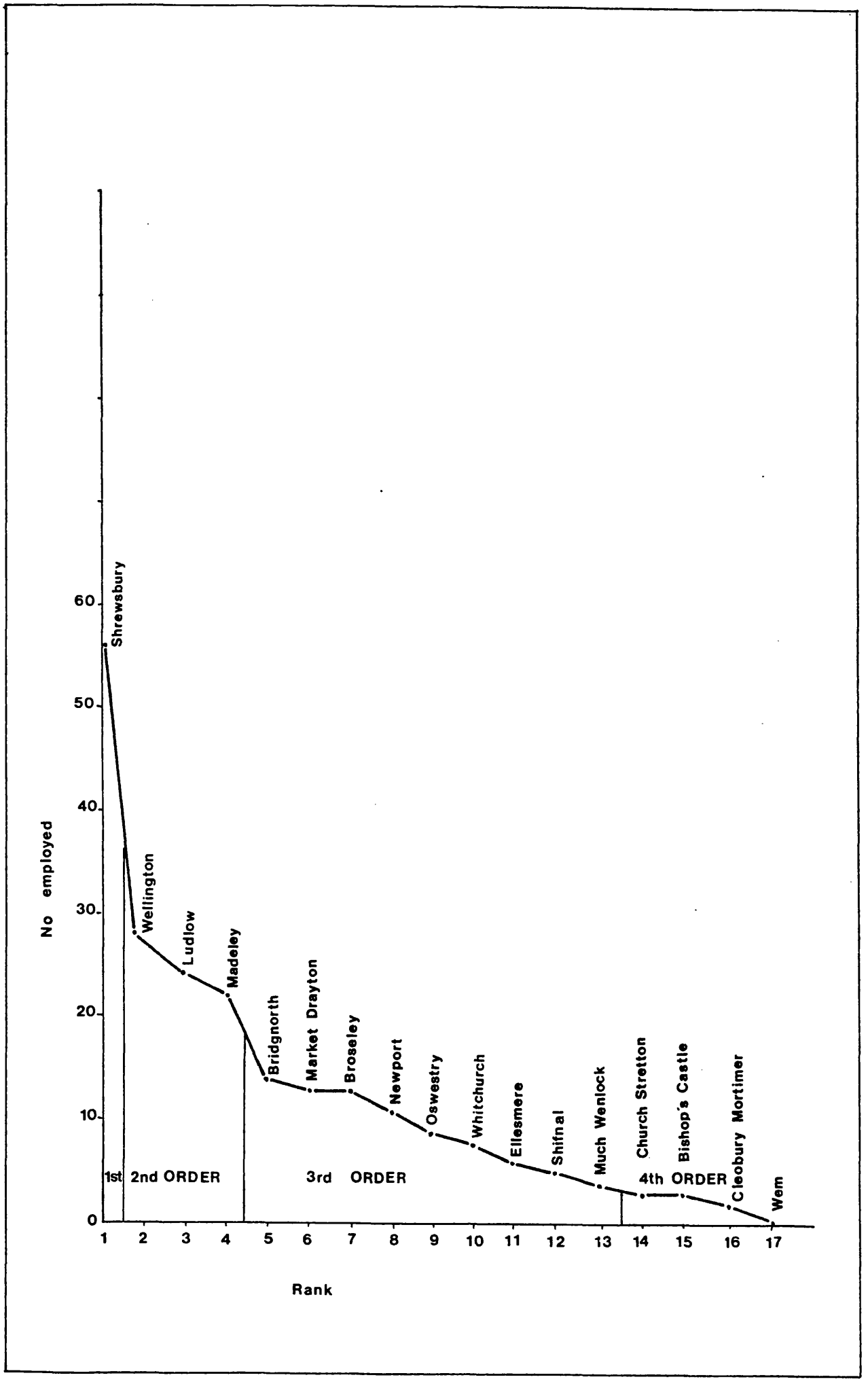


Fig 12:2 The urban hierarchy of Shropshire in 1828, Sector II

industrial occupations up the frequency groups.

The distinction between different types of industrial activity is important. When looking at the data from the Universal British Directory it was remarked that towns like Shrewsbury, Bridgnorth and Ludlow which consistently achieve high ranks in all economic sectors, tend to host processing industries and those which are less affected by the location of raw materials. The development of primary industry in Broseley, Madeley and Wellington (the iron masters, brick manufacturers etc.) is enough to push these towns up the hierarchy to a position more commensurate with those listed above. For this reason it is suggested that together with the retail sector this is the most dynamic sector within the small town economic system of the Shropshire region. It is further suggested that it is the development of the regional export side of these functions which gives them their dynamism.

The analysis of the frequency groups demonstrated that retailing was a developing sector of the urban economy in this period. Diversification of activities characterizes such development and is largely responsible for the increased primacy of Shrewsbury seen in figure 12:3. A trend towards a greater primacy for the county town was a feature of the functional index ranking used to assess centrality in the previous chapter. Shrewsbury is the largest town in the county and has the most extensive market in terms of both areal extent and function. The potential and demand for a more diversified retail sector would therefore be much greater here than in any of the small towns.

The rest of the towns are divided into three groups. Expansion has occurred in groups 2 and 4 while group 3 has contracted to half the size it was in the 1797 and group 5 has disappeared (see fig. 12:3). In this sector Bridgnorth maintains its place as a second order settlement and the decline seen in the percentage of its workforce occupied in traditional and craft based occupations is mirrored by an increase in retailing. All the members of this order; Ludlow, Bridgnorth, Oswestry, Wellington and Whitchurch, have on or above average proportions of the workforce in this sector but

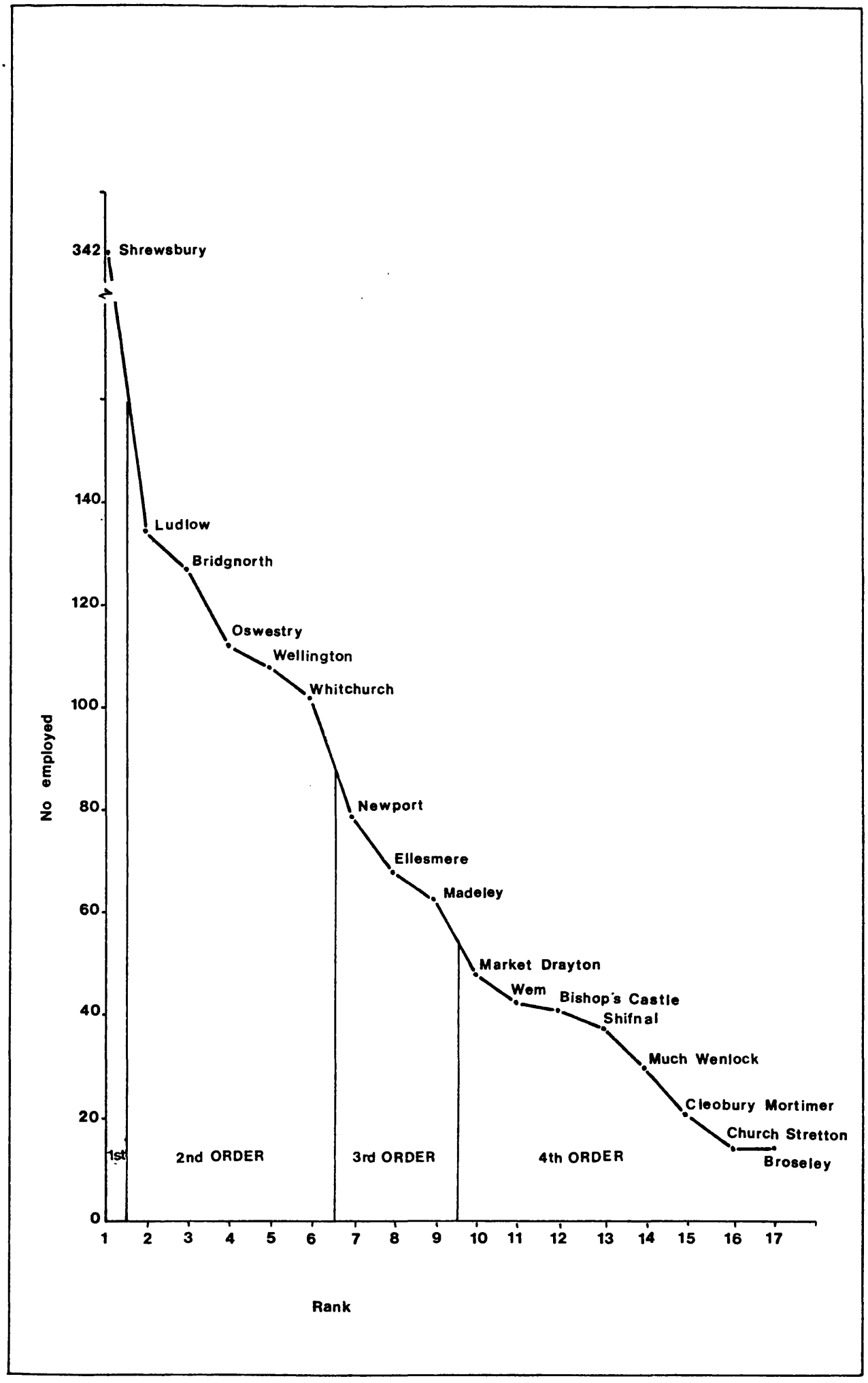


Fig 12:3 The urban hierarchy in Shropshire in 1828, Sector III

particular growth is seen in Bridgnorth and Oswestry. In terms of absolute numbers employed, second order towns are distinguished as the only ones other than Shrewsbury to be above average. They all have over 100 economic agents recorded in sector III compared with previous totals of 40 to 70.

Newport and Ellesmere are the stable members of the third order, Wenlock, Wem and Market Drayton having slipped to the order below. Madeley has joined this group rising from fifth to third order despite a relative decrease in the proportion of its workforce involved. This is indicative of the stabilization of the town's economic structure and the more accurate recording of its occupations. In absolute terms the numbers in this sector have increased from 10 to 63 and the variety of occupations involved has also increased.

The fourth order towns are an amalgamation of groups 4 and 5 in the Universal British Directory sample created by a closer clustering. Cleobury Mortimer, Church Stretton and Broseley are among the few towns to have witnessed a decline in the percentage of their population in retailing. Decline in Much Wenlock and Cleobury Mortimer is also absolute. Retailers in these towns are still mainly of the traditional type, it is possible that the small nature of the markets they serve does not allow them to expand as those of other towns have been able to do. Improved communications, transport and credit facilities etc. may also mean that they suffer new competition from more developed neighbouring towns like Bridgnorth and Ludlow. In Market Drayton the numbers in sector III have only risen fractionally compared with the increase seen in some other towns, the range of activities has also decreased and it no longer has any occupations in frequency group one. The failure to diversify and the tendency towards stability in numbers rather than growth has lost this town its former position in the hierarchy.

One can suggest that the diversification of retailing has led to its concentration in the larger towns in the network at the expense of the smaller. The development of sector III therefore contributes to the greater differentiation of towns in the urban

system. The decline in the craft/producer category will combine with this to effect the rationalization of the urban system which took place in this period.

In the service/professional sector the slope of the graph (fig.12:4), remains much the same but the towns now form five, rather than four tiers. In effect the large group of second order towns seen in the earlier directory has been split as the larger centres like Bridgnorth and Ludlow differentiate themselves from the smaller ones of Wem and Shifnal. The service/professional sector is clearly oriented to the larger towns. Absolute increases are greatest in Shrewsbury and Ludlow, and the primacy of the former has become more marked by 1828. Shifnal, Oswestry and Whitchurch all fall an order to comprise the third group of towns in 1828. Both Oswestry and Whitchurch have a smaller percentage of their population in this sector at the later date and the numbers employed remain virtually the same. Expansion in the economy is such that stability of numbers is not enough to maintain stability in the hierarchy. Shifnal does see some growth in numbers and also in the percentage of people employed in this sector and this allows it to rise from rank 8 up to rank 6.

Much Wenlock, Market Drayton and Broseley are the only towns to see a decline in the numbers involved in this sector. The former two have a similar proportion of their workforces in services and professions but this does not prevent them losing rank. Much Wenlock declines most noticeably to occupy the lowest rank echoing the trend seen in the retail sector. The pattern observed in Broseley is similar to that of Madeley in the retail sector. The service/professionals accounted for a disproportionate percentage of the workforce in the 1797, probably as a result of poor recording. By 1828 some of these errors have been removed and the economic structure of the town appears more typical of the others in the system.

Data for the service/professional sector in 1828 suggests expansion in the occupational range involved. A trend towards greater employment exists but the average percentage of the urban

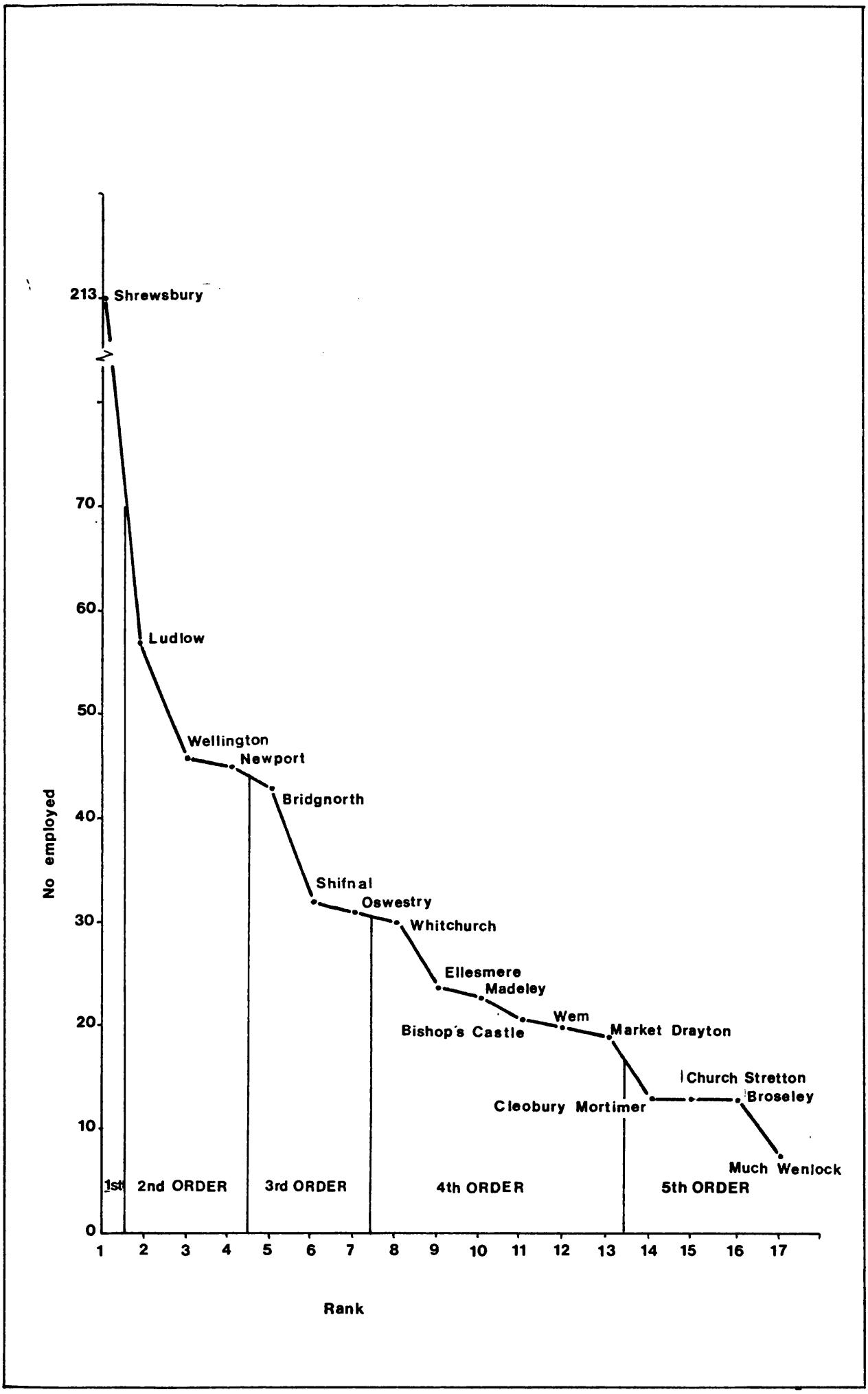


Fig 12:4 The urban hierarchy of Shropshire in 1828, Sector IV

workforce in these occupations actually decreases one unit. The variation around the mean is not great, nor was it in the 1797 with the exception of Broseley, so it seems that this sector is a relatively stable one in the urban economy of Shropshire.

The increasing scale of retailing activities, the extension of links with other retailers outside the county and the production of metallurgical goods for export overland and down the Severn brought income and investment from outside the normal sphere of influence to the small towns involved. Towns without this extra input do less well over the period covered by the two directories. Much Wenlock and Bishop's Castle are examples of this pattern. They survive as towns performing residentiary functions for the local population, but without the economic growth facilitated by exogenous factor inputs on the supply side, and the demand side influence of an extended market area, their development is limited.

To summarise the changes taking place over the period 1797-1828, the ranks of each town in each sector have been averaged to form a new hierarchy. Unlike that of the functional index used in Chapter 4, the new hierarchy illustrates urban ranks in terms of economic structure. As the table below shows overall change in the hierarchy is substantial.

| RANKS | TOWNS IN 1797 | TOWNS IN 1828 |
|---|---|---|
| 1 | Shrewsbury | Shrewsbury |
| 2 | Ludlow | Ludlow |
| 3 | Bridgnorth | Wellington |
| 4 | Whitchurch | Bridgnorth |
| 5 | Market Drayton | Oswestry |
| 6 | Oswestry | Newport |
| 7 | Newport | Whitchurch |
| 8 | Much Wenlock | Madeley |
| 9 | Ellesmere | Ellesmere |
| 10 | Wem | Market Drayton |
| 11 | Shifnal | Shifnal |
| 12 | Cleobury Mortimer | Bishop's Castle |
| 13 | Bishop's Castle | Wem |
| 14 | Madeley | Broseley |
| 15 | Broseley | Cleobury Mortimer |
| 16 | Church Stretton | Much Wenlock |
| 17 | | Church Stretton |

Ludlow and Shrewsbury remain at the top but Bridgnorth and Whitchurch

are both displaced by Wellington; Newport and Oswestry also displace Whitchurch. The slopes seen on the graphs of the Tibnam's data tend to be more gentle than those of the Universal British Directory data. This indicates a greater integration of economic functions among the towns and vertical sorting. Decline and stability seem to characterize the system, Madeley is alone in achieving a significant rise in the hierarchy. Whitchurch, Market Drayton, Cleobury Mortimer and Much Wenlock are all declining towns while Shrewsbury, Ludlow, Ellesmere and Shifnal remain stationary. It is difficult to assess the role of Wellington because of the absence of data in the earlier directory, however, like Madeley it has a developing industrial sector and it is likely that this town also experienced upward movement. The more substantial development of its economic sectors other than the industrial, suggests that this movement may not have been characterised by so extreme a pattern of specialisation, but a rather more balanced pattern of growth and structural change.

Decline in one sector can be counterbalanced by growth in another. This is represented, for example, by the differing fortunes of Bridgnorth's retail and craftsmen/producer sectors. Well diversified towns like Bridgnorth can experience this sort of structural change and through sustained economic growth maintain their position in the hierarchy. For slightly less well developed towns like Whitchurch and Market Drayton the failure to achieve growth above that taking place in the system as a whole means relative decline.

The above analysis relies heavily on the directories as sources of occupational information. Their shortcomings in relation to particular towns and particular sectors of the economy have already been noted.[1] They have the advantage however, of providing compatible data sets for almost the entire system of Shropshire towns. No other source can offer this before and after 1800. The directories have been used to reveal general trends in the economic development and differentiation of the small towns in the context of the county as a whole. To explore the avenues thus opened in greater detail one has to turn to the less systematic sources of probate inventories, tax records and freemen rolls mentioned at the start of

this chapter. The directory survey then provides a framework around which to organize the use of more piecemeal information, and thus lends it greater clarity.

FOOTNOTES

1. For discussion see Chapter 3.

## CHAPTER 13 - An Analysis of the Relationship between the Demographic and Economic Characteristics of Small Towns

It is possible to extend the analysis of the changing economic fortunes of the small towns of the Shropshire urban system by employing the quantitative data available as a source of explanation as well as description. This approach identifies the statistical parameters of the changes taking place and derives a breakdown of the changes in the hierarchy which reveals the sources of change. These sources of change are both demographic (see table 13:1) and economic and an integration of the data from these two perspectives can yield a dynamic portrayal of the changes taking place. The outcome of the analysis is a simple model of the urban system, from which a typology of urban growth and decline can be established.

This extended analysis continues to employ the four-fold sectoral classification of economic activities. The main purpose of the exercise is to reconstruct the urban economy, using the sectoral breakdown of the data as an explanatory variable in the growth or decline of towns. This procedure is not expected to yield monocausal explanations of economic change, but it can reveal the relative significance of a range of factors. From this type of analysis it is possible to derive a typology of towns. This form of differentiation can then be compared with the hierarchical ordering of towns based on the structural classification of occupations. The resulting typology will embody findings derived from the demographic (table 13:2)in addition to the economic (tables 13:3a and 13:3b) characteristics of the towns. The outcome of the processes which affect the towns' long-run economic development are then revealed as a spectrum of relative growth and decline.

The first stage in this analysis is to look at the demographic evidence in relation to the economic evidence(see tables 13:3a and b); to examine the extent to which population change is a causative factor in the economic expansion or contraction of towns. The second stage of the analysis is an examination of the role of structural change in the processes of growth or decline. This is measured by inter-temporal changes in the sectoral composition of output (see

TABLE 13:1 Population estimates for Shropshire towns 1563-1831

| TOWNS | 1563 | 1672 | 1801 | 1831 |
|---|---|---|---|---|
| Bishop's Castle | - | 431 | 1,313 | 1,729 |
| Bridgnorth | 1,151 (T) | 1,759 (T) | 4,185 (T) | 4,785 (T) |
| Broseley | - | 608 | 4,832 | 4,299 |
| Church Stretton | - | 241 (T) | 924 | 1,302 |
| Cleobury Mortimer | - | 418 | 1,368 | 1,716 |
| Ellesmere | 1,888 (T) | 418 | 5,553 | 6,540 |
| Ludlow | - | 2,035 | 3,897 | 5,253 |
| Madeley | - | 398 | 4,758 | 5,822 |
| Market Drayton | 1,237 | 1,079 (T) | 3,162 | 3,882 |
| Much Wenlock | - | 837 (T) | 1,981 | 2,424 |
| Newport | - | 961 | 2,307 | 2,745 |
| Oswestry | - | 941 (T) | 5,839 | 8,581 |
| Shifnal | 737 | 758 (T) | 1,141 (T) | 1,699 (T) |
| Shrewsbury | - | - | 13,486 | 20,090 |
| Wellington | 1,105 | 810 (T) | 7,531 | 9,671 |
| Wem | 994 (T) | 719 | 3,087 | 3,973 |
| Whitchurch | 787 | - | 4,515 | 5,736 |

Sources: CLARK, P., GASKIN, K. and WILSON, A. Population Estimates of English small towns 1550-1851 (1989) pp. 137-140 and the population censuses of 1801 and 1831.

(T) = figure referring to the town rather than the parish.

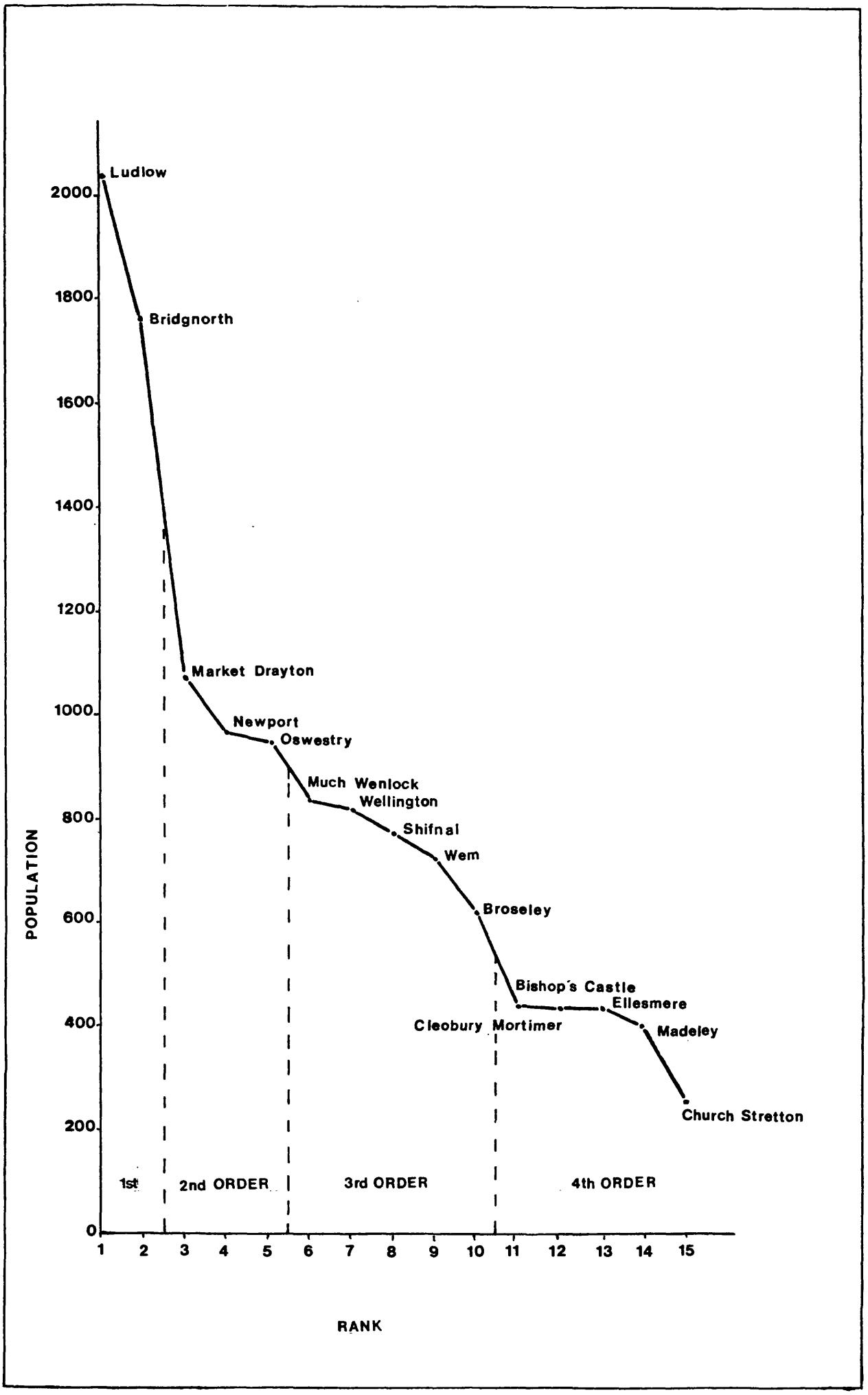


Fig 13:1 The population hierarchy of Shropshire towns in 1672

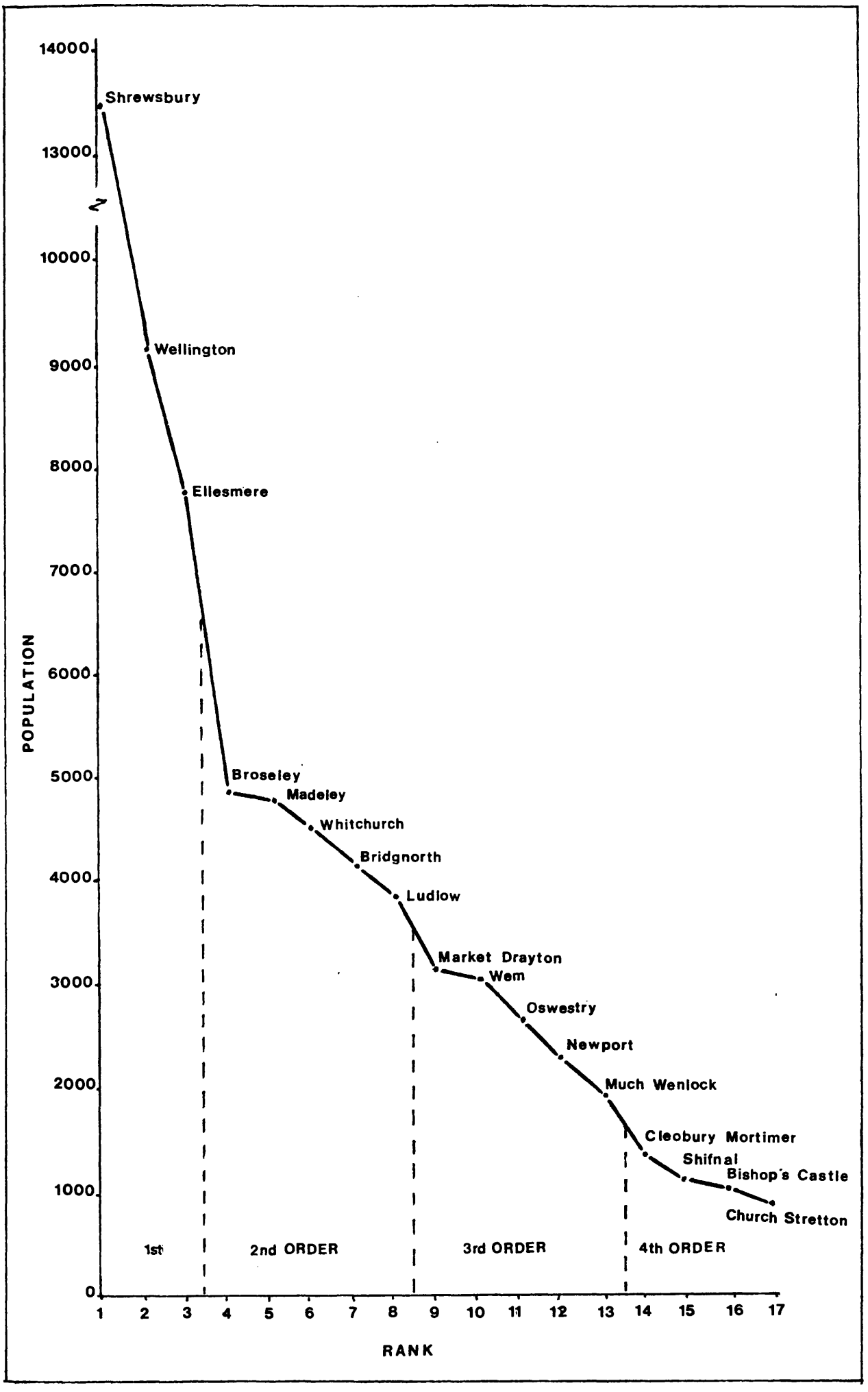


Fig 13:2 The population hierarchy of Shropshire in 1801

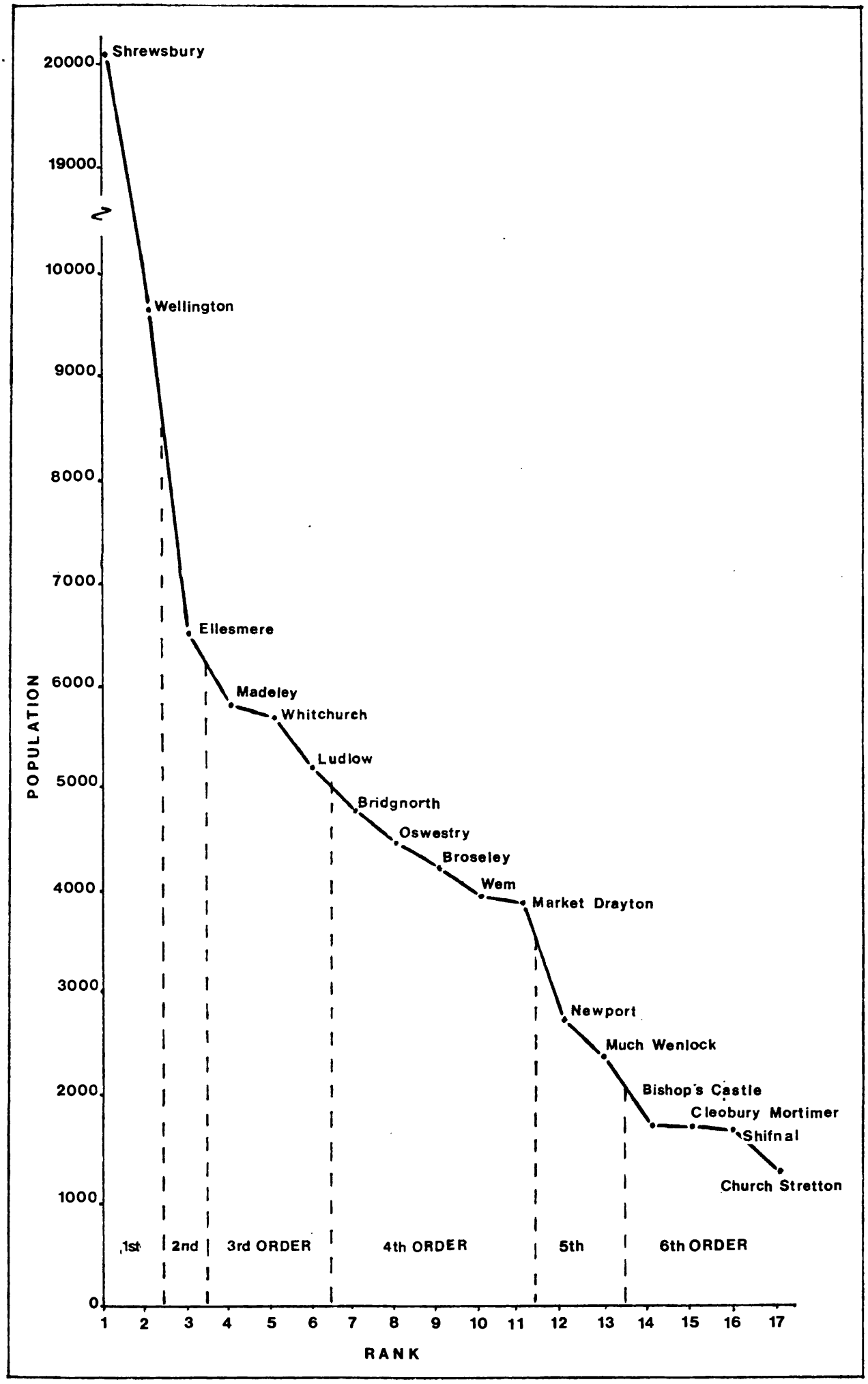


Fig 13:3 The population hierarchy of Shropshire in 1831

Chapter 4). In this way two contrasting approaches can be compared, in order to ascertain which has the greater explanatory power in delineating the actual sources of growth and decline of the towns within the hierarchy. The ongoing vertical reordering of the urban hierarchy can then be portrayed as a dynamic adjustment process, and the relative significance of the range of forces at work in the process can be assessed.

The benchmark dates for the economic data are 1797 and 1828. These dates are sufficiently close to the first and fourth population censuses of 1801 and 1831 for the purposes of demographic analysis (see tables 13:1 and 13:2). There are difficulties in defining precisely what constitutes the small town's population, but in most cases these difficulties are not insurmountable in this period.[1] Equally the direct comparison of urban populations at 1801 and 1831 gives rise to some problems of comparability; again these are not insurmountable. Where either of these aspects of the population characteristics of a small town in the urban system is problematic, it is dealt with in the context of the narrative relating to the individual town. In no case are the difficulties at the individual level serious enough to affect the representativeness of the aggregative data.

In order to construct a comparable measure of economic change, it is necessary to derive an output estimate using the data base constructed from the directory information. The estimate is derived from the disaggregated sectoral data which is treated as a proxy for output in 1797 and 1828. The rate of growth of output for each town is adjusted by weighting this figure according to the average size of the sector in each town between 1797 and 1828. In this way the estimate for the rate of growth of output for each town is corrected for the diversity of economic structure that exists within the town.

The group constituted by Madeley and Broseley, which diverges from the average structural characteristics of the towns observed on a system-wide perspective as industrial towns emerges clearly merits particular attention. Equally, another group of two towns, constituted by Much Wenlock and Market Drayton, is also sufficiently

TABLE 13:2 Population growth rates of Shropshire towns 1801-1831

| RANK | TOWN | Population growth rate % p.a. |
|---|---|---|
| 1 | Shifnal | 1.82 |
| 2 | Bishop's Castle | 1.76 |
| 3 | Shrewsbury | 1.60 |
| 4 | Oswestry | 1.56 |
| 5 | Church Stretton | 1.46 |
| 6 | Ludlow | 1.20 |
| 7 | Cleobury Mortimer | 1.02 |
| 8 | Wem | 1.00 |
| 9 | Whitchurch | 0.88 |
| 10 | Much Wenlock | 0.87 |
| 11 | Madeley | 0.80 |
| 12 | Market Drayton | 0.76 |
| 13 | Ellesmere | 0.60 |
| 14 | Newport | 0.57 |
| 15 | Bridgnorth | 0.46 |
| 16 | Broseley | -0.34 |

divergent to merit attention. These are the only two towns within the urban system to experience absolute economic contraction.

These observations provide the basis for two small but distinctive groups within the typology of towns. In respect of the interface of economic and demographic factors however, it may be noted that neither group is characterised by a close correlation. That is, the output of Madeley and Broseley is not matched in this period by their population growth rates. Madeley's rate is 75% of the average population growth rate, and Broseley's is negative. More detailed interpretation of these findings is given in Chapter 23 which deals with the individual analysis of Broseley. What can be observed at this stage of the analysis is that there are factors, both historical and geographical, beyond those revealed by this procedure which it is essential to consider. Historically it is necessary to take a longer time perspective on the development of these towns. Geographically it is necessary to look at the towns within a broader spatial context in terms of the demographic and the economic evidence, than that represented by the boundaries of the town itself.

From a methodological point of view, what this sample reveals is that it is not strictly necessary to analyse the actual estimates of growth rates to derive useful observations of the comparative economic performance of particular towns. The ranking procedure itself can yeild useful information which can be employed in the construction of a typology of towns. It can also be used to analyse the relative performance of each town through the sequential reordering of the urban hierarchy.

Abnormally high or low rates of growth, or of structural change, reveal interesting generic characteristics. This also applies to the county town. Shrewsbury is characterised by distinctive features due to the larger size of its population, and its rate of expansion within the economic system of which it is the centre. Its generic role may best be analysed, in both demographic and economic terms, as that of a primate town within a regional economy. The region of which it is the central place both

economically and spatially, is largely coterminous with the county of which it is the administrative centre.

The rate of population growth of the primate town is 54% above the average rate of the urban system of the county. This places it on a level with the group of relatively fast growing smaller towns, Type A (see table 13:3a). Thus population size rather than rate of growth is the distinguishing feature of Shrewsbury's demographic primacy. Shrewsbury is growing in terms of estimates of output of goods and services at about double the rate of the average small towns in the system. The change in the contribution of the primate town to the total output of the regional urban system is therefore much more notable than the change in its contribution to the demographic expansion of the system. The primate economy is therefore possessed of generic characteristics which distinguish its economic performance qualitatively as well as quantitatively from the small towns in the system.

Good data is available for a large and representative sample of nine Shropshire small towns for both benchmark dates, and for both economic and demographic indicators, that is 1797/1801 and 1828/1831. The sample includes: Bishop's Castle, Bridgnorth, Ellesmere, Ludlow, Newport, Oswestry, Shifnal, Wem and Whitchurch. On this basis comparison with the primate town may be made. In respect of total urban population, the share of the sample group of nine fell from 58% to 47%, while that of Shrewsbury rose from 19% to 22%. The size of the primate town increased relative to that of the collective size of the sample of small towns from a third (33%) to almost a half (47%), over the approximately thirty year period. In respect of total urban output in the regional economy of Shropshire the share of the normal group of nine remained constant, while that of Shrewsbury rose by 11%. There are some interesting implications for the trends in output per head in these two parts of the urban system revealed by these estimates which merit investigation. They provide a way of testing, even if only as a hypothetical model, the significance of the differences of a qualitative nature between the two types of urban economy: the primate economy of the centre on the one hand, and the peripheral economies of the small towns on the other. On a

TABLE 13:3a. Population growth rates and gross and net output estimates in the Shropshire urban system, percent per annum, 1797/1801 - 1828/1831

| | 1<br>Gross output growth rate | 2<br>Population growth rate | 3(1-2)<br>Net output growth rate |
|---|---|---|---|
| Shrewsbury | 3.9 | 1.6 | 1.5 |
| Type A Towns | | | |
| Bridgnorth | 1.7 | 0.4 | 1.5 |
| Ellesmere | 1.7 | 0.6 | 1.1 |
| Ludlow | 2.3 | 1.2 | 1.1 |
| Newport | 1.6 | 1.6 | 1.0 |
| Oswestry | 3.3 | 1.6 | 1.7 |
| Type B Towns | | | |
| Bishop's Castle | 2.3 | 1.7 | 0.6 |
| Shifnal | 1.3 | 1.8 | -0.5 |
| Wem | 1.2 | 1.0 | 0.2 |
| Whitchurch | 1.2 | 0.8 | 0.4 |
| Type C Towns | | | |
| Market Drayton | -0.9 | 0.7 | -1.6 |
| Much Wenlock | -1.6 | 0.8 | -2.4 |
| Type I Towns | | | |
| Broseley | 1.4 | -0.3 | 1.7 |
| Madeley | 3.1 | 0.8 | 2.3 |
| Type V Towns | | | |
| Church Stretton | 1.7 | 1.4 | 0.3 |
| Cleobury Mortimer | 0.8 | 1.0 | -0.2 |

(Output figures for this and all subsequent tables are derived from the occupational data of appendices 4-9.)

TABLE 13:3b Population growth rates and gross and net output estimates in the Shropshire urban system by rank 1797/1801 - 1828/1831

| | Rank of gross output growth rate | Rank of population growth rate | Rank of net output growth rate |
|---|---|---|---|
| Shrewsbury | 3 | 1 | 1 |
| Type A Towns | | | |
| Bridgnorth | 15 | 6 | 5 |
| Ellesmere | 13 | 6 | 6 |
| Ludlow | 6 | 4 | 6 |
| Newport | 13 | 9 | 8 |
| Oswestry | 3 | 2 | 3 |
| Type B Towns | | | |
| Bishop's Castle | 2 | 4 | 9 |
| Shifnal | 1 | 11 | 14 |
| Wem | 7 | 12 | 12 |
| Whitchurch | 9 | 12 | 10 |
| Type C Towns | | | |
| Market Drayton | 12 | 15 | 15 |
| Much Wenlock | 9 | 16 | 16 |
| Type I Towns | | | |
| Broseley | 16 | 10 | 3 |
| Madeley | 9 | 3 | 1 |
| Type V Towns | | | |
| Church Stretton | 5 | 6 | 11 |
| Cleobury Mortimer | 7 | 14 | 13 |

system-wide level the latter contribute to the growth of factor inputs on the supply side, and to the market on the demand side, for the more rapidly expanding central primate town. This process of development, familiar from aggregative models of core-periphery relationships, may thus be identified within the framework of the regional economy and its urban system. It is examined further in Chapter 24, together with the implications it contains for trade-offs in the growth of the primate core and the urban periphery.

The group of nine towns may be designated a "normal" sample in terms of their distribution around the mean. Within it there is a range of population growth: from 1.8% per annum to 0.4% per annum (see table 13:3a, column 2, Types A and B). One group of three towns exhibits an annual average population growth rate of 1.7% (see table 13:4), almost identical to the primate rate of 1.6% per annum. Since this rate is 54% above the average rate of 1.1% per annum, the share of this group of towns in the total urban population of the region rises from 11.8% to 13.5%. The average rate of growth of net output in this group is close to the estimated average rate of growth of output per head in the economy of the urban system of the region as a whole (0.6% compared with 0.5%). The rate of growth of total output over the period, uncorrected for population change, is high in this group, at 2.3% per annum (see table 13:4, column 2). It is this figure which must be looked at in judging the overall functional relationship between population growth and economic growth. The net output figure however, is such that given the rate of population growth and the high rate of growth of gross output, the group is just able to maintain its relative share of total urban output in the regional economy. The rate of expansion varies widely within this group (see table 13:4 columns 2 and 3) to such an extent that it is not possible to suggest on the basis of this evidence that the trend of output is necessarily strongly influenced in each case by the trend of population.

In the case of the fastest growing small town population, Shifnal, the demographic rank order 1 in the group of nine is matched by rankings of 7 for gross output and 9 for net output (see table 13:5). The second ranked by population growth rate, Bishop's Castle,

TABLE 13:4 Population and growth characteristics of a sample of nine small towns, percent per annum 1801 - 1831.

| | Population growth rate | Gross output growth rate | Net output growth rate |
|---|---|---|---|
| GROUP 1 | | | |
| Shifnal | 1.8 | 1.3 | -0.5 |
| Bishop's Castle | 1.7 | 2.3 | 0.6 |
| Oswestry | 1.6 | 3.3 | 1.7 |
| Average | 1.7 | 2.3 | 0.6 |
| GROUP II | | | |
| Ludlow | 1.2 | 2.3 | 1.1 |
| Wem | 1.0 | 1.2 | 0.2 |
| Whitchurch | 0.8 | 1.2 | 0.4 |
| Average | 1.0 | 1.5 | 0.5 |
| GROUP III | | | |
| Ellesmere | 0.6 | 1.7 | 1.1 |
| Newport | 1.6 | 1.6 | 1.0 |
| Bridgnorth | 0.4 | 1.7 | 1.5 |
| Average | 0.5 | 1.6 | 1.2 |
| AVERAGE | 1.1 | 1.8 | 0.8 |

TABLE 13:5 The sample of nine towns ranked by population and growth rates.

| | Rank by population growth rate | Rank by gross output growth rate | Rank by net output growth rate |
|---|---|---|---|
| GROUP I | | | |
| Shifnal | 1 | 7 | 9 |
| Bishop's Castle | 2 | 2 | 6 |
| Oswestry | 3 | 1 | 1 |
| GROUP II | | | |
| Ludlow | 4 | 2 | 3 |
| Wem | 5 | 8 | 8 |
| Whitchurch | 6 | 8 | 7 |
| GROUP III | | | |
| Ellesmere | 7 | 4 | 3 |
| Newport | 8 | 6 | 5 |
| Bridgnorth | 9 | 4 | 2 |

ranks second and sixth in terms of estimated growth rates of gross and net output. Hence the high rate of population growth is pulling down the net output estimate. In each case therefore the above average population growth is associated with below average net output growth estimates.

Evidence of a possible relationship emerges in the third town of this group, Oswestry, which ranks first in terms of rate of growth of net and gross output in the group of nine, and is ranked third out of nine in terms of population growth rate (table 13:5). Thus the experience of towns within a group may be quite diverse, making it impossible to assert any uniform pattern of association between population growth rates and estimates of output growth.

The average rate of growth of the urban population of the Shropshire region in the period 1801 to 1831 is 1% per annum. The second group in the sample of nine "normal" towns is a group of three whose demographic experience is close to this average. They are: Ludlow, Wem and Whitchurch (see table 13:4 group II). The proportion of the total urban population in this group therefore changes little, from 16.3% in 1801 to 16.5% in 1831. The population growth rate is 1%, and gross and net output estimates average 1.5% and 0.5% respectively.

The experience within the group is again characterised by diversity rather than uniformity. Once again two of the smaller towns, Wem and Whitchurch, are characterised by slow growth of output. They thus come near the bottom of the ranking of estimates of both gross output growth and output per head, while fifth and sixth in the ranking of population growth (table 13:5). Ludlow is the faster growing town in terms of output growth in this group that has a commensurate ranking in terms of population growth. This could indicate prima facie that, as in the case of Oswestry, strong output growth tends to be associated with population growth. Population growth alone is not however sufficient to offset low rate of growth of output. The sources of low growth rates must therefore be sought, not in urban demographic factors, but in an inter-temporal analysis of the economic structure of the urban economy.

The third group consists of towns with average population growth rates about half the regional average, that is about 0.5% per annum. These towns are: Ellesmere, Newport and Bridgnorth. The estimated average rate of growth of gross output for this group is similar to that of the previous group: 1.6%. Since population growth is low however, this group is actually increasing its relative share of total output, and is characterised by a correspondingly high estimated rate of growth of output per head: 1.2%.

To conclude the first stage of this analysis of the sources of town growth and decline in this period, it may be stated that population growth is not uniformly positively correlated with economic expansion, nor is it uniformly inversely correlated. Nevertheless higher than average rates of population growth are associated with higher than average rates of growth of gross output. The first group, characterised by population growth rates of about 50% above average has an estimated gross output growth rate of 2.3% per annum, significantly above that of the other two groups.

The estimates for net output growth obviously bring into focus the critical interface between demographic and economic change, and the outcome of the analysis reveals very clearly the significance of this dynamic interaction. The first group with above average population growth rates exhibits <u>average</u> economic growth rates. The second group with average population growth rates exhibits <u>below average</u> economic growth rates. The third group with below average population growth rates exhibits <u>above average</u> economic growth rates. Thus while there is a suggestion of a positive relationship in respect of the gross output growth estimates, there is equally a suggestion of an inverse relationship in respect of estimated net output growth.

Thus this procedure of ranking by population fails to reveal significant causal relationships of a system-wide relevance between demographic change and economic change. Nevertheless it does reveal a pattern which can assist in the articulation of a typology of urban settlements. This can be formulated on the basis of the dynamic economic characteristics of the towns. This approach reveals a quite

different perspective on the urban hierarchy and the changes occurring in it than that based on the demographic data.

The first group of towns which can be identified from this approach consists of Oswestry, Ellesmere, Ludlow, Bridgnorth and Newport, labelled Type A. The second group consists of four towns: Bishop's Castle, Shifnal, Wem and Whitchurch which are designated Type B. Type A is distinguished by the fact that it is growing at above the average rate for the system, while Type B is growing at below the average rate. The industrialising towns of Madeley and Broseley are designated Type I; Shrewsbury the primate town is designated Type P; Church Stretton and Cleobury Mortimer are very small towns; designated Type V; and Market Drayton and Much Wenlock, the contracting towns are Type C.

The sample of nine towns that is employed in this exercise are all of either Type A or Type B; they are therefore statistically relatively normal. Towns exhibiting much higher than average rates of growth and structural change, absolute demographic or economic decline, primate status and other statistical abnormalities have been excluded from the analysis. Within the small town system of Shropshire during this period, the sample of nine constitutes a substantial proportion of the total urban population and output. This is particularly the case if, as is necessary given the focus of this exercise upon the historical record of the small town, the primate town is excluded. The sample represents 77% of total regional small town population at the 1801 census (see fig.13:2), and 72% of the total at the 1831 census (see fig.13:3). It is interesting to compare these percentages with the estimate derived from the 1672 Hearth Tax (see fig.13:1). At this earlier period the sample also constituted 72% of the small town population.

FOOTNOTES

1. CLARK, P., GASKIN, K. and WILSON, A. Population Estimates of English Small Towns 1550-1850 (Centre for Urban History, Leicester University 1989) pp.iii-iv.

## Chapter 14 - The Role of Structural Change in the Processes of Urban Growth, Stability and Decline

The second stage of the analysis employs the same sample of nine towns to examine the hypothesis that structural factors are a source of the economic differentiation of the small towns. The use of the concept of growth in this context, from a methodological point of view, refers to a spectrum of relative expansion and contraction. This stage of the analysis requires the application of statistical procedures to the sectorally disaggregated data. Thus, even when all the towns in the sample are experiencing aggregate growth, individual sectors may be contracting in the process of structural change. Structural change is the conceptual term employed to refer to the processes of change in the composition of output in the town's economic system.

Estimates of output are derived, as in the analysis of the influence of population, from the breakdown and analysis of directory material for the benchmark dates of 1797 and 1828. The typology derived from the analysis of population is also employed in the analysis of the structural sources of growth. In this way it is possible to examine the extent to which the range of growth rates experienced by each type of town is the outcome of a similar range of structural factors.

The first sector to be examined is sector I, the traditional sector, and it will be analysed first in the group of towns designated Type A. These are the towns whose estimated net output growth rate is above the average rate for the sample as a whole. Their average gross rate is 2.1% per annum, their average net rate is 1.2% per annum (compared with 1.8% and 0.7% per annum respectively for the sample as a whole). The estimated rate of growth for sector I is 0.9% per annum compared with the average rate of 0.8% per annum. Since sector I accounts for 54% of total estimated output at the beginning of the period in 1797, and 41% by the end in 1828 (see table 14:2), it is at both points the largest single sector. Hence growth rates above average in this sector contribute disproportionately to aggregate outcomes, despite the fact that the trend

TABLE 14:1 Sample of nine towns, Types A and B : average sectoral weighted gross and net output estimates, percent per annum 1797-1828.

| | 1<br>Sector I | 2<br>Sector II | 3<br>Sector III | 4<br>Sector IV | 5<br>Gross Output | 6<br>Net Output |
|---|---|---|---|---|---|---|
| TYPE A | 0.9 | 5.4 | 3.6 | 1.9 | 2.1 | 1.2 |
| TYPE B | 0.7 | 2.6 | 2.3 | 1.7 | 1.5 | 0.2 |
| SAMPLE AVERAGE | 0.8 | 4.0 | 3.0 | 1.8 | 1.8 | 0.7 |
| STANDARD DEVIATION | 1.0 | 4.3 | 1.6 | 1.2 | 0.7 | 0.7 |

of output composition is for the share of sector I to decline secularly in the long-run. Thus a sector I growth rate significantly above average, as in the case of Oswestry (see table 14:3), continues to make a substantial contribution to total output growth (see table 14:1), because even though sector I is contracting relatively it is still growing absolutely on a system-wide basis.

There is only one town in the sample of nine in this period, Bridgnorth, which experiences an actual contraction in the absolute size of this sector. In this town the contribution to total output of sector I falls from the average level of 48% to 31% (see table 14:4), significantly below the average level of 41% by the end of the period (see table 14:2). The performance of Ludlow is close to the average, with sector I's share falling from 55% to 43% (table 14:4), and a rate of growth of sector I output of 1.3% per annum (table 14:3 compared with the average for Type A towns as a whole of 0.9%). The varied experience of the other Type A towns makes it unlikely that their experience in respect of the economic performance of sector I is the principal determinant of aggregate outcomes in this period. An analysis of the the structural contribution on a sectoral basis using a simple growth accounting procedure can contribute to a more detailed explanation. The findings of such an exercise, considered in their aggregative context, follow this analysis by sector, in Chapter 15.

Type B towns have sector I growth rates below average levels (see table 14:1). This may indicate that the aggregate growth rates of the slowest growing towns tend to be determined by the growth rate of this sector. If this Type B representing Bishop's Castle, Shifnal Wem and Whitchurch, is compared with the experience of Type C, namely Market Drayton and Much Wenlock (see table 14:3), it is notable that the latter exhibit contraction of sector I output and declining total output . The fly-wheel effect of sector I expansion, though relatively modest, therefore continues to make a substantial contribution to the determination of the total output growth rate of Type B towns. It may well, in this respect, determine the threshold between stability and decline in the town's history. The differential effect of Sector I on the development of slower growing

TABLE 14:2 Average sector share of Types 'A' and 'B', per cent, 1797-1828

| Sector | Type | 1797 | 1828 | Percentage Change |
|---|---|---|---|---|
| I | A | 54 | 41 | -13 |
| | B | 53 | 44 | - 9 |
| Average | | 53.5 | 42.5 | -11 |
| II | A | 2.8 | 4 | 1.2 |
| | B | 0.6 | 2.8 | 2.2 |
| Average | | 1.7 | 3.4 | 1.7 |
| III | A | 29 | 41 | 13 |
| | B | 29 | 34 | 5 |
| Average | | 29 | 37.5 | 9 |
| IV | A | 16 | 14 | - 2 |
| | B | 16 | 18 | 4 |
| Average | | 16 | 16 | 1 |

or declining towns is therefore a function of the rate of contraction of sector I. Rapid contraction in a slow-growth environment eventuates in aggregate decline due to the fact that in terms of absolute size sector I is still predominant. It is still the largest single sector at the end of the period in all of the nine towns in the sample. Oswestry, emerges as the Type A town with the highest rate of structural change (tables 14:3-14:7) and total growth (table 13:4). The next is Bridgnorth, the rather exceptional structural characteristics of which have already been discussed.

Sector II is of relatively minor importance in determining growth outcomes compared with sector I (tables 14:5 and 14:4). This is despite the fact that this sector contains the typically modern industries of the industrial revolution. In the case of Type I towns, industrialisation has a dramatic effect on the structural compostition of output, but towns of Type A and Type B are not characterised by rapid industrialisation. The variations in the relative importance of modern industrial activities are nevertheless significant. They shed further light on the distinguishing characteristics of faster and slower growing towns, despite the uniformly lesser significance of their contribution to total output in absolute terms. In the sample of nine towns only one, namely Wem, (tables 14:3 and 14:5) has an estimated rate of growth of output in sector II below the average rate of total output growth for the sample as a whole of 1.8% (table 14:1 column 5). All the other eight towns therefore have relatively fast growing sector II output.

The average growth rate for sector II as a whole is 4% per annum. The average rate for the faster growing towns, Type A, is 5.4% per annum which is more than double their average total growth rate of 2.1% (see table 14:1). For the slower growing towns of Type B taken as a whole, the average is 2.6% per annum, a rate which compares with their average total growth rate of 1.5%. Hence the dynamic effect of sector II is felt independently of the position each town occupies in the overall growth hierarchy, but in effect is relatively more significant in faster than slower growing small towns. This rather different set of statistical relationships between the sectoral growth rate and the aggregate growth rate in the

TABLE 14:3 Sectoral growth rates for the small towns of Shropshire, percent per annum, 1797-1828

| TYPE | TOWN | SECTOR I | SECTOR II | SECTOR III | SECTOR IV |
|---|---|---|---|---|---|
| A | Bridgnorth | -0.8 | 4.3 | 2.6 | 1.0 |
| | Ellesmere | 0.9 | 6.4 | 2.4 | 2.7 |
| | Ludlow | 1.3 | 7.8 | 3.3 | 2.2 |
| | Newport | 0.3 | 4.5 | 2.8 | 3.7 |
| | Oswestry | 2.8 | 4.0 | 7.1 | 0.2 |
| B | Bishop's Castle | 1.2 | 3.6 | 3.3 | 2.9 |
| | Shifnal | 0.0 | 2.5 | 2.7 | 1.6 |
| | Wem | 0.6 | 0.0 | 1.5 | 2.1 |
| | Whitchurch | 0.9 | 1.9 | 1.8 | 0.2 |
| C | Market Drayton | -1.0 | 3.7 | 1.0 | -0.8 |
| | Much Wenlock | -2.1 | -0.6 | -0.2 | -1.4 |
| I | Broseley | 1.4 | 4.5 | -4.8 | -0.7 |
| | Madeley | 1.3 | 3.2 | 1.7 | 1.5 |
| V | Cleobury Mortimer | -0.4 | 0.0 | 0.0 | 3.8 |
| | Church Stretton | 2.8 | 0.0 | 2.4 | 1.7 |

small town economies is reflected in the significantly weaker correlation coefficient, r = 0.75, between the two variables in the total number of Shropshire towns from which the sample is selected; this includes Shrewsbury and all the small towns. This may be interpreted as showing that growth in sectorII is less dependent on overall growth than is growth in sector I, where the coefficient of correlation with the total growth rate is r = 0.91. This finding may indicate that sector II growth is more subject to exogenous influences than sector I growth. Sector I contains a large number of traditional manufacturing activities, which are small scale, and not characterised by rapid technological change with the attendant effects on productivity growth. What can be said perhaps, is that those manufacturing activities of sector II which conform to the industrial model in being relatively large scale, relatively more capital intensive and more commonly characterised by technologically induced productivity growth, are also characterised by a greater tendency to distant market rather than local market orientation. They largely serve, therefore, the "export" rather than the "residentiary" markets.

Sector III is of greater absolute significance than sector II. The average proportion of total output over the period 1797 - 1828 for the sample of nine small towns is 37.5% compared with 2.8% for sector II output and 42.5% for sector I output (see table 14:2). Furthermore this proportion is much more consistent across the sample than is the case with sector II, and in this respect it compares with sector I. The standard deviation of the sector III average of 37.5% is 3.2, that of the sector I average of 42.5% is 4.2, while that of sector II's average of 2.8 is 1.4, significantly higher. This relative diversity of size is of the nature of the small, dynamic modern industrial sector in the small town economy, which at this period is still dominated by its traditional sector. Sector III however, is large, and also dynamic relative to sector I. The proportion of total output accounted for by sector I declines, with the single exception of Bishop's Castle, in all of the towns in the sample between 1797 and 1828 (table 14:4); whereas in sector III (see table 14:6) the proportion rises, again with the exception of Bishop's Castle. The average in 1797 is 29%, in 1828 37.5% (table

TABLE 14:4 Changes in the sectoral composition of small town output, percent, 1797-1828 : Sector I

| | 1797 | 1828 | Percentage change |
|---|---|---|---|
| Shrewsbury | 47 | 44 | - 3 |
| Bishop's Castle | 47 | 50 | 3 |
| Bridgnorth | 48 | 31 | -17 |
| Broseley | 23 | 31 | 8 |
| Church Stretton | 61 | 50 | -11 |
| Cleobury Mortimer | 63 | 50 | -13 |
| Ellesmere | 59 | 47 | -12 |
| Ludlow | 55 | 43 | - 8 |
| Madeley | 6 | 32 | 26 |
| Market Drayton | 56 | 42 | -14 |
| Much Wenlock | 54 | 28 | -26 |
| Newport | 55 | 41 | -14 |
| Oswestry | 40 | 39 | - 1 |
| Shifnal | 50 | 36 | -14 |
| Wem | 53 | 47 | - 6 |
| Whitchurch | 50 | 48 | - 2 |

TABLE 14:5 Changes in the sectoral composition of small town output, percent, 1797-1828 : Sector II

| | 1797 | 1828 | Percentage change |
|---|---|---|---|
| Shrewsbury | 4 | 5 | 1 |
| Bishop's Castle | 0 | 4 | 4 |
| Bridgnorth | 3 | 6 | 3 |
| Broseley | 40 | 50 | 10 |
| Church Stretton | 0 | 5 | 5 |
| Cleobury Mortimer | 3 | 3 | 0 |
| Ellesmere | 2 | 3 | 1 |
| Ludlow | 3 | 6 | 3 |
| Madeley | 12 | 14 | 2 |
| Market Drayton | 4 | 9 | 5 |
| Much Wenlock | 5 | 6 | 1 |
| Newport | 1 | 5 | 4 |
| Oswestry | 6 | 5 | -1 |
| Shifnal | 0 | 4 | 4 |
| Wem | 0 | 0 | 0 |
| Whitchurch | 2 | 3 | 1 |

TABLE 14:6 Changes in the sectoral composition of small town output, percent, 1797-1828 : Sector III

| | 1797 | 1828 | Percentage change |
|---|---|---|---|
| Shrewsbury | 31 | 31 | 0 |
| Bishop's Castle | 34 | 30 | - 4 |
| Bridgnorth | 33 | 42 | 9 |
| Broseley | 15 | 5 | -10 |
| Church Stretton | 31 | 23 | - 8 |
| Cleobury Mortimer | 33 | 29 | - 4 |
| Ellesmere | 28 | 36 | 8 |
| Ludlow | 27 | 35 | 8 |
| Madeley | 59 | 39 | -20 |
| Market Drayton | 24 | 35 | 11 |
| Much Wenlock | 33 | 45 | 12 |
| Newport | 30 | 34 | 4 |
| Oswestry | 29 | 43 | 14 |
| Shifnal | 24 | 32 | 8 |
| Wem | 33 | 36 | 3 |
| Whitchurch | 33 | 38 | 5 |

TABLE 14:7 Changes in the sectoral composition of small town output, percent, 1797-1828 : Sector IV

| | 1797 | 1828 | Percentage change |
|---|---|---|---|
| Shrewsbury | 18 | 19 | 1 |
| Bishop's Castle | 19 | 15 | - 4 |
| Bridgnorth | 16 | 16 | 0 |
| Broseley | 19 | 14 | - 5 |
| Church Stretton | 8 | 22 | 14 |
| Cleobury Mortimer | 1 | 29 | 28 |
| Ellesmere | 10 | 13 | 3 |
| Ludlow | 13 | 15 | 2 |
| Madeley | 23 | 14 | - 9 |
| Market Drayton | 15 | 14 | - 1 |
| Much Wenlock | 8 | 21 | 13 |
| Newport | 13 | 20 | 7 |
| Oswestry | 24 | 12 | -12 |
| Shifnal | 25 | 27 | 2 |
| Wem | 14 | 17 | 3 |
| Whitchurch | 14 | 11 | - 3 |

14:2), an increase of 8.5%. This matches the decline of 11% in the average share of sector I from 53.5% in 1797 to 42.5% in 1828. Both the growth of sector III and the decline of sector I are relatively uniform compared with the expansion of sector II. In addition the rate of growth of sector III conforms more closely to total growth rates than both the other sectors. This is reflected in the correlation coefficients of sector growth and total growth for the urban sector of the regional economy taken as a whole, which are as noted above, low for sector II, r = 0.73 and high for sector I. The sector III figure r = 0.92, is slightly higher than that for sector I.

Type A towns taken as a whole have a higher sector III growth rate of 3,6% per annum than those of Type B (2.3%). However, the figure for the faster growing towns is less dramatic when seen in relation to their overall average growth rate of 2.1%, a ratio of 1.7:1. This compares with a ratio of 1.5:1 for the slower growing towns, derived from the relationship of their overall average growth rate of 1.5%, to their sectoral growth rate of 2.3% (table 14:1 columns 3 and 5). There is only one town in which the estimated growth rate of sector III output (table 14:3) does not exceed the average aggregate growth rate of 1.8%. As in the case of sector II this was Wem, a Type B town at the bottom of the growth hierarchy.

Looked at in terms of growth rate criteria, growth rates for sector III reflect the ranking of the groups by overall growth rate more closely than do the estimates for the other sectors. The interaction of these sectoral and total growth rates has to be seen relatively, in terms of their impact on the long-run viability of the individual small town economy. Sector III expansion is significant for slower as well as for faster growing towns because, although the actual sector III growth rates are lower, they are high relative to the overall growth rate. Their actual contribution to total growth outcomes may in fact therefore be significantly greater. This is a hypothesis that may be tested using a simple growth accounting model. Before this technique is employed however, it is necessary to analyse the data on sector IV relating to average sector shares.

The average size of sector IV is about half that of sector III. It accounts on average for 16% of the total output in 1797 to 1828 in the sample of nine, compared with 29% for sector III. Its relative size varies more than that of sector III, having a standard deviation of 4.2 compared with 3.2 for the larger sector. The relationship between Type A and B towns at the aggregate level is inversley reflected in sector IV. Type A towns (average growth rate 2.1% per annum) have a sector IV growth rate of 1.9% and a growth ratio of 0.9:1. Type B towns (average growth rate 1.5%) have a sector IV growth rate of 1.7% and a growth ratio of 1.13:1. Four towns out of nine have sector IV growth rates below the average aggregate rate of 1.8%. Two of these are Type A towns: Bridgnorth and Oswestry, and two are Type B: Shifnal and Whitchurch.

In terms of the sources of growth in this sample of nine small towns it appears therefore that variations in the rate of aggregate growth as is experienced by the sample towns is not significantly influenced by the expansion or contraction of sector IV. The contribution of sector III however, unlike sector IV appears to be considerably more dynamic. This is a characteristic feature of the pattern of structural change in fast growing towns, which is experienced to a similar degree in the slower growing towns. Both these hypotheses may be tested using a simple technique of sectoral growth accounting, and the next chapter addresses the analysis of the sectoral contribution to growth in the small town economies in this way.

## Chapter 15 - A Comparative Analysis of Sectoral Differentiation in the Urban System of Shropshire

The next stage of the statistical analysis of the historical database is a simple growth model of the urban economy covering the period 1797 to 1828. It examines first the towns in the Shropshire provincial economy: the primate county town, industrialising towns, the faster growing and slower growing towns, the declining towns and the very small towns. Secondly it returns to the sample of nine towns to re-examine their experience of growth in the light of the insights generated by the growth accounting procedure. Thirdly the total population of towns is analysed disaggregated by type, and in comparison with the findings of the analysis of the sample.

In this technique of analysis the average growth rate of each sector is weighted by the average contribution of each sector to total output. This produces a reliable estimate of aggregate growth based on the weighted contribution of each sector, and a breakdown of the sectoral source of growth in the form of the proportion of total growth accounted for by each sector. These estimates may be positive or negative, since contracting sectors make a negative contribution to total output.

An analysis of the contribution to total output growth of sector I reveals that on average about 15% of total growth can be attributed to the expansion of this sector. The range of contributions, considering all the small towns in the county is very wide, from a positive contribution of 84% to a negative contribution of -101% (see table 15:1 column 1). In the former case it can be said that most of the growth occurring is attributable to sector I expansion. In the latter case which is, perhaps needless to say, the most rapidly contracting small town in the urban network, Market Drayton, more than all the contraction is accounted for by sector I. This is slightly offset by expansion in sectors II and III. This phenomenon is likely to occur only in declining towns.

TABLE 15:1 Growth accounted for by changes in sectoral composition in the urban system, percent, 1797-1828

| TYPE | TOWN | SECTOR I | SECTOR II | SECTOR III | SECTOR IV |
|---|---|---|---|---|---|
| P | Shrewsbury | 6.6 | 5.0 | 53.0 | 35.4 |
| A | Bridgnorth | 7.3 | 18.4 | 70.0 | 4.0 |
| | Ellesmere | 60.0 | 2.0 | 26.0 | 12.0 |
| | Ludlow | 54.0 | 6.4 | 32.4 | 6.8 |
| | Newport | - 1.5 | 9.2 | 9.2 | 83.0 |
| | Oswestry | 17.6 | 8.3 | 79.0 | 0.0 |
| B | Bishop's Castle | 13.2 | 7.5 | 56.3 | 23.0 |
| | Shifnal | 0.0 | 8.5 | 69.0 | 22.5 |
| | Wem | 11.0 | 0.0 | 47.5 | 41.5 |
| | Whitchurch | 24.0 | 6.6 | 69.0 | 0.4 |
| C | Market Drayton | -101.7 | 0.9 | 0.6 | -0.2 |
| | Much Wenlock | - 45.6 | -1.7 | -45.6 | -7.1 |
| I | Broseley | 84.0 | 13.5 | 3.5 | -1.0 |
| | Madeley | 45.5 | 5.5 | 13.5 | 35.5 |
| V | Cleobury Mortimer | - 4.0 | 0.0 | 0.0 | 104.0 |
| | Church Stretton | 7.0 | 1.3 | 3.2 | 87.8 |

Among the sixteen towns considered in table 15:1 there are five that experience a zero or negative contribution from sector I. These are the towns in which sector I output is declining absolutely. The average negative contribution in these towns is -28%. There are five towns in which the contribution of sector I is positive and below the average level of 14%, averaging 7%. There are six towns with above average sector I growth contribution, averages 46%. It may be deduced from this that since ten out of sixteen towns experience a below average sector I contribution, this sector is not on the whole a bouyant factor in the growth equation of the provincial economy. This must be qualified however in above average cases, where this sector clearly does have a bouyant rather than a depressing effect on overall economic activity, accounting as it does for almost half the average growth in output experienced by these six towns in the period 1797 to 1828.

The proportion of total growth attributed to sector II expansion (see table 15:1 column 2) is less than that of the other sectors because it is a relatively small sector. Its contribution ranges from 18% to -2%. The average contribution is 5%. Three towns experience zero or negative sector II growth compared with five for sector I. Six towns grow positively and below the average rate. Eight towns exceed the average rate. The respective levels are -1%. 2% and 9%. Hence in neither of these three groups does sector II account for more than one tenth of the growth. In fact only two towns out of the sixteen have sector II contributions above 10%: Bridgnorth and Broseley.

The contribution to growth from sector III ranges from 79% to -45%. The average level is 30%. Two towns experience negative growth averaging -22%, six towns a below average contribution averaging 9% and eight towns an above average contribution averaging 60%. Compared with the contributions of sectors I and II of 14% and 5% respectively sector III's average contribution of 30% is a considerable source of growth in the urban economy. It exceeds sector I's contribution by a ratio of 2:1 despite the fact that sector I is a larger sector in absolute terms in all cases. It exceeds that of the much smaller sector II by a ratio of 6:1. The scale of its contribu-

tion in towns where it has an above average influence compared with sector I a total of 8 compared with 6, displays a mean contribution to growth from sector III of 60% compared with 46% from sector I.

Sector IV's contribution to total growth (see fig. 15:1 column 4) ranges between 104% and -7%. Five towns experience a negative contribution averaging -2%; three towns below average: 7.5%, while eight experience an above average contribution: 54%. Hence there are significant instances in which this sector can make a substantial contribution to aggregate growth, accounting for more than half of total growth. In this respect it is like sector III, more bouyant than sector I, and also larger in its impact than sector II. Its overall influence on growth is 50% greater than sector I. The eight towns with above average sector IV contribution average 54%, compared with 46% for sector I and 60% for sector III. Thus sector IV behaves very like sector III in the growth process. Since together these sectors as defined for the purposes of this analysis constitute the modern tertiary sector, it may be suggested that their generic characteristics contribute to the similarity of their contribution to the processes of growth and decline in the provincial urban economy.

The next step in this procedure is to look more closely at a sample group of small towns to ascertain in greater detail the parameters of a town's aggregate economic performance over time. In this way the growth accounting exercise can provide further insights into the mechanics of urban growth and decline. It is a form of analysis equally powerful in shedding light on the reasons for economic contraction as well as expansion. The small towns selected for more detailed treatment are the same as in the sample used for analysing sectoral growth rates. They grow neither very fast nor are they in decline; they are neither very large nor very small; their structural characteristics are relatively balanced, no single sector completely dominates their output. The growth characteristics of two groups of towns in this sample have already been identified; those with above average and those with below average growth rates, denominated Type A and Type B.

The average contribution of sector I to the growth of Type A

towns is 27% (table 15:1 column 1). The average contribution of sector I growth to the slower growing Type B towns averages 9%. Thus it can be seen that it is in Type A towns that sector I makes the greater contribution to growth. The ratio of this contribution to sector I's influence on Type B growth is 3:1.

No such difference is found in respect of sector II's contribution in both Type A and Type B towns sector II accounts for 7% of overall expansion. There is no indication that faster growing towns benefit disproportionately from this source. Thus in Type B towns sector II is a small but uniformly dynamic sector. Its contribution compares closely with that of the much larger sector I average contribution to growth of 9%.

Sector III unlike sector II does not have a relatively uniform influence on growth. It contributes 43% to the growth of Type A towns and 60% to the Type B towns. Its significance lies in the scale of the contribution, amounting to half of the total growth in the nine sample towns, sample average 52%. In terms of its relative contribution Type B towns benefit most from the dynamic influence of sector III expansion, accounting for 60% of total growth. Sector III appears therefore to have an extremely important role to play in the overall growth process, and to be more significant in the slower growing towns. Sector IV's contribution to growth is the same in the faster growing towns as in the slower growing ones. Its contribution to growth is 22% on average.

The growth accounting procedure is next applied to a comparison of the sample, disaggregated into Type A and Type B groups, with the other types of small towns in the Shropshire system and including Shrewsbury the primate town. The county town exhibits an interesting profile when compared with the two groups of normal small towns. The growth accounting procedure reveals a sectoral contribution sequence of 7%, 5%, 53% and 35% for sectors I-IV respectively. It may be observed that this resembles most closely the profile of the slower growing towns, 9%, 7%, 60% and 22%; the correlation coefficient is r=0.93. This may be compared with r = 0.77 when the profile of the faster growing towns is compared with the primate town. The

structural growth characteristics of the county town therefore seem to function along the same line as the slower growing (Type B) small towns within the county.

The profile of the structural growth characteristics of small towns of the industrial type (Type I),representing Broseley and Madeley within the urban system, differs radically from that of the county town. As might be expected the contribution of sector II is more important, although only by a ratio of 2:1 which is a rather lesser distinction than many such ratios which have been observed. Nevertheless this is sufficient to place the contribution of sector II to the growth of these towns first by rank among all six types of town being considered. Hence it is justifiable to distinguish them from other towns on the grounds of their distinctive industrial structure. In respect of the contribution of sector I to industrial small town growth the ranking is again first out of the six groups. This is a most interesting finding. What it may well indicate is the strength of the relationship in the growth process of the small industrial town between the expansion of modern industry and the expansion of more traditional manufacturing activities. It appears that the two forms exist in a complementary rather than a competitive framework and that the increased contribution of one enhances that of the other through a positive feedback effect. The direction of causality, it may be assumed, is between above average sector II growth and the expansion of the traditional trades. This illustrates the inter-sectoral dynamism of rapid industrial growth.

This dynamic interaction is confined however, to sectors II and I. Sectors III and IV do not seem to benefit disproportionately in this way from the impetus of local industrialisation. Both rank fourth out of six in terms of their contribution, that of sector III at 8% being about one quarter the average sector III contribution, while that of sector IV at 17% is just over half the average for that sector.

The group of very small towns, constituted by Church Stretton and Cleobury Mortimer, exhibits a very high concentration of growth in sector IV, combined with very low contributions from the other

sectors. Hence the rank order of sector IV is one while that of the other sectors is fifth out of six in each case. Sixth rank in all sectors is reserved for the declining towns of Market Drayton and Much Wenlock; but in this case also the sectoral contributions, though uniformly negative, nevertheless reveal in some detail the sectoral forces operating in the process of urban decline. The largest single contribution to contraction comes from sector I which accounts for almost three quarters of the decline. Sector II is negligible and sector IV minor, the balance being accounted for almost entirely by sector III. An estimated 22% of economic decline is attributable to this sector. Hence the major negative source making for decline in the urban system of Shropshire is sector I contraction. Its significance exceeds that of the next most significant source, sector III, by a ratio of 3:1.

It may be observed therefore that at both ends of the spectrum of growth and decline in the urban system the processes of change are characterised by strong sectoral imbalances. Both the growing towns of the industrial type and those in economic decline exhibit structural abnormalities. The deviation from the norm is most marked in both cases by the behaviour of sector I. Since this is uniformly the largest sector, any divergent path of either expansion or contraction affects total growth disproportionately.

Having made this point however, it is not sufficient to assume that the other types of towns exhibit balanced growth. On the contrary, what this exercise reveals is that no single type of town has uniform inter-sectoral growth rates, or relatively similar contributions to growth from each of the four sectors. What may be said is that certain patterns of unbalanced growth are more productive of overall growth than others. Relative sectoral contributions provide an insightful quantitative perspective on the dynamics of urban growth and decline.

## Chapter 16 - Conclusion to Part II

The techniques of investigation that have been employed to analyse the aggregate outcomes of inter-sectoral relationships between types of towns with extremely varied economic histories, can also be employed between groups of broadly similar towns. It is useful at this stage to return to the sample group. The normality of this group of nine small towns consists partly in their sectoral structures. It is interesting therefore to observe structural change in both the faster and the slower growing towns in the period 1797 to 1828 (see table 16:1).

This was of course a period of rapid structural change in the wider national economy; associated particularly in England with the rise of modern industry and represented in the sectoral model employed in this investigation by sector II. It has been stressed that these towns are not, almost by definition, industrialising towns. Hence although they do have sector II activities, they are small relative to total economic activity. Sector II is not the only dynamic factor. The other larger sectors, it has been demonstrated, make a more significant contribution than sector II. They have in other words a dynamic impact, using the term dynamic to imply an impetus towards growth, or in the direction of decline.

There are two ways in which this quality of dynamism can be quantified: the sectoral approach and the growth accounting approach. The results of the application of both have provided useful insights and it is thought worth extending this methodology a little further. The findings yielded by the simpler sectoral methodology (table 16:1)are probably more reliable than those of the growth accounting approach (table 16:2), but both sets of results are presented here as an extension of the hypothesis testing power of the two methods. The purpose of this exercise is to illuminate the qualitative dynamic aspects of the small town economies in the early nineteenth century before the impact of the railway system.

The sectoral model reveals the dynamism of sector I in

TABLE 16:1 Sectoral growth rates by rank compared with sector-weighted estimates of gross and net output for a sample of nine small towns 1797-1828

| Type | Town | Sector I | Sector II | Sector III | Sector IV | Growth rate of weighted gross output | weighted net output |
|---|---|---|---|---|---|---|---|
| A | Bridgnorth | 9 | 4 | 5 | 7 | 4 | 2 |
| | Ellesmere | 4 | 3 | 6 | 3 | 4 | 3 |
| | Ludlow | 2 | 2 | 2 | 4 | 2 | 3 |
| | Newport | 7 | 1 | 3 | 1 | 6 | 4 |
| | Oswestry | 1 | 5 | 1 | 8 | 1 | 1 |
| B | Bishop's Castle | 3 | 7 | 2 | 2 | 2 | 5 |
| | Shifnal | 8 | 7 | 4 | 6 | 7 | 8 |
| | Wem | 6 | 9 | 8 | 5 | 8 | 7 |
| | Whitchurch | 4 | 6 | 7 | 8 | 8 | 6 |

TABLE 16:2 Sectoral contribution to aggregate growth by rank in a sample of nine small towns, 1797-1828

| Type | Town | Sector I | Sector II | Sector III | Sector IV | Weighted gross output | Weighted net output |
|---|---|---|---|---|---|---|---|
| A | Bridgnorth | 7 | 1 | 2 | 7 | 4 | 2 |
| | Ellesmere | 1 | 8 | 8 | 5 | 4 | 3 |
| | Ludlow | 2 | 6 | 7 | 6 | 2 | 3 |
| | Newport | 9 | 2 | 9 | 1 | 6 | 4 |
| | Oswestry | 4 | 7 | 1 | 9 | 1 | 1 |
| B | Bishop's Castle | 5 | 4 | 5 | 3 | 2 | 5 |
| | Shifnal | 8 | 3 | 3 | 4 | 7 | 8 |
| | Wem | 6 | 9 | 6 | 2 | 8 | 7 |
| | Whitchurch | 3 | 5 | 3 | 8 | 8 | 6 |

terms of its qualitative contribution to growth and the speed of its relative decline. This is a decline which is relative because it takes place in a context of overall expansion. Sector I participates in this expansion. It is growing absolutely while declining relatively. In the growth context the role of a relatively declining sector is that it releases resources which can be then employed in the faster growing sectors. These resources, the factors of production: labour, capital, enterprise and technology contribute in the process of their reallocation to total growth. The greater impact of this relative dynamism is seen in the more rapid decline of sector I in faster growing towns of Type A in the sample. Its contribution to Type A output declines from 54% to 41% on average, compared with a decline from 53% to 44% in the slower growing Type B towns (see table 14:2). These relative rates of decline can be expressed as a ratio of 1.4:1; sector I has declined 40% more in Type A than Type B towns over the period 1797 to 1828.

Whereas sector I is of equal importance in 1797 in both groups, sector II is already considerably more important in Type A towns. It represents 2.8% of output compared with 0.6. This is a reflection of a past economic history of more rapid growth and structural change. However, in this period Type B towns are catching up with their faster growing counterparts. These sectors have convergent growth as distinct from the divergent growth of sector I. By 1828 sector II represents 4% and 2.8% of output in Type A and Type B towns respectively. While this only brings the latter up to the level of the former in 1797, it represents nevertheless the fact that sector II's share of output is rising 80% faster in Type B than in Type A towns. This is demonstrated by the ratio of the proportionate change in sector shares: 1:1.8.

The most dramatic quantitative evidence of this variation in the dynamic qualities of the growth process revealed in the sectoral model is found in sector III. In the absence of a modern industrialising sector of a relative size capable of effecting the wider structural transformation of the urban economy, it is sector III which proves to have the most dynamic effect. Sector III is

both large enough and fast growing enough to have a major effect on relative growth outcomes. In this respect it is the counterpart of sector I and indeed increases its proportionate share of total output in the faster growing towns, on average, reciprocally with the relative decline of sector I. Its share of output in Type A towns rises from 29% to 41%, while in Type B towns the share of sector III rises from 29% to 34% increasing its share 13% and 5% respectively. Thus it can be said that both groups of towns are experiencing growth in this sector, both relatively and absolutely. Furthermore it can be suggested that sector III is also a major factor behind the contrasting growth experience of the two groups of towns. A growth ratio between two of 2.4:1 indicates that sector III is increasing its share of output at over twice the rate in the faster growing towns.

Sector IV reverses this relationship, behaving in this respect rather like sector II, except that in Type A towns it is in relative decline and in Type B towns it is expanding. Thus the share of sector IV in the former declines from 16% to 14% of total output, while in the latter it expands from 16% to 18%, change of -2% and +4% respectively. The experience of the two groups may thus be summarised by divergence rather than convergence in the case in sector IV.

This analysis of the qualitative dynamic factors operating on the sample group of towns reveals the divergent character of growth in the two sub-groups. Towns of both Type A and Type B possess remarkably similar structural characteristics at the beginning of the period, and quite different characteristics by its end. Their relative sector shares in 1797 are 54%, 2.8%, 29%, 16%, and 53%, 0.6%, 29%, 16% respectively. In 1828 after the changes which have been identified their structures are; 41%, 4%, 41%, 14%, and 44%, 2.8%, 34%, 18% respectively. In the faster growing towns the size of sector III has grown from being little more than half that of sector I to equal it in size. In the slower growing towns by contrast, it only grows from one half the size of sector I to three quarters its size.

In combination, the size of sectors I and III is great enough to largely determine the aggregate growth path of the individual small towns, and of the groups of which they from a part. Together their output constitutes 83% of average output in Type A towns in 1797 and 82% in 1828. In Type B towns they account for 82% in 1797 and 78% in 1828. It has been demonstrated that it is the dynamic interaction between these two sectors which helps determine the rate at which the small town economy will expand. By comparison the impact of sectors II and IV on aggregate growth is relatively minor. This is particularly the case in the faster growing towns in which their combined contribution actually declines from 19% to 18%, while in the slower growing towns it rises from 16% to 21%.

# Part III

## The Urban System of Shropshire 1600-1830:

## Case Studies

## CHAPTER 17 - Introduction: A Comparative Analysis of the Six Case Study Towns

As a means of examining in greater detail the long run changes in the small town network it is useful to employ a sampling technique. A sample of six small towns has been selected. They are chosen to be representative of the structure of the small town economy as a whole. That is to say, the sample includes an industrialising town: Broseley; a declining town: Much Wenlock; a very small town: Bishop's Castle; an emergent second-order town: Ludlow; a stable, normal town in the middle rank of most hierarchical schema: Bridgnorth; and a dynamic town of sharply varying fortunes: Oswestry.

It is not intended to employ the sample extensively as representative of the small towns of the county as a whole. It was, however, deemed appropriate that they should constitute, in terms of their respective populations, if not the ideal microcosm, then at least a valuable surrogate for the wider provincial economy and society. Mostly however the sample will be examined in its own right, as a group of heterogeneous small towns, and as a vehicle for the closer examination of the distinguishing features of each type. In terms of the typology of towns employed in the study, Broseley is type I, Much Wenlock type C, Bishop's Castle type V, and Ludlow, Bridgnorth and Oswestry, type A. Type A towns are to be regarded as "normal" towns and hence they dominate the sample. Types I and C lie at either end of the spectrum, the former have a history of the highest growth rates in this period, the latter the lowest.

The principal purpose of this exercise is to establish a time series of growth rates based upon the database for each town, the composition of which is detailed in the individual case-studies. This exercise is therefore essentially comparative. It seeks to look at the long-run growth path of each town in the context of the wider environment in which it operates, spatially, chronologically and economically. In choosing the benchmark data for the time series it has of course been necessary to accommodate the vagaries of the historical record. It has been important to consider the

availability of data. This is not of even quality amongst the towns of the sample. The normal towns are reasonably well covered by the diversity of materials employed in this study, but those of exceptional character, industrializing, very small or declining, are less well covered. Despite variations in the quality of the historical record it has been possible to process the raw data derived from the pre-directory sources with the minimum of modification.[1]

Five major benchmark dates are employed in the chronological structure of this analysis: 1620, 1665, 1745, 1797 and 1828. These are at intervals determined partly by the availability and quality of the data and partly by the wish to create time periods of analysis of a reasonably coherent nature; coherent that is, in terms of the major trend periods in the wider economy. It is regrettable that there is not a benchmark date in the early eighteenth century which provides a representative coverage. Estimates are possible for three out of the six towns centred on 1710, but since these three are the normal towns, these estimates fail to reflect the diversity of experience in the sample as a whole. The 1710 estimates are of course helpful in examining the fortunes of those towns, Bridgnorth, Ludlow and Oswestry, and will be referred to in this more limited context. Until the end of the eighteenth century the share of output accounted for by the normal towns: Ludlow, Bridgnorth and Oswestry, remains remarkably constant, despite the more varying economic fortunes of each of the three towns (see table 17:1).

In the period before the Restoration, coverage is limited to four out of six towns. These are: Bridgnorth, Broseley, Ludlow and Much Wenlock. A more diversified group of this kind may give some limited information on the early seventeenth century environment, and since this is a period when the historical material yielding such estimates is less plentiful they are presented in this exercise for what they are worth (see table 17:2, column 1). They indicate the presence of growth in three out of the four towns in the period 1620-1665. Much Wenlock is the exception and throughout the six trend periods examined, this town is revealed to be in decline in three. These are at the beginning and end of the period. The way in which

TABLE 17:1 Percentage contribution to gross output of the sample six case-study towns, 1665-1828

| | 1665 | 1745 | 1797 | 1828 |
|---|---|---|---|---|
| Ludlow | 33 | 25 | 27 | 31 |
| Bridgnorth | 18 | 16 | 24 | 24 |
| Oswestry | 16 | 24 | 15 | 21 |
| Broseley | 3 | 10 | 11 | 8 |
| Much Wenlock | 6 | 15 | 13 | 5 |
| Bishop's Castle | 28 | 9 | 9 | 10 |

TABLE 17:2 Gross output estimates for the six case-study towns. Overlapping periods 1620-1828, per cent, per annum.

| | 1<br>1620-1665 | 2<br>1620-1710 | 3<br>1665-1710 | 4<br>1665-1745 | 5<br>1665-1797 | 6<br>1710-1745 | 7<br>1710-1797 | 8<br>1745-1797 | 9<br>1745-1828 | 10<br>1797-1828 |
|---|---|---|---|---|---|---|---|---|---|---|
| Ludlow | 1.5 | 1.0 | -0.6 | 0.5 | 0.7 | 1.7 | 1.3 | 1.0 | 1.2 | 1.7 |
| Bridgnorth | 0.9 | 1.1 | 1.9 | 0.8 | 1.1 | -0.6 | 0.7 | 1.4 | 1.4 | 1.3 |
| Oswestry | - | - | 1.9 | 1.3 | 0.8 | 0.8 | 0.3 | 0.6 | 0.8 | 2.3 |
| Broseley | 2.1 | - | - | 2.4 | 1.9 | - | - | 1.0 | 0.8 | 0.3 |
| Much Wenlock | -1.0 | - | 1.2 | 2.1 | 1.5 | - | - | 0.6 | -0.2 | -1.8 |
| Bishop's Castle | - | - | - | -0.6 | 0.4 | - | - | 0.7 | 1.1 | 1.7 |

the trend period estimates are presented provides a series of overlapping periods which enables patterns of long-run growth and decline to emerge more clearly from the underlying data.

The counterpart of Much Wenlock in the period 1620-1665 is its near neighbour, Broseley. Broseley is favoured by the quarternary geology its Severn Gorge location, in contrast to the limestone escarpment of Wenlock Edge. The course of the river exposes coal seams, ironstones and claybeds, all of which are serving, by this period, to create a microcosm of modern heavy industry in early modern Broseley. The essential modernity of its developing secondary sector is reflected in its rate of growth of output and income of about two percent per annum. This is reflected in the fact that the contribution to output from sector II equals that from sector I in 1665 (see table 23:1), an exceptional phenomenon, indicating that the primacy of traditional economic activities based on renewable vegetative resources has already been successfully challenged by those exploiting non renewable mineral resources and fossil fuels. Shropshire is industrialising.

The vigour of the pre-industrial economic base is still however borne out by the growth of the other two towns, for which pre-Civil War records are available. Ludlow, destined to play such a significant role in the conflict, is a considerable beneficiary of the early Stuart regime. Its rate of growth of output and income of 1.5% per annum (see table 17:2) marks it as the local branch of the "great wen", the term coined by provincial parliamentarians to condemn London's consumption-led expansion in this period. Like the metropolis, Ludlow has its own provincial court, and this element, which was the basis of the growth of most early modern European capital cities, clearly gave Ludlow an advantage. The administrative, bureaucratic and political structures of the Council of the Marches of Wales, based in Ludlow, became more autonomous in the period of Charles' personal rule in the 1630's, when the peripheral parts of the Kingdom became subject to variants of direct rule. The more courtly counterparts of the development of the political and administrative infrastructure provided scope for conspicuous consumption in the town and the development of a society

which, if it was not splendid, was certainly elegant by provincial standards.

Bridgnorth is the other town for which it has been possible to estimate a rate of output growth in this period. The data relates largely to the 1630s. Between then and the mid-1660s the town experiences growth which must be considered quite vigorous by early modern standards at 0.9% p.a. Bridgnorth, like Ludlow, held out as a Royalist town until late in the Civil War. The destruction entailed, as much in its defence as in its attack, was not as extensive.

Bridgnorth then enters a phase of considerable expansion in the next trend period 1665-1710 when its growth rate rises by 1% to 1.9% p.a. (see table 17:2, column 3). A state of affairs in marked contrast to that of Ludlow, which fails to expand after the Restoration. The role of the Council in the affairs of state atrophies in the late Stuart period, and in the constitutional upheaval of 1689 it is abolished as a remnant of the potentially autocratic appurtenances of personal rule.

The tempo of both the domestic and foreign trade sectors of the national economy quickened in the late seventeenth century as Britain challenged the Dutch for commercial supremacy in Western Europe. Bridgnorth as an inland port of some significance benefited from these developments. The rate of its expansion in this period, although from a lower base, probably exceeded its late eighteenth and early nineteenth century growth, though it was not as sustained as in the later period. The experience of Oswestry seems to have been broadly similar, despite the great contrast between the respective economic roles of the two towns (table 17:2). The sectoral structure of Oswestry remains remarkably stable in this period (table 20:1), whereas sectors III and IV, the trade and services sectors, almost double their share of output in Bridgnorth (table 19:1).

Ludlow's period of decline was confined to the late seventeenth and early eighteenth century period. After 1710 Ludlow entered a period of growth comparable with that of Bridgnorth and Oswestry in the previous period, expanding by 1.7% p.a. between 1710 and 1745

(table 17:2, column 6). Growth on this scale exceeds that of the early Stuart period and is comparable to the growth experienced in the early nineteenth century. The structural parameters of these changes have been examined in the case study of the town. What may be suggested here is that in the long-run Ludlow passes through three peaks and two troughs in its growth path between 1600 and 1830. The peaks are in the first third of each century with decline setting in by mid century and bottoming out in the second half of the century (see table 17:2, passim).

Bridgnorth and Oswestry by comparison experience only two peaks and one trough. Both peak in the late seventeenth century and Bridgnorth has its trough in the early eighteenth century, Oswestry in the mid-eighteenth century. The second peak for Bridgnorth is in the late eighteenth century, and for Oswestry in the early nineteenth century. It is not possible because of the paucity of early eighteenth century data to pinpoint the turning points in the long-run growth cycles of the other three towns. However, it is interesting to observe that both Broseley and Much Wenlock reach their peak growth rates between 1665 and 1745 and that thereafter both are in secular decline. They have only one peak, Bishop's Castle also has only one peak. This occurs at the end of the period under study in the early nineteenth century. It coincides in this respect with the second peaks of Ludlow and Oswestry.

At its peak in the period 1665-1745 Broseley reaches a rate matched only by Oswestry in the immediate pre-railway period; though it must be stressed that this is from a low base compared with its counterparts. Broseley contains 9% of the sample population in 1665 (see table 17:3). This share has doubled by 1740. Both Ludlow and Bridgnorth contain about 25% of the sample population, and Oswestry 14%. Broseley's share of population is rising steeply therefore. Ludlow's share is declining while that of Bridgnorth and Oswestry is stable. Much Wenlock's share is also declining, and it is overtaken and outstripped by its neighbour Broseley, falling from 12% to 11% This illustrates the contrast in the demographic experience of the two types of towns. Bishops Castle is half the size of Much Wenlock: a very small town. Its population share is relatively stable

TABLE 17:3 Percentage Share of the Population of the sample : six case study towns, 1670-1831

| | 1670 | 1740 | 1801 | 1831 |
|---|---|---|---|---|
| Ludlow | 29 | 25 | 20 | 21 |
| Bridgnorth | 25 | 24 | 22 | 20 |
| Oswestry | 13 | 14 | 14 | 18 |
| Broseley | 9 | 17 | 25 | 17 |
| Much Wenlock | 12 | 11 | 10 | 10 |
| Bishop's Castle | 6 | 7 | 7 | 8 |

throughout.

It is possible using the overlapping sequence of periods to look at quite long term trends in output and income growth. When this is done for the earliest period 1620-1710 (table 17:2, column 2) it is seen that despite their varying economic and political fortunes, and the different amplitude of their cycles of growth, the long-run growth rates of Bridgnorth and Ludlow are about the same at 1% p.a. In the next period 1665-1745 their experience is more divergent. Ludlow's rate is 0.5%, Bridgnorth's is 0.8. With the exception of Bishop's Castle which is in decline in this period, the smaller towns are growing faster that the larger towns. The average growth rate of Broseley, Much Wenlock and Oswestry is 2% (table 17:2, column 4), their average population share is c.1670 12%, (table 17:3, column 1). The share of sample output accounted for by Bridgnorth and Ludlow declines from 51% in 1665 to 41% in 1745 (table 17:1, columns 1 and 2).

In the next long period which comprises 1745-1828 this pattern of relationships is reversed and the larger town's average growth rate doubles to 1.3% while that of the smaller towns falls from 2% to 0.5% per annum. This excludes the very small town of Bishop's Castle which is growing at 1.0% at this period, emerging from its decline in the previous period. The share of output of Bridgnorth and Ludlow has accordingly returned to its mid-seventeenth century share of 51% by the end of the eighteenth century, and by the end of the period under analysis has risen further to 55%. Thus the historical peak of output share for these two large towns is reached at the end of the period. The relative shares of the smaller towns are reasonably constant until the end of the eighteenth century when they begin to diverge quite markedly.

When these changes in levels of output are translated into growth rates it is Oswestry which emerges as the fastest growing town of the early nineteenth century, and it becomes in due course a railway town of some significance, a distinction it shares with the primate county town. No other Shropshire small town becomes a railway town on a comparable scale. The experience of Bridgnorth and

Ludlow at the end of the period of study reflects perhaps a divergence in their relative roles in the urban system. Growth in Bridgnorth reaches its peak in the late eighteenth century and the first third of the nineteenth century shows a marginal decline. Ludlow by comparison is accelerating noticeably over the three overlapping periods 1745-1797, 1745-1828, 1797-1828; from its second trough to its third peak. The growth rate rises from 1.0% to 1.2% to 1.7% per annum, matching the early eighteenth century peak rate (table 17:2 passim).

It is possible to take the analysis of comparative growth rates a little further by considering how they relate to relative population growth rates. The interaction of these two variables can provide an insight into the trends in net growth rates as distinct from gross estimates, that is, rates of change in output and output per head in the small town economy. The only population estimate available for the sample towns in the pre-Restoration period is for Bridgnorth from the Diocesan Survey of 1563. This figure fortunately relates to the township rather than the parish, and may be used in conjunction with the estimates derived from the figures for payers of Hearth Tax in 1672[2]. It reveals a long run population growth rate of 0.4% per annum. This may be compared with the estimate of output growth in Bridgnorth between 1620 and 1665 of 0.9% per annum. When this gross estimate is corrected for the rate of population change it yields a margin of per capita growth of 0.5%.

The Hearth Tax figures of 1672 provide the basis of a range of estimates to cover the sample as a whole. There is no further estimate available for all the small towns until the first census of 1801. The procedure adopted therefore has been to relate the 1672 estimates of population to the nearest benchmark estimates of output, which is 1665. And similarly, the 1801 figures are used in conjunction with the 1797 estimates of output. A third estimate of per capita output has been constructed using the 1831 census figures and the 1828 estimates of output.

The 1665/72-1797/1801 estimates reveal a figure of 0.5% for Bridgnorth. This is the same as the earlier estimate, which is a

source of some confidence in the earlier figure (table 17:4, column 3). It is derived from an estimate of output growth for the period of 1.1% per annum, and a population growth rate of 0.6% per annum (columns 1 and 2). Thus both the economic and demographic rates of growth have risen, while the outcome in terms of growth of per capita output has remained stable. These two estimates may be compared with the early nineteenth century. The output growth rate for 1797/1801 - 1828-1831 is 1.3% (column 4), when this is offset with the population growth rate of 0.4% per annum (column 5) it reveals a per capita growth rate of 0.9% per annum (Column 6). In the light of the average population growth rate of the sample in this period (1801-1831) which is 1% per annum, the Bridgnorth figure, at less than half this level, appears on the low side. If this is the case it will tend to overstate the per capita rate. 0.9% per annum is in fact the highest estimate for this period in the sample.

This procedure can be followed for each town in the sample, providing a comparison between individual towns in each period, and for each town a comparison of the earlier and later period. Taking the sample as a whole the interpretation of these figures as averages may have wider relevance in terms of their representativeness of the structure of the small town economy of the county. This is offset however by the range of population size in the sample.

The average for the sample as a whole for the first period 1665/72 - 1797/1801 for the output growth rate is 1.1% per annum; this is offset by an average population growth rate of 0.8%; these produce an average per capita growth rate of 0.3% per annum. Thus the sample reveals best estimates of output growth rates for the small towns of Shropshire in the late seventeenth and eighteenth centuries of 1.1% per annum gross and 0.3% per annum net.

When Bridgnorth is taken in conjunction with the other normal towns of the sample Ludlow and Oswestry, excluding industrialising Broseley, declining Wenlock and the very small Bishop's Castle, the average gross growth rate drops to 0.8%; net of population growth of 0.6% per annum this produces a growth estimate of 0.2% per annum. This estimate coincides with the net estimate for Ludlow. Ludlow's

TABLE 17:4 Long-run gross output growth estimates and net growth rates of the six case-study towns, per cent per annum.

| | 1665/1672 - 1797/1801 | | | 1797/1801 - 1828/1831 | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| | Gross output growth rate | Population growth rate | (1-2) Net output growth rate | Gross output growth rate | Population growth rate | (4-5) net output growth rate |
| Ludlow | 0.7 | 0.5 | 0.2 | 1.7 | 1.0 | 0.7 |
| Bridgnorth | 1.1 | 0.6 | 0.5 | 1.3 | 0.4 | 0.9 |
| Oswestry | 0.8 | 0.8 | 0.0 | 2.3 | 1.7 | 0.6 |
| Broseley | 1.9 | 1.5 | 0.4 | 0.3 | -0.4 | 0.7 |
| Much Wenlock | 1.5 | 0.6 | 0.9 | -1.8 | 0.6 | -2.4 |
| Bishop's Castle | 0.4 | 0.7 | -0.3 | 1.7 | 1.5 | 0.2 |
| Average | 1.1 | 0.8 | 0.3 | 0.9 | 0.8 | 0.1 |
| Average of type A Towns | 0.8 | 0.6 | 0.2 | 1.7 | 1.0 | 0.7 |

experience is therefore, fairly representative of Type A towns. Oswestry shows no increase in net output in this period, since output growth of 0.8% per annum is entirely offset by population growth of 0.8%. Thus, despite the similarity of the gross output growth rate among this group of 1.1%, 0.7% and 0.8% for Bridgnorth, Ludlow and Oswestry respectively, their net growth rates vary both by rank and proportionately: 0.5%, 0.23% and 0.0% respectively.

When the same group of three Type A towns is observed in the period 1797/1801 - 1828/1831, the average gross output growth rate has doubled from that of the earlier period (0.8% to 1.7% per annum), while the population growth rate has risen from 0.6% to 1.0% per annum. The less than commensurate acceleration of population relative to output results in a major improvement in rates of growth of estimated net output in the towns from 0.2% in the first period to 0.7% per annum in this period. Ludlow and Oswestry have similar rates of 0.7% and 0.6% per annum respectively. Bridgnorth's rate, as discussed above, is 0.9%. Broseley matches the Ludlow rate of 0.7% to come equal second in the hierarchy of per capita growth. Thus by quite dissimilar paths of structural change the growth outcomes of these two towns Ludlow and Broseley in terms of this seminal measure of economic welfare are broadly similar. The route taken by Ludlow appears to prove the more enduring however, since it is the product of a conjunction of high output growth (1.7%) and high population growth (1.0%). By comparison, Broseley has joined the ranks of declining small towns already, as the growth of heavy industry elsewhere in the Severn Gorge and elsewhere in the Kingdom, provides an early example of the economics of de-industrialization. Broseley's population is in absolute decline in this period (-0.4% per annum) while its growth rate is very low at 0.3%. However, the movement of resources out of the town, in this case the net out-migration of labour to areas with more buoyant local economics is sufficient to prevent living standards in the town falling. One rather interesting reflection on this process, is the relative rise of the contribution to output of sector I, the traditional sector, from 24% to 31% (see table 23:1). Thus the net growth estimates may be seen in conjunction with the record of overall growth. When these aggregative estimates are considered in conjunction with relative sectoral

shares, they are able to shed light on the processes of economic decline in the urban sector, as well as on those of economic growth.

FOOTNOTES

1. Pre-directory sources are typically: probate inventories, burgess rolls, Quarter Sessions Papers, Poor Law records and Poll Taxes. These are listed for each town in their respective chapters and the information derived is given in appendices four to nine.

2. CLARK, P., GASKIN, K., and WILSON, A. Population Estimates of English Small Towns 1550-1851 (Centre for Urban History, University of Leicester 1989) pp.137-140

## CHAPTER 18 : LUDLOW

Ludlow is one of Shropshire's better known towns, a planned product of the twelfth century in terms of morphology, and a graceful monument to the Georgian style in terms of the built environment which survives today. The Castle was one of a line to be built along the border of England and Wales by Roger de Montgomery in the late eleventh century and was a large example of its type. A successful military installation in times of conflict; the castle also promoted the development of the civilian sector and later became the seat of the Council of the Marches of Wales, a role it played until 1689. The wool trade flourished here in the Medieval period and the parish church of St.Lawrence, one of the finest and certainly the largest in the county, was built upon the proceeds of this industry. Draper's Row still contains some of the late thirteenth century houses built by successful woolmen. The prosperity of the town was further enhanced in the sixteenth century when Queen Elizabeth's favourite, Sir Henry Sidney, was appointed Lord President of the Council of the Marches. The presence of the Royal Court in the town would have had advantages for the businesses of local tradesmen and the urban economy as a whole. It promoted the social and cultural development of the town and the sophisticated tastes of the courtiers created demand for high quality and luxury goods and services not seen elsewhere in the county. Demand for entertainment, masques, plays and dances, centred round the castle, Milton's 'Comus' being one of its better known first performances.

Ludlow entered the seventeenth century as a prosperous settlement having made a noticeably more successful transition from castle town to market town than some of its neighbours (for example, Clun and Bishop's Castle). In 1619 officials from the Council of the Marches still accounted for 38 of Ludlow's 500 burgesses, though conflict between the Principality and England had basically ceased. The contribution such officials made to urban finances was considerable, amounting to £35.6.0d of the £160.3.4d received in Corporation rents.[1]

With a history of Royal favours and patronage, it is not per-

haps surprising to learn that Ludlow remained staunchly Royalist throughout the Civil War. Indeed it was among the last of Shropshire's towns to be taken by the Parliamentarians in May 1646.[2] Military disruption was a setback to the economic growth of the town in the latter half of the seventeenth century and it did not properly recover until the first decades of the eighteenth century. Whether Ludlow ever regained its medieval preeminence is open to question. It did however, maintain its position as the most significant market town in southern Shropshire into the nineteenth century acting as an economic and social centre for this part of the county.

In order to determine the role of Ludlow in the urban system of Shropshire over the 230 year period encompassed in this study, it is necessary to plunder a wide range of sources for information. In previous chapters material from directories has been used to establish the position of the town in geographical and economic hierarchies.[3] Directories give data of a comparable nature at dates towards the end of the period and thus form a reliable starting point for analysis. To work back from this, one has to incorporate material from such disparate sources as poor law records, court books, turnpike trusts, estate records and so on. Material of this kind has been collected and collated for Ludlow and forms the basis of the following chapter.

Population figures indicate that Ludlow was a substantial settlement in the urban network. Early population estimates are of course plagued with uncertainty but pre-census data may be used to suggest trends in growth or decline. An estimate for 1602 gives Ludlow a pre-Civil War population of 1,657.[4] Lloyd has suggested that the disruption caused by the war and the demolition of houses, both inside and outside the town walls, gave rise to an economic slump in the town which exhibited itself in depopulation.[5] This is supported by the 1689 population estimate of 1,598 and the House and Window Tax of 1710 which shows that some of the demolished dwellings in Corve Street were still vacant in the eighteenth century.[6] By 1740 however, another estimate shows that the population had begun to recover. At this date Ludlow's population was 2,826; by 1801 it had risen to 3,897. The first decades of the nineteenth century were

characterized by a comparatively high population growth rate of 1.2% per annum, and in 1831 Ludlow had over 5,000 inhabitants.

Ludlow retains a relatively high rank in the hierarchies which have been constructed for three dates, 1672, 1801 and 1831, (see figures 13:1-13:3). In 1672 Ludlow is in first place, by 1801 it has fallen to seventh place, from which it climbs back to fifth place by 1831. Population statistics for Ludlow are given for the parish rather than the town, but as the two were largely coterminous this is not seen as too great a problem. Unfortunately the same cannot be said of the other small towns. Ellesmere, for example has a much higher rank than Ludlow in both the later hierarchies because its data refers to the extensive parish of Ellesmere, rather than the town. If statistics for the latter were available one might reasonably expect them to depress the rank of Ellesmere and thus raise that of Ludlow. Such differences are not overly important in this case however, as Ludlow remains in the group of second order towns identified on the graphs. This corresponds with the order achieved in the assessments of centrality made for 1797 and 1828 in Chapter 4. The functional indices show an increase in the rank of Ludlow from fourth in 1797 to second in 1828. At this date it constitutes the only second order town. This correlates well with the high rate of population growth already observed in the first decade of the nineteenth century and suggests the development of Ludlow as an increasingly important central place.

Central functions are those serving the local population. In terms of the economic model used in chapter 9 as they have been identified as residentiary activities. The increase in centrality displayed by Ludlow over the 1797-1828 period correlates well with the increase in population. Ludlow clearly had an important role to play as a central place and one would therefore expect residentiary functions to feature heavily in its economic profile. The extent to which this is so may be assessed as part of a structural analysis of the urban economy. The development of the town will therefore be examined in terms of the four sectors employed in chapter 9; that is: sector I, the traditional craftsmen/producer sector; sector II, the 'modern' industrial sector; sector III, the retail sector, and sector

IV, the service/professional sector.

Analysis of this type hangs on the availability of occupational data which in this case is used as a measure of economic diversity and importance. Material from the two directories has already been disaggregated into four economic groups to give benchmarks in the later period at 1797 and 1828. Occupational data for the early period has been taken from probate inventories,[7] Poll Taxes,[8] Burgess Rolls,[9] a Ship Money assessment[10] and Poor Law documents[11] and have been grouped around a series of mid-points at intervals of between twenty and thirty years throughout the period, see Appendix 4. Though the data for Ludlow are of comparatively high quality they have been converted to percentages which allow greater comparability with less well represented towns. The latter are typically those of exceptional character, for example, the industrializing towns and very small rather than the "normal" ones.

Ludlow is of "normal" type and as such forms part of the analysis of a sample of nine towns made in Chapter 14. This concentrates on its performance relative to other normal towns in the period 1797-1828. In this section however, Ludlow is to be analysed in relation to the six case-study towns. Table 18:3 shows the percentage contribution to growth of output made by the six heterogeneous towns over the three periods 1665-1740, 1740-1797 and 1797-1828. In the first period it appears that Ludlow's contribution to economic growth in the six towns is as little as 6%. This is despite the fact that its population was substantial in relation to the other towns. However, when Ludlow's percentage share of the total output of the six towns is calculated it is seen to be relatively high at 33% in 1665 (Table 17:1). This indicates that though contribution to output is high it occurs in a sector which has little impact on growth during this period. Ludlow's contribution to growth rises steadily accounting for 18% between 1740 and 1797, and 33% between 1797 and 1828. This suggests that Ludlow is developing a more balanced economy as expansion occurs in growth inducing sectors as well as more traditional ones.

When the Ludlow database is disaggregated into the four

economic sectors the picture outlined above is described with greater clarity (see Table 18:1). Sector I, the traditional sector of craftsmen/producers retains an exceptionally large proportion of economic activity. In no other town does this sector account for so much economic activity for such a long period of time. The nature of sector I is to serve as an economic base catering for a local market. If, as suggested by the models described in Chapter 9, growth is promoted by exogenous influences and is characterized by 'export' activities then one would not expect to see growth in a town dominated by traditional sector I activities. The almost negligible development of sector II (modern industry) and the limited development of sectors III and IV in Ludlow serve to illustrate this point more clearly.

The suggested setback suffered by Ludlow after the Civil War fits neatly into the series of figures on the development of sectors III and IV. These describe a 'U' shaped curve in the second half of the seventeenth century (see figure 18:1 and table 18:1). The graph in figure 18:1 clearly shows a curve of opposite dimensions for the contribution of sector I to output. Thus Lloyd's suggested decrease in the population of Ludlow coincides with an increase in the contribution to output made by sector I and a decrease in the contribution made by sectors III and IV. The strength of sector I at this stage is enough to maintain the status of Ludlow as a second order town in the urban network of Shropshire. This sector also ensures Ludlow's percentage contribution to the total output of the sample of six case-study towns is higher than that of any other, despite a decrease in population. At this stage the traditional sector is therefore an important one for the stability of the small town economy even though it is not a growth inducing one.

Table 18:3 suggests that industrializing towns like Broseley are the centres of growth in the period running up to that known as the Industrial Revolution. Broseley's percentage contribution to growth between 1665 and 1740 is higher than that of any other case study town at 44%. This is a result of the dynamism of sector II and "modern" industry. This is a sector of negligible importance to the economic profile of Ludlow and in its absence it is seen that sectors

Table 18:1 - Ludlow: Percentage Contribution to Output of Sectors I-IV, 1625-1828

| | 1625 | 1665 | 1705 | 1745 | 1797 | 1828 |
|---|---|---|---|---|---|---|
| Sector I | 74 | 81 | 81 | 71 | 55 | 43 |
| Sector II | 0 | 1 | 2 | 9 | 2 | 7 |
| Sector III | 13 | 13 | 10 | 10 | 27 | 35 |
| Sector IV | 13 | 5 | 7 | 10 | 14 | 15 |
| Sectors III & IV | 26 | 18 | 17 | 20 | 40 | 50 |

Table 18:2 - Ludlow: Percentage Contribution to Output of Sector I Disaggregated, 1625-1828

| | 1625 | 1665 | 1705 | 1745 | 1797 | 1828 |
|---|---|---|---|---|---|---|
| Primary | 5 | 12 | 23 | 11 | 1 | 1 |
| Food Processing | 10 | 11 | 4 | 7 | 12 | 17 |
| Textiles | 19 | 16 | 12 | 13 | 11 | 5 |
| Leather | 28 | 28 | 23 | 22 | 14 | 5 |
| Metal | 6 | 4 | 7 | 3 | 4 | 2 |
| Construction | 6 | 10 | 12 | 15 | 13 | 13 |
| Total Sector I | 74 | 81 | 81 | 71 | 55 | 43 |

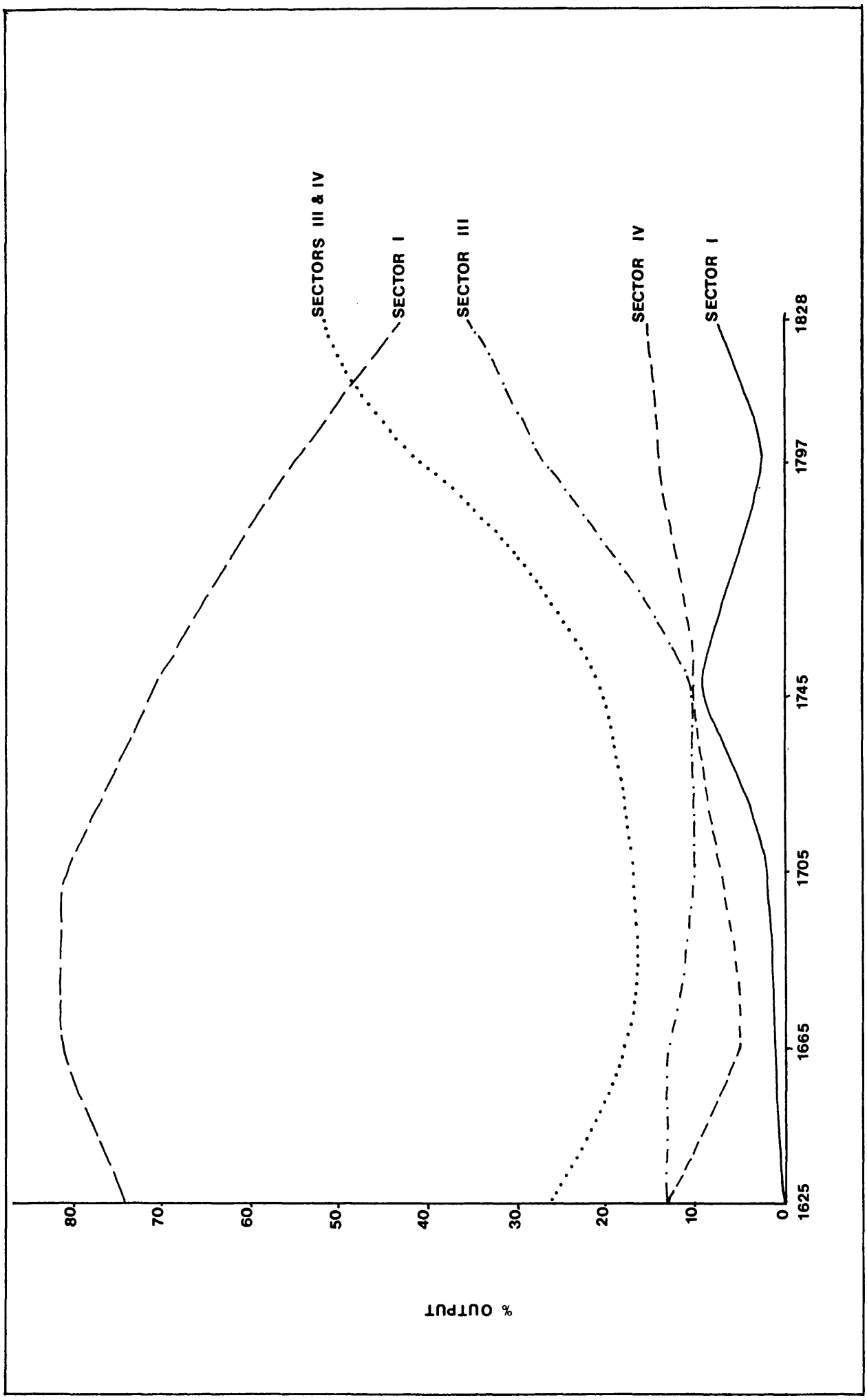


Fig 18:1 Sectoral contribution to output, Ludlow 1625 - 1828

III and IV adopt the dynamic role. The graph in figure 18:1 shows that this is particularly the case with sector III. The wholesale and retail activities of this sector characterise the modernizing economy of Ludlow. When the contributions to output of sectors III and IV are summed, the relationship between these dynamic activities and the rise in Ludlow's contribution to growth in the sample of towns, is made even clearer.

Table 18:3 shows increases in Ludlow's percentage contribution to growth among the six case study towns to 18% in the period 1740-1797 and finally to 33% in 1797-1828. This coincides with the period of most rapid growth in the contribution to output of sectors III and IV (see table 18:1). The contribution to output made by the retail and tertiary sectors in Ludlow exceeds that of the traditional sector by the turn of the century. At this point Ludlow becomes a 'modern' or 'proto-modern' town with a more balanced economy capable of greater dynamism and flexibility than previously. This coincides with a period of population increase in the town from 3,897 in 1801 to 5,253 in 1831.

The relationship between Ludlow's contribution to economic growth in the sample of case-study towns, and its contribution to their total output also changes (tables 18:3 and 17:1). While the former increases steadily the latter is seen to fluctuate. This suggests that in the early period urban output was largely accounted for by traditional sector I activities. Economic dynamism in Ludlow is centred in the tertiary and retail sectors where total output is not high. Thus with the expansion of these activities in Ludlow after 1740 its share of total output actually decreases and fluctuates in response to the relative decline of sector I.

The conclusions drawn from the structural analysis of Ludlow's economy in the seventeenth and eighteenth centuries suggest a pattern of development similar to that put forward in the "Stages Model" referred to in chapter 9.[12] The first stage of agricultural subsistence is so far back in Ludlow's history that it does not form part of this study. By 1600 Ludlow had already reached the "hinterland stage". The strength of the traditional sector is typical of this

TABLE 18:3 Percentage contribution to growth of output of the six case-study towns, 1665-1828

| | 1665-1740 | 1740-1797 | 1797-1828 |
|---|---|---|---|
| Ludlow | 6 | 18 | 33 |
| Bridgnorth | 15 | 22 | 26 |
| Oswestry | 13 | 15 | 33 |
| Broseley | 44 | 24 | 7 |
| Much Wenlock | 21 | 7 | -10 |
| Bishop's Castle | -1 | 7 | 11 |

stage. The existence of primary and secondary activities in the town and the occurrence of individuals engaged in the dual economy of agricultural and craft production is also characteristic. Thus in the burgage rental of 1619 fields and hemp butts occur inside the town amongst the properties on Corve Street.[13] It is common to find probate inventories in the seventeenth century which list stock, crops and agricultural implements of considerable value and variety.[14]

The market records used in the analysis of spheres of influence (Chapter 7) show, that Ludlow had developed an extensive hinterland by 1646 with which it was linked by a system of roads. Its function as a central place and market town for the south Shropshire region, northern Herefordshire and Worcestershire, and its administrative role in the Marches counties meant that, though craft industries were important, an infrastructure of services was also required. The size of the town also encouraged the development of infrastructure at an early date. In accordance with this members of the medical profession and retail trades are comparatively well represented in seventeenth century Ludlow (see Appendix 4).

It is suggested that Ludlow's progression to the third stage of "interregional" development was delayed until the first half of the eighteenth century by the Civil War. It is only in this period that sectors III and IV recover their pre-war levels of contribution to output in the urban economy. In the eighteenth century the turnpiking and improvement of roads, first to Hereford and Worcester and then to Knighton (Radnorshire), Bishop's Castle, Bridgnorth, Cleobury Mortimer, Church Stretton and Much Wenlock, consolidated Ludlow's position as a nodal centre of some importance. The assessment of turnpikes as a measure of connectivity made in Chapter 5 reveals Ludlow as one of only two second order towns in 1752 (see figure 5:1a). In 1724 John Macky was able to refer to the town as "the Capital of South Wales ..... one of the neatest, clean, pretty town in England..." where society congregated "from the adjacent counties, for the conveniency and cheapness of Boarding; Provisions of all sorts" being "extremely plentiful".[15]

By 1710 sector I had begun to decline from a peak, reached in the years of economic regression suffered after the Civil War. This decline was accompanied by an increase in output from Sectors III and IV. Small scale changes in the details of the economic organization of the town and provision and quality of facilities are also seen and suggest the prosperity of Ludlow at this stage. The Butter Cross, a classical town hall and market building, was constructed in 1743,[16] in 1756 the almshouses were rebuilt at the cost of over £1000,[17] and in 1785 the water system was repaired and a room built over the market house at the cost of £300.[18] Such investment could only take place in a period of economic boyancy. It indicates the Corporation's positive response to the structural developments taking place in the urban economy and symbolizes the town's high status within the urban system as a whole.

A further indication of the increasing sophistication of the urban economy is seen in the declining use of the Pie Powder Court during the eighteenth century. In the 1600s this had still been a well used vehicle for the resolution of disagreements in marketing practice. However, after 1750 very little action was taken by the court, and its function became increasingly obsolete as new techniques of marketing developed.[19] An increase in the scale of activity and the development of sale by sample, especially for grains, both played a part in this. A tendency towards free trading and the avoidance of market restrictions was also typical of the period. Notices against the buying and selling of commodities in inns and houses rather than in the market place were given though often one, suspects, in vain.[20] In 1756 it became necessary for the Ludlow corporation to issue a statement in the effort to control the unofficial expansion of the market and of marketing techniques.[21] This was targeted against forestallers guilty of haggling to get better prices before entering the market; regrators who acted as an early class of middlemen buying goods in one town to sell in another for profit; and against engrossers who bought in bulk to stockpile resources and thus raise prices by creating an artificial shortage.

The formalization of the market place, and in accordance with this, the growing number of permanent standings and shops, is also a

feature of the third and interregional stage of urban development. As the hinterland served by a town expands the extent of its retail function also expands; the number of tradesmen increases as demand increases.[22] Thus in 1756 52 shopkeepers resident in Ludlow signed a petition against the proliferation of irregular standings. These were set up by incoming traders and obscured the shop fronts thus damaging their trade and introducing new unwanted competition.[23] In the occupational database of the eighteenth century (Appendix 4), the development of Sector III is reflected in the replacement of pedlars, hucksters and chapmen, with shopkeepers, shop assistants and salesmen. The Universal British Directory of 1797 lists a cheesemonger, corn merchant and coal agent as wholesalers and middlemen, specialist intermediaries also characteristic of an increase in the scale of economic activity in sector III. The elegant shops and houses of the Georgian period which survive in such abundance in Ludlow today are a further testimony to the prosperity such entrepreneurs brought to the town at this time.

Development during this stage took place in the social sphere as well as the economic. A public dispensary was opened in 1780 and a library established in 1789.[24] In 1786 a committee was set up by the corporation to regulate entertainments. It set down rules about the issuing of tickets for balls and the unacceptable presence of servants in the ball-room.[25] References to the assemblies, balls, dinners and "exceedingly gay" company to be found in the town were made by Mrs Philip Lybbe Powys in her diary of 1771. She also refers to the race meetings held there and to the existence of a theatre which could command a "good set of actors".[26]

It is clear therefore, that in the third stage of development Ludlow achieved a position as both an economic and cultural centre in the network of Shropshire towns. It served an interregional market and specialized in retailing activities and cultural developments of the kind listed above. 'Gentrification' is perhaps the best term to describe development in the eighteenth century. It is not however, characteristic of the development of other small towns in the county though it does occur in Shrewsbury. Gentrification may therefore be considered as a form of specialization and furthermore, one which

brought economic growth to Ludlow.

The fourth and final stage of development identified in the 'Stages' model consists of the expansion of the tertiary sector within the urban economy and the export of capital as well as goods and labour. This stage is conterminous with the development of Ludlow after 1800 and is reflected in the occupational data of the 1828 directory. It has already been suggested that in this period Ludlow emerged as a 'modern' town characterized by a balanced economic structure. By this time the combined output of Sectors III and IV exceeded that of Sector I. Sector I was not unresponsive to the forces for change however, and this is reflected in the distribution of output among the occupations of which it is comprised. The percentage contribution to output of sector I in disaggregated form is given table 18:2. The patterns revealed support the conclusions drawn from the use of the stages model on the urban development of Ludlow.

In 1625 Ludlow was relatively well developed compared with other small towns, and sector I accounted for only 74% of output. At this stage the primary sector, including agricultural production and the production of capital goods, was not significant in terms of its contribution to output. Instead the traditional craft activities of the textile and leather trades were of primary importance. The problems encountered during and after the Civil War changed this however, and primary activities gained a renewed importance less typical of economic development in the second or hinterland stage. As Ludlow recovered from the setback suffered after the war and entered the interregional stage of urban development primary functions again declined in importance. By the end of the eighteenth century and the beginning of the final stage of urban development they were insignificant.

The textile trades, though they held potential for modernization and reorganization on an industrial basis, did not realize this potential with the exception of one small woollen factory of five looms producing blankets and flannels.[27] Their contribution to output declines as urban development proceeds. The structural

changes of the interregional stage mean that these, the most traditional of Ludlow's activities play little part in the town's 'modern' economy. A similar pattern can be identified for the leather trades for which Ludlow had also been particularly well known in the earlier period. A certain amount of specialization in the leather trades, particularly glove-making, meant that they maintained a stable position in the economy until 1745. It is probable that this was achieved through a diversification and subsequent specialization in superior quality products for the gentrified market found in Ludlow. The trade did not however, develop this specialization and expand into an export role; its contribution to output in the interregional stage of urban development was therefore reduced.

The food processing and construction sub-groups are those responsible for maintaining the contribution to output of Sector I, in the town as a whole, at a level of 43% in 1828 (see table 18:2). These sub-groups are those most likely to benefit from the fourth stage of urban development, that is, the expansion of tertiary activities. Construction trades are traditional ones which have always had a role in the urban economy because of the buildings in which it manifests itself. These trades were also some of those least disadvantaged by the Civil War as houses had to be rebuilt in the aftermath. Indeed the contribution to output made by construction activities nearly doubles between 1625 and 1665. This sub-group was further in demand as Ludlow established itself as an interregional centre. Reference has already been made to the construction work undertaken by the corporation at this stage; further demand was created by the conversion of houses to shops, the construction of new shops and houses and the provision of the equipment to go inside them. Demand of this type is sustained into the last stage of urban development in Ludlow with the construction of the Museum, Public Rooms and Court House, hotels, the Congregational Chapel, numerous houses and the establishment of national schools, banks and gas street-lighting.[28]

The development of the growth inducing sectors III and IV in the fourth stage of the urban model promotes expansion in food processing as well as construction. Food is seen to play an import-

ant role in the early period when traditional production by maltsters, millers, butchers and bakers contributed 10% of output. Poor recording due to the variety of sources used, means that the contribution to output made by food processing in 1705 and 1745 is underestimated. After analysis it has been concluded that rather than decreasing its share of output this sub-group would probably have undergone development similar to that of construction as both are stimulated by economic growth. What the data do show however, is a diversification in the range of food processing being carried out in Ludlow (see Appendix 4). As tastes and fashions in food changed and new processing techniques were introduced new occupations such as pastry cook and confectioner appear in the database. Both the capacity and range of production increase to cater for a growing population and expanding market. This is typical of the fourth stage of urban development.

The increased share of output attributed to sector III (35% in 1828) and sector IV (15% in 1828) is also typical. These sectors are characterized, during this stage, by an increase in the range of activities undertaken. Carriers, coach services, bankers, hairdressers, auctioneers and insurance offices are seen for the first time in the tertiary sector of the economy. The expansion of this sector promoted the development of Ludlow as a central place of major importance in the urban network of Shropshire. Sector III and IV activities are by definition central functions and the expansion of these sectors in Ludlow during the fourth stage of urban development elevates the town to second place in the hierarchy of centrality for 1828 (see figure 4:4), though in terms of population it only achieves a rank of five (see figure 13:3).

Structural analysis has shown how the economic development of Ludlow was accompanied by an increasing differentiation between the urban and rural economy. This is partly a result of population growth but is also a function of the greater integration of the town into the national economy. Indeed, in this case, economic parameters prove a more satisfactory measure of urban growth and development than those of population size. This is shown by the contrasting positions of Ludlow in the hierarchies of functional index and

population. That of functional index illustrates the position of Ludlow as the most important centre in the small town network, while in that of population it only ranks fifth. Contemporary sources have been used to show that, in terms of central functions, it was indeed the most important town in the county after Shrewsbury. Expansion in Sectors III and IV, serviced by the substantial output of Sector I, proved a successful combination. As subsequent case-studies show, no other small town in the network was able to specialize so successfully in the provision of luxury goods and services. Other towns certainly made the attempt, Bridgnorth for example, but Ludlow's national reputation as a town of Georgian elegance reflects its position as a social and cultural centre second only to Shrewsbury during this period.

FOOTNOTES

1. Information gained in conversation with David Lloyd.

2. SHERWOOD, R. E. Civil Strife in the Midlands 1642-1651 Chapter 18 (Phillimore 1974).

3. See chapters 4 and 6.

4. CLARK, P., GASKIN, K. and WILSON, A. Population Estimates of English Small Towns 1550-1851 (Centre for Urban History, Leicester University 1989).

5. Information gained in conversation with David Lloyd.

6. P.R.O. E182/810 Munslow Hundred House and Window Tax 1710.

7. Probate inventories are located under 'Ludlow' in the appropriate catalogues in the P.R.O. and H.R.O.

8. P.R.O. E179/255/22 Poll Tax, Purslow Hundred 1660; P.R.O. E179/255/37 Poll Tax, Purslow Hundred 1667.

9. S.R.O. 356/284.

10. S.R.O. 356/472 Ludlow 1639 Ship Money Assessment.

11. S.R.O. 356/503-508.

12. NORTH, D. C. 'Location Theory and Regional Economic Growth' in McKEE, D. L. and DEAN, R. D. and LEAHY, W. H. Regional Economics, Theory and Practice (London 1970); STABLER, J. C. 'Exports and Evolution : The Process of Regional change' in ibid.

13. S.R.O. (356/400).

14. H.R.O. Probate records: (1) Earsly, Thomas, 1663 (Corvisor); (2) More, Thomas, 1665 (Yeoman); (3) Brown, William, 1663 (Baker).

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16. PEVSNER, N. The Buildings of England : Shropshire (London 1958) p.184.

17. Ibid, p.185; Ludlow Corporation Minute Book 1746-1787 S.R.O. 356/2/6 p.73.

18. Ludlow Corporation Minute Book 1746-1787, p.316, S.R.O. 356/2/6.

19. Ludlow Pie Powder Court Book 1691, S.R.O. 356/165

Ludlow Pie Powder Court Book 1686-1794, S.R.O. 356/165. Footnote about changes in techniques.

20. Ludlow Market Accounts, Proclomations and Papers 1605-1774, S.R.O. 356/297. Notice of December 1753 against buying and selling of butter or cheese in homes or inns.

21. Ibid, Reading of the Act of 5th and 6th Ed VI in October 1756, S.R.O. 356/297.

22. Refer back to the model made by Christaller and his assumptions and the relationship between the market and provision of central functions, chapter 3.

23. Ludlow Market Accounts, Proclomations and Papers 1605-1774, S.R.O. 356/297 October 1756 petition against itinerant traders signed by fifty two Ludlow tradesmen.

24, HULBERT, C. The History and Description of the County of Salop (1837).

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## CHAPTER 19 : BRIDGNORTH

Bridgnorth is not recorded in the Domesday Book and the origins of the town are somewhat obscure. They are thought to lie in the "burh" built by Queen Athelfleda on the banks of the Severn in 912 but the precise location of this structure is not known, hence identification as Bridgnorth remains conjecture. A bridge existed at Quatford to the south of the modern town in the tenth century and the Norman lord Robert de Belleme had a military base there. In 1101 Earl Robert removed his military establishment to a settlement further north, to what we now know as Bridgnorth.[1] Here he built a castle and the chapel of St Mary's around which the borough was laid out. The 'planted' nature of the town is belied by the fact that for a long time St Mary's was denied parochial status and the settlement formed part of the large parish of Morville. Bridgnorth received its first charter in 1157 from Henry II, and in the second half of the twelfth century a further church, that of St Leonard's, was built and further streets were laid out.

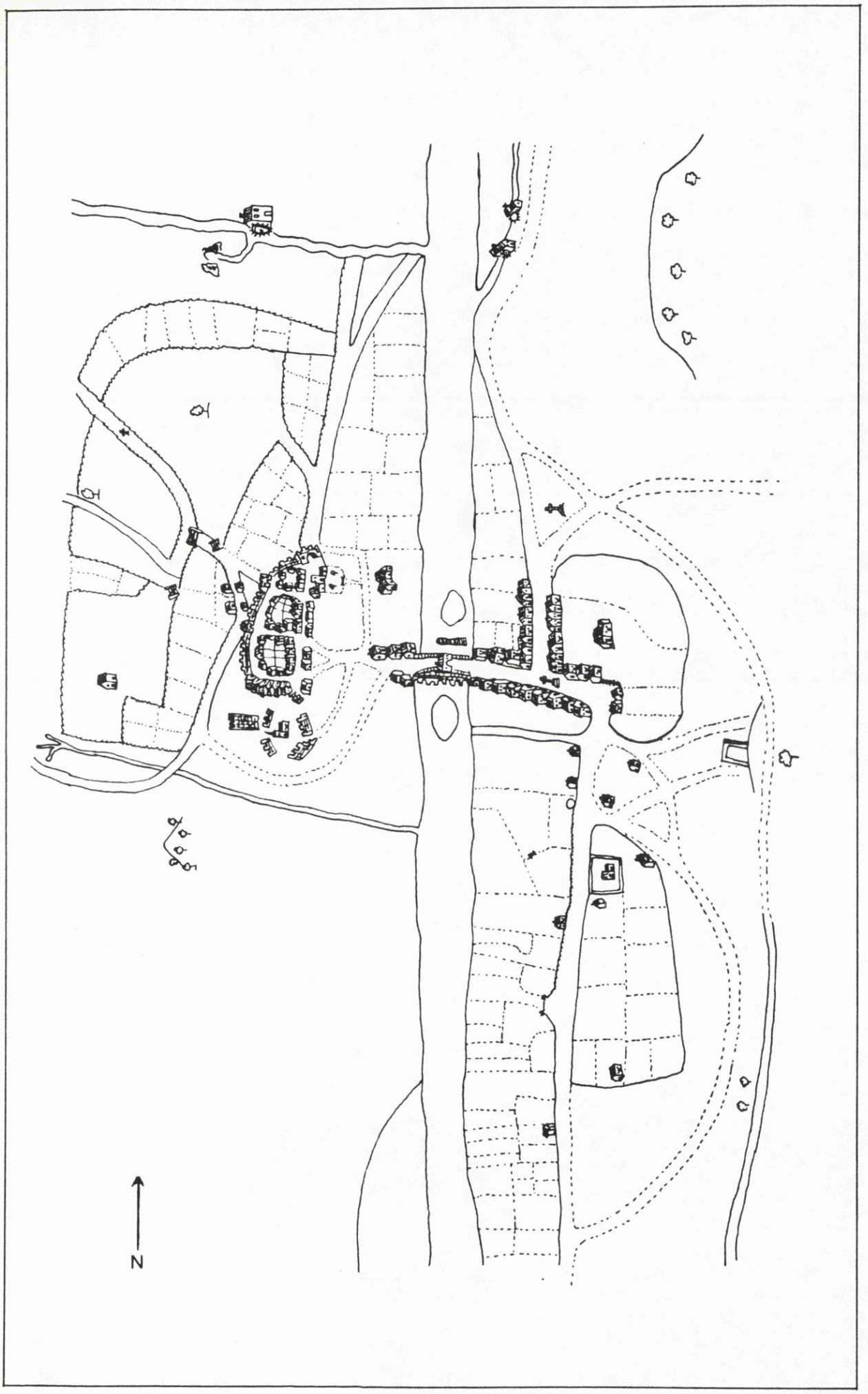
The Medieval period was a prosperous one for Bridgnorth. The town played a strategic role in the conflict with the Welsh and was an important bridging point on the Severn. The Bristol to Chester road crossed the river here and road and river traffic brought trade to the town. The "suburbs" of New Town, to the north round St Leonard's, Littleburg, now known as Pound Street, and Low-Town on the other side of the river, developed at this time.[2] The high level of autonomy achieved by the borough may also have promoted growth. Self government was seen as a priority by the burgesses. They had the right to pay their fee farm or yearly rent straight to the Crown rather than to the Sheriff of the county, a practice which continued until 1651. In 1180 the borough was granted its own court. In 1215 the burgesses were given freedom from toll throughout England,[3] and in 1227 they were able to form a guild that monopolized and protected the town's trade. A register for the Company of Smiths, Coopers and Nailers was still being kept as late as 1761.[4] The castle brought royalty to the town, especially during the reigns of Edward I and Henry III. The presence of the royal retinue acted as a periodic stimulus to town trade, though this ceased to operate by the

beginning of the sixteenth century. Earlier, however, royal interest had made Bridgnorth a Royal Peculiar. This rendered the five local churches exempt from episcopal jurisdiction and gave the Crown the livings to dispose of, presumably for secular rather than religious interest.[5]

Such administrative advantages and privileges established Bridgnorth as one of the most important towns in Shropshire, second only to Shrewsbury. Ludlow was the only other small town in the county to compete with Bridgnorth in the Medieval period. Both towns were dependent to a considerable extent on textiles for their prosperity. Metal working, tanning and brewing were also substantial urban trades, but in 1540 Leland reported that Bridgnorth "standeth by cloth".[6] The monopolization of the cloth trade, especially the woollen trade, by the Shrewsbury drapers contributed to the decline of trade in Bridgnorth as it had in Oswestry. The prosperity engendered by the Shropshire woollen industry which had exhibited itself in the county in such monuments as Ludlow's ostentatiously impressive parish church, was confined to the Middle Ages. By the sixteenth century measures of Elizabethan legislation enforcing the wearing of woollen caps and the use of woollen shrouds were necessary to support a declining industry. Bridgnorth's attempt to specialize in cap and hat making at this time met with only modest success.

The Early Modern period was therefore one of economic adjustment to the decline of the woollen industry. Leland, who had noted the dependence of Bridgnorth on the cloth trade also noted that the town was "sorely decayed". Baxter in 1640 could find there "no general trade to employ the inhabitants in".[7] The location of Bridgnorth on the Severn, and its function as both a bridging point and a port were of central importance to the economic restructuring of the town, which took place in the Early Modern period. The existence up stream of the East Shropshire coalfield generated large amounts of river traffic throughout the period.

As a result, in the seventeenth and eighteenth centuries Bridgnorth emerged as a nodal centre, developing numerous trades which reflected the diversified nature of its agricultural and industrial




Map 19·1 Bridgnorth and Liberties, 1610 (not to scale)

hinterland. Occupations associated with agriculture included corn milling, seed selling, food marketing, food processing, and the leather trades. Those associated with industry included boat builders and barge owners who were found in the town in growing numbers, as were metal workers and coal merchants. Subsequently bankers, accountants, attorneys and professionals serving the interests of the local landed gentry and their estates all formed part of the urban economy. Service trades were particularly important to the borough's role as a central place. In addition to the development of its transport facilities the town provided markets, fairs, a location for the assize court and entertainments such as horse racing, theatrical performances and musical concerts.

As a result, in the eighteenth century Bridgnorth developed as a social centre for the surrounding area. Georgian elegance was introduced to the town by the construction of town houses for the local gentry and successful businessmen. However, despite the emergence of gentility in the town, Bridgnorth never quite achieved the same importance as a social centre as Ludlow. This failure may have been as a result of the industrialized nature of some areas of the urban hinterland, or it may have been that the county could not support a gentrified Bridgnorth when it already had Shrewsbury and Ludlow to cater for the demands of the landed class. For a fuller explanation of the town's growth and development it is clearly necessary to look at it in the context of the urban network of the county as a whole. The corporate nature of Bridgnorth means that the town's history is quite well documented and sufficient records survive to include it in the sample of six towns for detailed economic analysis (see Appendix 5).

Table 17:3 shows that among the sample of six case-study towns Bridgnorth, together with Ludlow, consistently dominates in terms of population. Their individual share of the population of the six never falls below 20%. In 1670 Ludlow has 4% more of the sample population than Bridgnorth, but this discrepancy is eroded, until 1801 when Bridgnorth temporarily takes the lead with 22% of the population compared with Ludlow's 20%. By 1831 however, the towns have reversed position once again with Ludlow having marginally more

of the sample population than Bridgnorth. In terms of their absolute population size in the Shropshire urban network rather than their relative size in the sample of six towns, Ludlow and Bridgnorth jockey for position at the upper end of the population hierarchy. Ludlow is larger in 1672 by nearly 300 persons. Between 1672 and 1801 Ludlow has a population growth rate of 0.5% per annum, while that of Bridgnorth is 0.67% per annum, so that by the later date Bridgnorth is slightly larger than Ludlow by a similar order of magnitude. After 1801 the two begin to diverge as population begins to expand in gentrifying Ludlow at a rate of 1.2% per annum, while Bridgnorth undergoes relative decline in its growth rate which falls to 0.4% per annum. In 1831 Ludlow is ranked fifth in the population hierarchy as a third order town, Bridgnorth is ranked sixth and is the largest of the fourth order towns (see figures 13:1-13:3).

Both towns, therefore, remain near the top of the population hierarchy throughout the study period, and are only ousted from first and second place by the emergence of the industrializing towns of Broseley, Madeley and Wellington. In these terms then, the two appear quite similar and only begin to diverge in the nineteenth century by virtue of their differing population growth rates. However, the apparent similarity of their population profiles obscures contrasting patterns of economic development. The divergent population experience after 1801 may well be an expression of this hitherto hidden economic factor. The comparison with Ludlow is useful in illustrating the development of Bridgnorth in the Early Modern period.

As with the other case-study towns the development of Bridgnorth is analysed in terms of its four economic sectors (see figure 19:1 and table 19:1). Occupational information was gathered from a number of sources covering the period 1630-1828 and then grouped round mid-points.[8] The importance of Sector I activities in the traditional, primary and craft production sector in the early period is clearly shown. The steady decline of this sector is mirrored by the rise of Sectors III and IV as the economic structure of the town develops towards the proto-modern stage. This is reached in 1797 when the percentage contribution to output of Sectors III and IV

Table 19:1 - Bridgnorth: Percentage of Contribution to Output of Sectors I-IV

| | 1635 | 1660 | 1680 | 1705 | 1745 | 1797 | 1828 |
|---|---|---|---|---|---|---|---|
| Sector I | 75 | 74 | 69 | 63 | 59 | 48 | 31 |
| Sector II | 3 | 6 | 7 | 2 | 5 | 3 | 6 |
| Sector III | 12 | 8 | 4 | 11 | 6 | 33 | 4 |
| Sector IV | 10 | 12 | 20 | 24 | 30 | 16 | 16 |
| Sectors III & IV | 22 | 20 | 24 | 35 | 36 | 49 | 63 |

Table 19:2 - Bridgnorth: Percentage Contribution to Output of Sector I Disaggregated

| | 1635 | 1660 | 1680 | 1705 | 1745 | 1797 | 1828 |
|---|---|---|---|---|---|---|---|
| Primary | 15 | 12 | 7 | 4 | 1 | 2 | 1 |
| Food Processing | 7 | 12 | 12 | 19 | 6 | 15 | 14 |
| Textiles | 22 | 17 | 18 | 10 | 6 | 4 | 2 |
| Leather | 15 | 17 | 10 | 12 | 22 | 12 | 6 |
| Metal | 8 | 6 | 7 | 10 | 2 | 8 | 2 |
| Construction | 8 | 10 | 15 | 17 | 22 | 7 | 7 |
| Total | 75 | 74 | 69 | 63 | 59 | 48 | 31 |

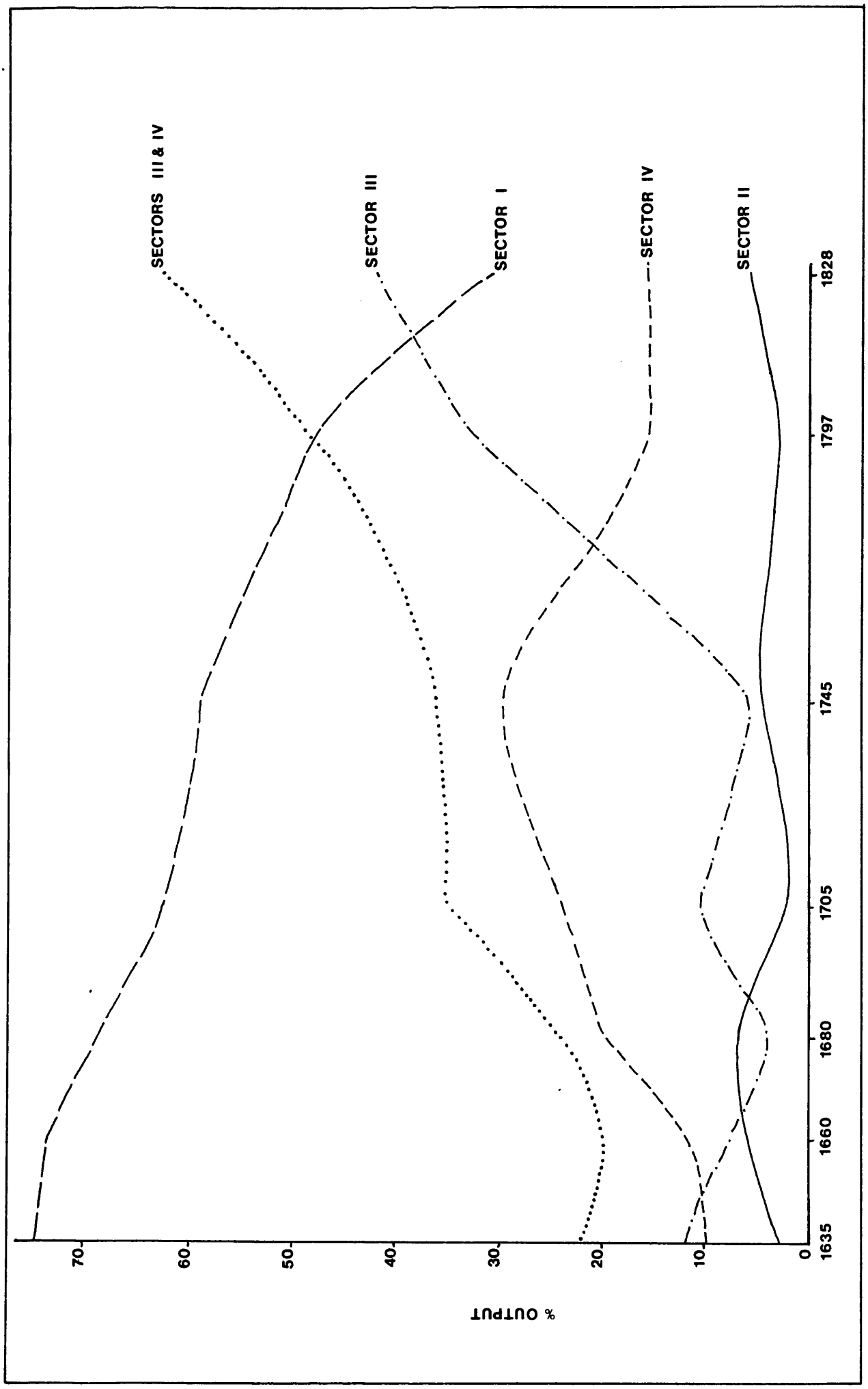



Fig 19:1 Sectoral contribution to output, Bridgnorth 1635 - 1828

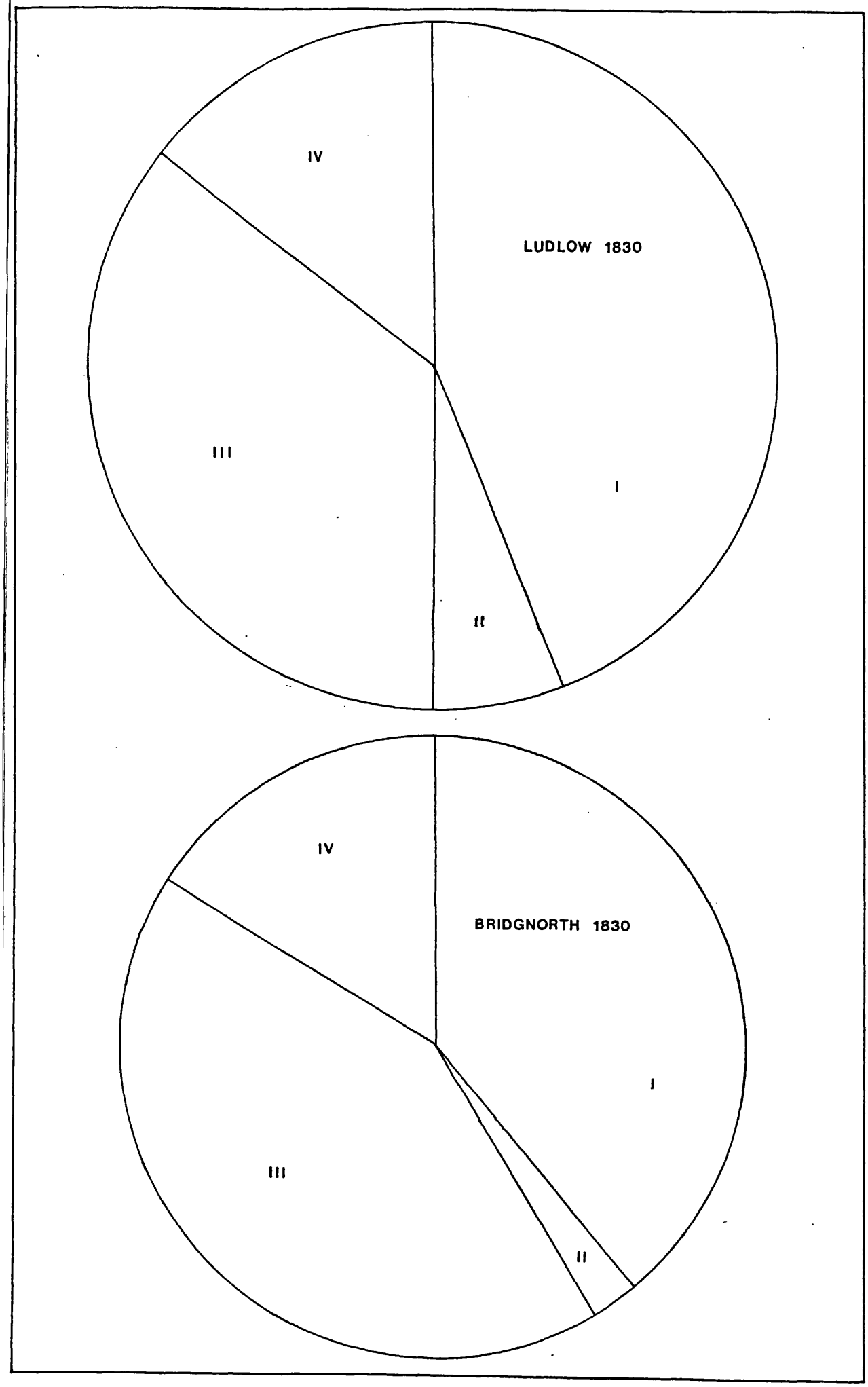



Fig 19:2 continued

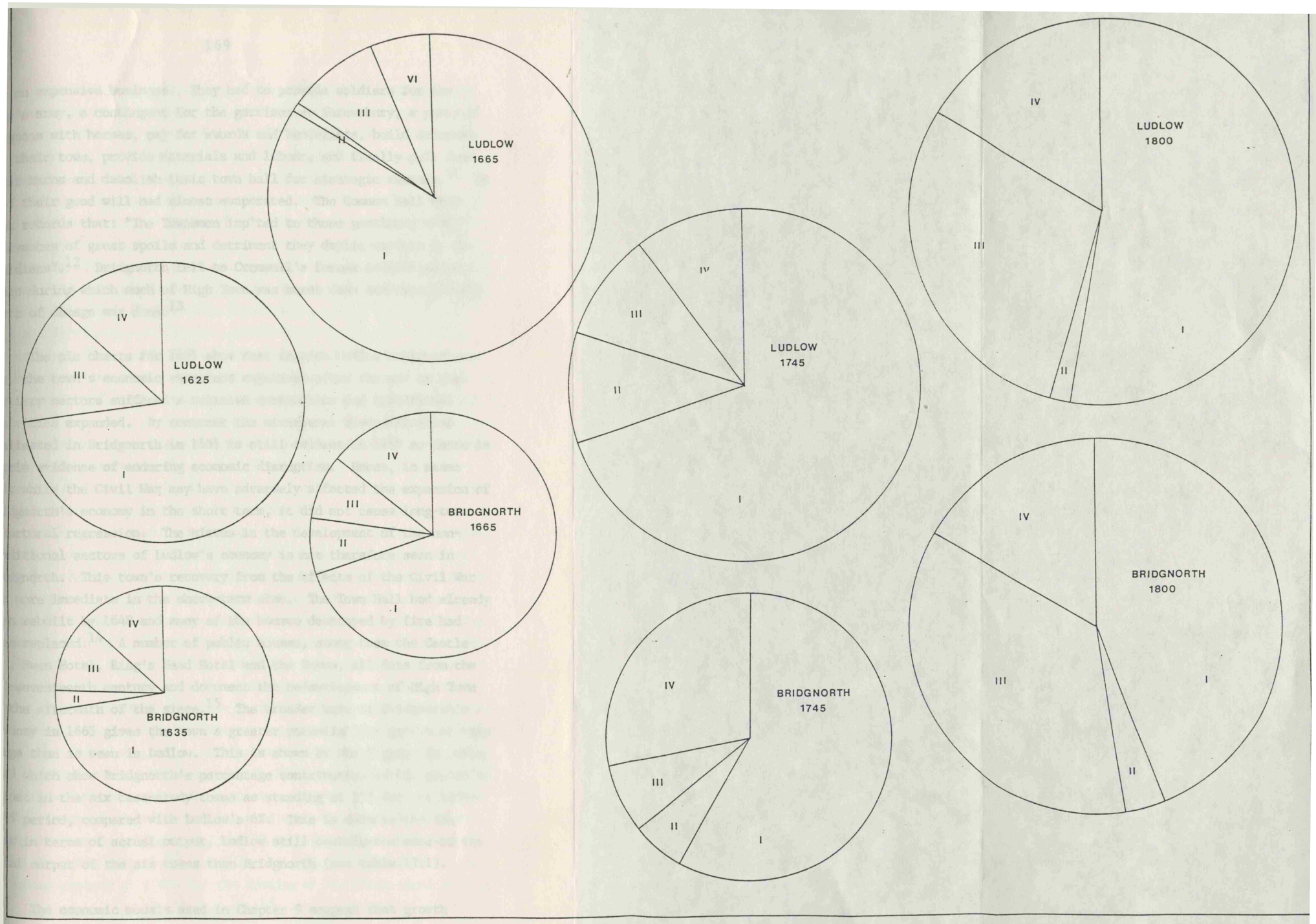



Fig 19:2 Sectoral share of output: bench-mark estimates: Bridgnorth and Ludlow

was an expensive business. They had to provide soldiers for the King's army, a contingent for the garrison at Shrewsbury, a party of dragoons with horses, pay for swords and bandeliers, build defences for their town, provide materials and labour, and finally pull down their barns and demolish their town hall for strategic reasons.[11] By 1645 their good will had almost evaporated. The Common Hall Order Book records that: "The Townsmen imp'ted to those gentlemen their Grievances of great spoile and detriment they daylie susteyn by the Souldiers".[12] Bridgnorth fell to Cromwell's forces in 1646 after a siege during which much of High Town was burnt down and some £90,000 worth of damage was done.[13]

The pie charts for 1665 show that despite Ludlow's higher output, the town's economic structure regressed after the war as the tertiary sectors suffered a relative contraction and traditional activities expanded. By contrast the structural diversification manifested in Bridgnorth in 1635 is still evident in 1665 so there is little evidence of enduring economic disruption. Hence, it seems that while the Civil War may have adversely affected the expansion of Bridgnorth's economy in the short term, it did not cause long-term structural regression. The hiatus in the development of the non-traditional sectors of Ludlow's economy is not therefore seen in Bridgnorth. This town's recovery from the effects of the Civil War was more immediate in the short-term also. The Town Hall had already been rebuilt by 1648 and many of the houses destroyed by fire had been replaced.[14] A number of public houses, among them the Castle Inn, Swan Hotel, King's Head Hotel and the Raven, all date from the mid-seventeenth century and document the redevelopment of High Town in the aftermath of the siege.[15] The broader base of Bridgnorth's economy in 1665 gives the town a greater potential for growth at this stage than is seen in Ludlow. This is shown by the figures in table 18:3 which show Bridgnorth's percentage contribution to the growth of output in the six case-study towns as standing at 15% for the 1665-1745 period, compared with Ludlow's 6%. This is despite the fact that in terms of actual output, Ludlow still contributes more to the total output of the six towns than Bridgnorth (see table 17:1).

The economic models used in Chapter 9 suggest that growth

inducing activities are those associated with export functions, and are typically found in sector II. In 1665 it is clear from the pie charts that the development of Sector II in Ludlow is negligible compared with its development in Bridgnorth. Residentiary activities constitute a greater percentage of output in Ludlow and these activities are seen as sustaining rather than progressive. Compared with other towns in the sample of six, the development of Sector IV in Bridgnorth is particularly marked. This too contributed to the towns growth of output. On closer inspection Sector IV is seen to be dominated by individuals engaged in the provision of transport services, particularly townsmen, barge owners and watermen (see Appendix five). These services account for 10% of output in 1635, 12% in 1660, 9% in 1680, 16% in 1705 and 22% in 1745. In other words, water transport is one of the most important single factors in the expansion of non-traditional activities in Bridgnorth's economy.

The river trade brought exogenous influences to bear upon the economy of Bridgnorth. The town capitalized on this, and in the course of the seventeenth and eighteenth centuries became one of the busiest ports on the upper reaches of the Severn. The importance of river trade to the town is reflected in the Corporation's protectionist policy towards it. In 1635 and 1641, when plans to make the River Avon navigable were being put forward, Bridgnorth was quick to put them down. In 1635 the town's reaction to the proposed navigation to Tewksbury was that it would "do great damage to this Country in carryinge away coles and other fewell, and Butter and Cheese w'ch is the life and support of the same .... it will hinder bringinge up of the Low Country malt into this country and will cause corn to be dearer in the marketts".[16] Other Shropshire people, particularly the industrialists of the coalfield upstream from Bridgnorth, were not so negative. Indeed the owners of the Benthall estate were among those petitioning for the Avon navigation in 1641, which it was anticipated would extend their markets for coal even further. An entry in Bridgnorth's Common Hall Order Book reported that "The Town Cryes it down altogether" anticipating that it would take trade from the town and raise the price of coal.[17] A similar attitude was expressed in the following century to plans for the opening of the Stour canal in case this also took trade from Bridgnorth.[18]

Probate inventories from the turn of the seventeenth century suggest that barge owners and trowmen were among some of the more prosperous members of Bridgnorth society. John Andrews, a trowman who died in 1704, owned a seven-roomed house, silver plate to the value of £6, a share in the lease of a warren on Morfe Common worth £10 and two boats. He also owned an additional house, the one in which he had lived as a bachelor; in total his inventory was valued at £76.5.0.[19] Richard Easthope, a bargeman who died in 1700, was even wealthier. He owned four tenements, in addition to his house, and four boats, three of which were barges. In total his inventory was valued at over £300.[20] Trinder (1973) has shown that in 1756, 75 of the 250 vessels working the Severn in Shropshire were based in Bridgnorth. The ownership of more than one boat was common in the town and the 75 mentioned above were the property of only 47 owners.[21] This is an indication of the relatively highly capitalized nature of water-borne transport at this time. It was a characteristic growth-inducing economic activity of the period, possessing backward linkages to Sectors I and II, and forward linkages to Sector III, both of which promoted an increase in the output of goods and services in the wider urban economy.

The function of Bridgnorth as a port therefore acted in much the same way as the function of extractive industries in Broseley, as a centre of Sector II activity. The river extended the market area of the town, linking it both to the coalfield upstream, and to the export potential of Gloucester and Bristol downstream. Coal from the Broseley pits, cheese from the dairy farms of the North Shropshire Plain, ironware from Madeley and cloth from Wales were the exports handled in Bridgnorth and sent down the river. Upstream traffic brought imports such as spices, sugar, brandy, hops and groceries from national and international production centres, for distribution throughout the county. Such trade brought prosperity to the shopkeepers of the town, who could offer foreign produce for sale which their competitors in land-locked towns could not afford because the comparatively high cost of road transport relative to water transport.

The prosperity of those engaged in Sector III activities is

also seen in the probate records of the town. Wealthy drapers, milliners, grocers and mercers, and feltmakers and the leather dressers of substance are to be found in Bridgnorth in the seventeenth and eighteenth centuries. The range of goods they offer and the amount of stock they carry are both exceptional compared with other Shropshire small towns reflecting a healthy level of demand in the town and its hinterland, as well as the advantages on the supply-side noted above. Of the thirty three inventories surviving for the years 1660-1675, 33% were of a value greater than £100.[22] Those engaged in trade accounted for 45%, agriculturalists 18%, the gentry 27% and the rest were unspecified. The same number of inventories survived for the period around 1700, and the proportion valued at £100 or more also remained the same.[23] Levels of wealth therefore, appear relatively stable in Bridgnorth at this time. Interestingly, however, the sources of wealth have shifted slightly in favour of Sectors III and IV. At the later date 54% of inventories over £100 in value belonged to those engaged in trade, the share of the agriculturalists had fallen to 9%, that of the gentry remained the same: 27%, and again 9% were unspecified.

The trend identified above is seen in greater detail when the occupations of the traders with inventories over £100 are examined. In the 1660s and '70s there are two mercers, a feltmaker/hatter and a tanner. Joane Bourne, who died as a widow in 1675, was an active feltmaker/hatter who had in stock £40 worth of wool, eleven felts and over 300 hats. Items in her inventory associated with her trade were valued at £88:16:10, and she had book debts from the shop owed to her of over £67. As a prosperous producer-retailer in sector I she owned a ten roomed house, a shop and two workshops. The rooms were given names: the Green Chamber, Little Parlour and Great Chamber, and were furnished in style with carpets, cushions, mirror, rugs and items of plate. This successful business woman left on her death and inventory of goods worth £241:6:1.[24]

The potential for social mobility exhibited by Joane Bourne was thus reflected in sector I activities and had also by this time become characteristic of individuals operating in sector III as well. Simon Beauchamp was a mercer from Bridgnorth who died in 1671 leaving

an inventory of goods valued at £1,334:17:0.[25] The spectacular success of his business in reflected in his pretensions to fine living; he owned fowling pieces for hunting, a sword, pistols and watches; he furnished his house with damasks, mirrors, and over £20 worth of plate. As well as a warehouse and shop for the business, he set himself up with a "Banqueting House"; thus he managed to be a gentleman in every aspect except that of farming an estate. Trade was already such in Bridgnorth to allow him to accept book debts amounting to £200 and carry a stock of "cloth, silks, grocery and other goods" worth £600. Businesses of this stature reflect the prosperity of the market in Bridgnorth in the seventeenth century and the potential for capital intensive economic development and investment.

Among the inventories dating from the turn of the century, valued at over £100 the majority come from sectors III and IV. Only one that of a vintner has sector I connections. The nature of the latter's business appears more typical of sector III than sector II. He owns two inns, the Talbot and the Raven, providing a quantity of accommodation for travellers. The inventory also mentions a brewhouse and equipment for brewing beer; he also has a cider mill. However, the most characteristic feature of his business is retailing.[26] Other retailers include two drapers and a milliner with inventories ranging from £160 to £488; though none is as prosperous as Simon Beauchamp the mercer mentioned above.[27] The range of goods offered for sale is given in some detail in Anne Beauchamp's inventory of 1698 - could the two be related? She calls herself a draper, but in fact operates much the same business as a mercer, selling a wide range of fabrics, silks, ribbons, threads of gold and silver, buttons, tapes, stockings, hooks and eyes, and in addition paper, sugar, tobacco and pepper. Many of her wares must have come from overseas, hence she undoubtedly profited from the port functions of Bridgnorth and its river trade with Bristol in its role as a developing international entrepot of the late seventeenth century.

The two individuals with inventories valued in excess of £100 in sector IV, dating from the turn of the century, are Thomas Garbet, an apothecary, and Richard Easthope, a bargeman, whose business was

discussed earlier.[28] Garbet may well have operated as an informal banker and money lender, as well as an apothecary. His inventory, valued at £2,395:9:7, consists mostly of money and debts. He has a substantial amount of money invested in the apothecary business, keeping nearly £500 worth of stock and tools. However, this sum is vastly outweighed by debts, with and without "specialty", of £1,215:11:4; a further £430 is held in cash, gold, silver and on oath. Details of this kind give an indication of the ways in which entrepreneurs in the commercial sector of a small town like Bridgnorth could contribute to economic growth by providing credit for other businesses and by investing in the economic potential of the town.

A comparison of the pie charts for Bridgnorth and Ludlow of 1745 shows how the prosperity of these commercial activities in sectors III and IV has by this time promoted a more developed and structurally diversified economy in Bridgnorth. The percentage of output accounted for by sector I is steadily eroded in the face of expansion in sector IV. By comparison, Ludlow's development, perhaps characterised by a greater commitment to traditional residentiary activities, perhaps as a slow but reliable means of recovering from the impact of the Civil War and the loss of administrative status in the 1680s, has resulted in an economic structure in 1745 comparable with that of Bridgnorth eighty years earlier. In 1745 the estimate of Ludlow's output of goods and services is still greater in total than Bridgnorth, but its economy is less diversified. Hence it may be less capable of promoting growth of output. The pie charts have been constructed in such a way as to indicate the relative size of output and it is clear from this that Bridgnorth's economy is growing, as well as developing structurally, at a faster rate than Ludlow's between 1665 and 1745. Indeed the two urban economies are on a converging course in the mid-eighteenth century. Bridgnorth is growing faster to become comparable in size with Ludlow by 1800; while Ludlow's sectoral development achieves a structure comparable with that of Bridgnorth by 1800.

In 1800 the two towns are at their most similar in terms of both size and structure. Tables 17:1 and 18:3 illustrate this,

showing that in 1797 there was only a difference of 3% in their contributions to the total output of the six case study towns, and in the period 1740-1797 there was a difference of only 4% in their contribution to the growth of this measure of output. The end of the eighteenth century was a period of great prosperity in Bridgnorth, a prosperity which the town sought to symbolize in the construction of the new church of St Mary Magdalen, to a design by the famous engineer Thomas Telford. Other buildings were put up in the last decade of the eighteenth century including the Almshouses (1792), and the Post Office in Low Town (1700).[29] The outer bailey of the castle was laid out as a park with promenades and walks in 1786, as was the fashion in towns attempting to provide a desirable atmosphere for the gentry.[30] The New Road also dates from this period (1792), providing an alternative link between High and Low Town to the steep and awkward 'Cartway', which had only been paved as recently as 1766.[31]

Bridgnorth had thus not been behindhand in developing and maintaining the quality of its built environment. Many new houses were built in the eighteenth century, giving the town an air of Georgian elegance which survives today, and is particularly well preserved in East Castle Street. Street paving begun in the seventeenth century, was continued in the eighteenth century; care was taken to repair the town walls on Castle Hill, and to maintain the walk which ran along them.[32] Bridgnorth had been given a water works in 1717 by the local benefactor and Member of Parliament, William Whitmore. This required an engine to pump water through a system of pipes and conduits from the Severn to the town. As a result the corporation was providing a water supply to individual houses in the town as early as 1718; the pipes were fitted with stop cocks and supply was regulated to particular times of the day; anyone misusing or wasting their water supply was liable to have it cut off and pay a fine.[33] In terms of the provision of local services of this kind Bridgnorth seems to have attained quite a high standard in the 1700s.

Investments in the infrastructure in this period, combined with the economic buoyancy of the town, attracted further business and industry to Bridgnorth. In 1760 the Coalbrookdale Company leased the Town Mills as a forge, and in 1798 John Hazledine established an iron

foundry in the town where he later built steam locomotives including Trevithick's "Catch-me-who-can" passenger train.[34] Carpet manufacturing, which had begun as a cottage industry, was transformed, probably contemporaneously with nearby Kidderminster, into a factory industry; the first factory was built in Bridgnorth in 1797.[35] The river was of course of prime importance to the location of 'proto modern' industry in the town. It provided transport for both imported raw materials, and for the export of finished products, which were often too heavy to carry by road. The River Warden's House was built in the late eighteenth century down by the town's wharfs in order to regulate trade, the earlier map of 1739 marks these dockyards on the Severn in Bridgnorth.[36]

The pie chart of 1800 (fig.19:2), therefore, represents the economic structure of Bridgnorth at the period of both its greatest prosperity, and at the peak of its population growth. As mentioned earlier, its output is comparable in size with that of Ludlow, and the sectoral structure of its output is only slightly different. The development of sector IV in Bridgnorth reflects the town's function as a port and river crossing. Also notable is the greater development of sector II, through the growth of modern iron and carpet making industries. Bridgnorth was of course nearer to the industrializing area of the West Midlands than Ludlow, as well as being closely linked to the industry in the Ironbridge Gorge. The location of the town and the existence of such industry in its hinterland, together with its participation in industrial long distance trade as a point of export, accounts for the greater development of sector II. The role of 'modern' industries should not be overstressed however, as their percentage contribution to output is still not great, particularly in comparison with that of sector III and sector IV.

By 1830 the two towns are once more following divergent paths. Ludlow has caught up with, and overtaken, Bridgnorth in terms of output growth. This trait is illustrated by the figures in tables 17:1 and 18:3 which show that Ludlow's contribution to the total output of the case study towns is now 7% greater than that of Bridgnorth; its percentage contribution to their growth of output is

also 7% greater.

In terms of the size of sector I, Ludlow in 1830 is comparable with Bridgnorth in 1800. Both continue to derive more output from retailing activity than from the service/professions. The pie charts for 1830 and figures 18:1 and 19:1 show how the traditional activities of sector I continue to account for a greater proportion of output in Ludlow than in Bridgnorth. This emphasizes the importance of continued residentiary activity in the urban economy which Phouts and Curtis (1960) point out.[37] When the structure of sector I is examined in greater detail, it is seen that Ludlow is once again the more traditional of the new towns. The importance of the textile industry to Bridgnorth in the medieval period and its decline in the sixteenth century were mentioned above. Table 19:2 shows that compared to the leather, construction and metal trades, textiles were still quite important in the early seventeenth century. After 1680 however, they entered a period of secular decline, and by 1828 accounted for only 2% of sector I output.

Textiles were important in the urban economy of Ludlow at much the same time. However, their importance was sustained much further into the modern period in this town. Though in decline from 1625, as table 18:2 shows, this decline was not rapid until after 1797. The leather industries, which were even more important, follow a similar pattern. This pattern contrasts with that of Bridgnorth. Leather trades were not important in the economy of Bridgnorth at the beginning of the seventeenth century, but rose to a peak in 1745. Thereafter they declined at the same rate as that experienced in Ludlow.

The leather and textile trades are the most important industries of the traditional sector. Their continued importance in Ludlow may be seen as indicative of the town's traditionally based economy. Their decline in the second half of the eighteenth century, and the rise of the food and construction trades which occurs contemporaneously, is indicative of the economic restructuring occurring in Ludlow at this time. Though it occurred comparatively late compared with the earlier dynamism of this sector in Bridgnorth, this

restructuring proved to be productive of economic growth. It is noticeable that all the sector I trades in Bridgnorth were in decline by the end of the study period, with the exception of food processing. Most importantly, however, none of the estimates for the groups show increased output. The same is true for the leather, textile, metal and primary industries of Ludlow. But it is not so for the food and construction sectors. The expanding population of this town created demand for new housing, public buildings and facilities and particularly for more retailed services, notably for retail food supplies. The provision of certain residentiary goods is, therefore, part of the process of economic and demographic expansion of Ludlow as a market and social centre in the first three decades of the nineteenth century.

Bridgnorth made a bid for prosperity of the kind brought to Ludlow by its gentrification, in the decades either side of 1800. This town also had banks, theatres, race meetings, musical concerts and urban parks; however, its bid to attract the gentry was less successful. This comparative lack of success is reflected in the contraction of output from sector I activities in general, and particularly in food processing, which had expanded considerably between 1745 and 1797. Contraction was also characteristic of sector IV after 1745, as the importance of Bridgnorth as a transhipment point for both upstream and downstream traffic on the river declined. The extension of the river network by the canal building boom of the 1790s opened new routes for water-borne trade. Much as Bridgnorth's citizens had foreseen the competition did little for the business of local bargeowners. Ports further south dominated river trade to an increasing ascent, and though it was 1895 before the last barge passed through Bridgnorth, the towns wharfs were not as busy in the nineteenth century as they had been in the eighteenth.

FOOTNOTES

1 ROWLEY, T. The Landscape of the Welsh Marches (London 1986) p. 89. The move made by Robert de Belleme is recorded by the contemporary writer Ordericus Vitalis.

2 Ibid p.91.

3 MASON, J.F.A. The Borough of Bridgnorth 1157-1957 (Bridgnorth 1957).

4 S.B.L. Microfilm 137 Bridgnorth Company of Smiths, Coopers and Nailers. Register of admissions 1598-1761.

5 MASON, J.F.A. op.cit. (1957).

6 ROWLEY, T. The Landscape of the Welsh Marches (London 1986) p.91.

7 Baxter is quoted in Mason (1957) op.cit. p.49.

8 Occupational information for Bridgnorth came from:- Probate inventories under Bridgnorth, L.J.R.O., Burgess rolls, S.R.O. 4001/Admin/4/2; Quarter Sessions papers S.R.O. 4001/QS/5; Poll Tax P.R.O. E179/812; Church Lewns S.R.O. 3662/P/5; the Universal British Directory (1797) op.cit. and Tibnam's Salop Directory (1828) op.cit.

9 S.R.O. 4001/Admin/3/1 Bridgnorth Common Hall Order Book 1634-1685.

10 S.R.O. 4001/Admin/3/1 p.35.

11 ibid pp.39, 40, 41, 43, 44, 45, 46.

12 ibid p.46.

13 MASON, J.F.A. The Borough of Bridgnorth 1157-1957 (1957).

14 PEVSNER, N. The Buildings of England: Shropshire (London 1958)

15 PEVSNER, N. ibid (1958), p.81.

16 S.R.O. 4001/Admin/3/1 Bridgnorth Common Hall Order Book 1634-1685, p.24.

17 S.R.O. 4001/Admin/2/1, p.37.

18 MASON (1957) op.cit. pp.60-65.

19 L.J.R.O. Probate Records, John Andrews (Trowman) Bridgnorth 11/1/1704.

20 L.J.R.O. Probate Records, Richard Easthope's (Bargeman) Bridgnorth 26/4/1700.

21 TRINDER, B. The Industrial Revolution in Shropshire (Chichester 1973), p.64 quotes a reference from Gentleman's Magazine volume 28 (1758), p.277.

22 Probate inventories for 1660-1675 - L.J.R.O and P.R.O.

23 Probate inventories for 1700-1710 - L.J.R.O and P.R.O.

24 P.R.O. Prob 4/12502 Inventory of Joane Bourne, Bridgnorth, 1675.

25 P.R.O. Prob 4/10724 Inventory for Simon Beauchamp, Bridgnorth 1671.

26 P.R.O. Prob 4/12505 William Morres, Bridgnorth 1685.

27 P.R.O. Prob 4/2334 Samuel Higgins, Bridgnorth 1681, Draper; P.R.O. Prob 4/12581 Anne Beauchamp, Bridgnorth 1698, Draper; L.J.R.O. Inventory of John Wilkes, Bridgnorth 12/10/1704, Milliner.

28 L.J.R.O. Inventory of Richard Easthope Sr, Bridgnorth 26/4/1700; P.R.O. Prob 4/9166) Thomas Garbet, Bridgnorth 1686.

29 PEVSNER, N. The Buildings of England: Shropshire (London 1958) p.81 and 84.

30 McINNES, A. "The Emergence of a Leisure Town: Shrewsbury 1660-1760" in Past and Present No.120 1988 p.67 and 68 refers to the town walks laid out in the Quarry in Shrewsbury in 1719 and 1728 to provide "an exclusive" airing for "the gentry".

31 PEVSNER, N. (1958) p.82 and 83; S.R.O. 4001 Admin/2/3 Bridgnorth Common Hall Order Book 1732-1774, p.271.

32 S.R.O. 4001/Admin/2/2 Bridgnorth Common Hall Order Book 1713-1732. p.6 refers to paving the streets in 1714 and p.20 refers to repairing the walk along the town walls 1716.

33 S.R.O. 4001/Admin/3/2 as above. p.20 discusses the conversion of William Whitmore's water works into a 'cranke work' by John England and lays down the rules for using the water supply.

34 ROWLEY, T. The Landscape of the Welsh Marches (London 1986), p.92.

35 MASON, J.F.A. The Borough of Bridgnorth, 1157-1957 (1957), p.

36 ROWLEY, T. The Landscape of the Welsh Marches (London 1986), p.92.

37 PFOUTS, R.W. and CURTIS, E.T. "Limitations of the Economic Base Analysis" in PFOUTS, R. W. (ed) The Techniques of Urban Economic Analysis (New Jersey 1960) p.305-340.

## CHAPTER 20: OSWESTRY

Situated in the north-western corner of the county, Oswestry is often thought of as more Welsh than English. As a frontier town established in the Norman period its early history was a product of the conflict between the two countries, when in Welsh hands it was sacked by the English and when under English rule it was sacked by the Welsh.[1] The strategic importance of the town in the Plantagenet invasions of Wales was not purely detrimental in its effect however, and Oswestry received charters which granted the corporation extensive administrative rights. The Norman lords who ruled the town could manipulate it as a little kingdom of their own and thus it received patronage and support which contributed much to its early urban development.

In 1399 Richard II gave Oswestry its first Royal Charter and its status as a market town. Of great importance to its development was the wool trade of Wales in which Oswestry acted as a gateway to the English market.[2] By the fifteenth century this trade had become so important that Welshmen were elected as burgesses in Oswestry. The once warring factions were thus united by commerce and Welsh influence in this English town was considerable over the next hundred and fifty years. Wool markets were spread through the marcher counties but Oswestry, as one of the most accessible, became a centre and was patronised by drapers from Shrewsbury, Whitchurch and Coventry.[3] In 1539 when John Leland passed through Oswestry he was able to remark that "the town standeth mostly by the sale of cloth made in Wales".[4]

At the beginning of the seventeenth century, Oswestry was a prosperous town famed for its weekly cloth market at which an average of some 300 cloths were sold (each cloth consisting of thirty 'goads' and each goad being 4½ feet long). These commanded a good price of fifteen pence a yard.[5] The town had links with Bristol and London through which ports cloth was exported. In addition the corporation derived a good income from the tolls it could impose on cloth leaving the town. Its position was soon threatened, however by the wish of the powerful Shrewsbury Drapers Company to have the cloth market

moved from Oswestry to Shrewsbury. The result of the ensuing argument was a Bill passed in 1621 which declared that, while the trade monopoly operated by Oswestry should cease, it should not be transferred to Shrewsbury, and that trade should be open. The effect of this was ultimately to transfer much of the trade to Shrewsbury because the drapers of this town operated on a large scale and provided an almost secure market for the Welsh weavers.

It seems that Oswestry suffered an economic stagnation or even decline after this. The siege it suffered during the Civil War, in preparation for which houses outside the walls were demolished cannot have helped its economic recovery.[6] In 1673 Richard Blome referred to Oswestry as "once a place of great strength ... a place of greater account than now it is, before the Mart for Welsh Cottons etc was removed to Shrewsbury, yet it is now an indifferent Town."[7] Little reference is made to Oswestry in the eighteenth century and this silence has been interpreted by some as indicative of economic and social stagnation.[8] However, handsome Georgian houses in Upper Brook Street and Church Street, the Wynnstay Hotel being the most prominent, suggest that some investment was being made in the town during this period.

However, much of the architecture in Oswestry dates from the nineteenth century and it is possibly for this reason that the town's historians have identified this period as one of renewed growth.[9] The railway is also seen as a moving force behind the development of Oswestry in the modern period. The first branch line arrived in 1848 and by 1866 Cambrian Railways had established their headquarters and central works there, making it a major railway centre.[10] The suggested scenario for the growth and development of Oswestry in the network of Shropshire towns may therefore be summarized in the following terms. It achieved early prominence as a castle town in the marcher context. The prosperity of the Welsh woollen industry meant that Oswestry successfully made the transition to a market town during the fifteenth and sixteenth centuries. It was perhaps guilty of over specialization in this field however, and on the declaration of an open wool trade in 1621 its comparative advantage over other towns in the system was lost. It subsequently entered a period of

stagnation and perhaps decline. This endured until the turn of the eighteenth century when innovations in transport and communications contributed to its economic recovery in the 1800s.

The extent to which this scenario is a reliable one can be tested by the analysis of economic information collected for the six case study towns. For the sake of clarity and comparability the analysis will be similar in format to that adopted in the other case studies. Oswestry, like Ludlow and Bridgnorth, is a corporate town and therefore has sources in common with these towns. Occupational data has been collected from probate inventories,[11] Burgess rolls,[12] Quarter Sessions Papers,[13] the corporation Assembly Book[14] and Tencery Books,[15] Militia Rolls,[16] and from directories. This produced information spanning the years 1600 to 1828 (see appendix 6) which was grouped around a series of mid points designed to coincide as far as possible, with those used in the analysis of the other towns in this sample. The results are shown in table 17:1 in terms of percentage contribution to output and in table 18:3 in terms of percentage contribution to growth.

The 1672 population estimate based on the Hearth Tax of that year gives the population of Oswestry as under a thousand (941). In terms of population size it is therefore one of the smaller 'normal' towns in the sample of six.[17] At this stage it ranks below Ludlow and Bridgnorth, the other two 'normal' towns in the sample and below Market Drayton and Newport (see fig.13:1). In terms of the system of Shropshire small towns it is at the bottom of the second order category ranking number 5, and just above the largest third order town, Much Wenlock, which has a population of 887. In the sample of six case study towns Oswestry and Much Wenlock have similar shares of the sample population, 13% and 12% respectively (table 17:3). The figures for their percentage contribution to output are quite dissimilar however (see table 17:1).

The contribution to the output of the sample in 1665 is estimated at 16% for Oswestry and 6% for Much Wenlock. The latter had been in decline in the early seventeenth century (see table 17:2), and as Blome observed in 1673 Oswestry also suffered at this

time from the loss of the Welsh Mart. However, by the late seventeenth century Oswestry bears more comparison with Bridgnorth, a much larger town, than with Much Wenlock. Oswestry and Bridgnorth share a high compound rate of growth of output of 1.9% per annum in the period 1665 to 1710 at (see table 17:2). In Oswestry this rate is sustained into the next overlapping period, 1665-1745. Oswestry's growth rate is still 1.3% per annum while that of Bridgnorth has fallen to 0.8%. Consequently Oswestry overtakes Bridgnorth in terms of its contribution to sample output in this period. This is shown by the figures in table 17:1, in 1665 Oswestry contributed 16% to the total sample output while the figure for Bridgnorth was 18%. By 1745 the position was reversed and Oswestry contributed 24% while Bridgnorth only made 16%.

In terms of the growth rates in table 17:2 Oswestry declines in the period 1710-1745 to 0.8%. In doing so however, it only declines to the average growth rate of the six sample towns over the long period of 1665-1828. It is only in the latter half of the eighteenth century that Oswestry's growth rate falls below this average to 0.6% per annum. This is the lowest point to which it falls and it subsequently rises again to achieve a growth rate of 2.3% between 1797 and 1828. This rate exceeds that of both Ludlow (1.7%) and Bridgnorth (1.3%), and is in fact higher than that of any other town in any period. The growth rate analysis therefore reveals a cyclical formation in the development of Oswestry with peaks in the 1665-1710 and 1797-1828 periods and a trough in the middle of the eighteenth century.

Over the period 1670-1831 Oswestry only slowly increases its share of the population of the six case study towns. It rises from 13% in 1670 to 14% in 1740 and stays at this point only rising to 18% in 1831 (see table 17:3). The first phase of growth is not therefore accompanied by the substantial increase in population, which characterises the second phase between 1797 and 1828. In this respect Oswestry again distinguishes itself from Much Wenlock which loses its share of population until it becomes stable in 1801. It also distinguishes itself from Ludlow and Bridgnorth both of which experience a decline in their share of the sample population, (table

17:3). By the end of the period the gap between Oswestry and these two larger towns in terms of their share of population, is considerably narrower. From 44% of Ludlow's population in 1665 Oswestry constitutes 85% in 1831.

From observations of this type one can draw conclusions about the nature of the phases of economic growth in Oswestry. The first cycle of growth identified between 1665-1710 is one of total output and population. As the number of producers in the town rises output rises. This makes the town larger but does not raise income or make it more prosperous. In the second cycle of growth, however, this relationship changes and the rate of growth of output outstrips that of population. Thus output per head is rising and Oswestry experiences economic growth of a type which makes it more prosperous. These trends are summarised in table 17:4.

The experience of Oswestry is very different to that of either Ludlow or Bridgnorth, where growth in output per head occurs in both periods but at a steadier rate. The increases in population and total output made by Oswestry in the later period are more dramatic than any changes in the other two towns. It is this burst of total growth in the early nineteenth century which brings prosperity to the town.

Disaggregation of the data into the four structural sectors of traditional craftsmen/producer activities, industrial, retail and service/professional activities may perhaps shed further light on the nature of growth and thus go some way to explaining it.

Table 20:1 shows the percentage contribution to output in Oswestry made by the four sectors the relationships between which are displayed in figure 20:1. Both the table and the graph show a very stable economy in the town between 1670 and 1710, particularly when sectors III and IV are taken together. Indeed, not much structural change occurs until after 1745. Data for the earlier period before 1621 when Oswestry lost its monopoly of the Welsh woollen trade is not available due to the poor survival of documents containing occupational information. However, on the basis of supplementary information referred to earlier in the chapter, one can make suggestions as

Table 20:1 - Oswestry: Percentage Contribution to Output of Sectors I-IV 1670-1828

| | 1670 | 1710 | 1745 | 1797 | 1828 |
|---|---|---|---|---|---|
| Sector I | 72 | 72 | 69 | 40 | 39 |
| Sector II | 2 | 2 | 6 | 6 | 5 |
| Sector III | 18 | 14 | 21 | 29 | 43 |
| Sector IV | 7 | 12 | 3 | 24 | 12 |
| Sectors III & IV | 26 | 26 | 24 | 53 | 55 |

Table 20:2 - Oswestry: Percentage Contribution to Output of Sector I Disaggregated 1670-1828

| | 1670 | 1710 | 1745 | 1797 | 1828 |
|---|---|---|---|---|---|
| Primary | 7 | 4 | 10 | 0 | 0 |
| Food Processing | 23 | 20 | 19 | 7 | 9 |
| Textiles | 20 | 18 | 15 | 6 | 1 |
| Leather | 20 | 16 | 12 | 12 | 11 |
| Metal | 0 | 2 | 3 | 6 | 3 |
| Construction | 2 | 11 | 9 | 9 | 15 |
| Total Sector I | 72 | 72 | 69 | 40 | 39 |

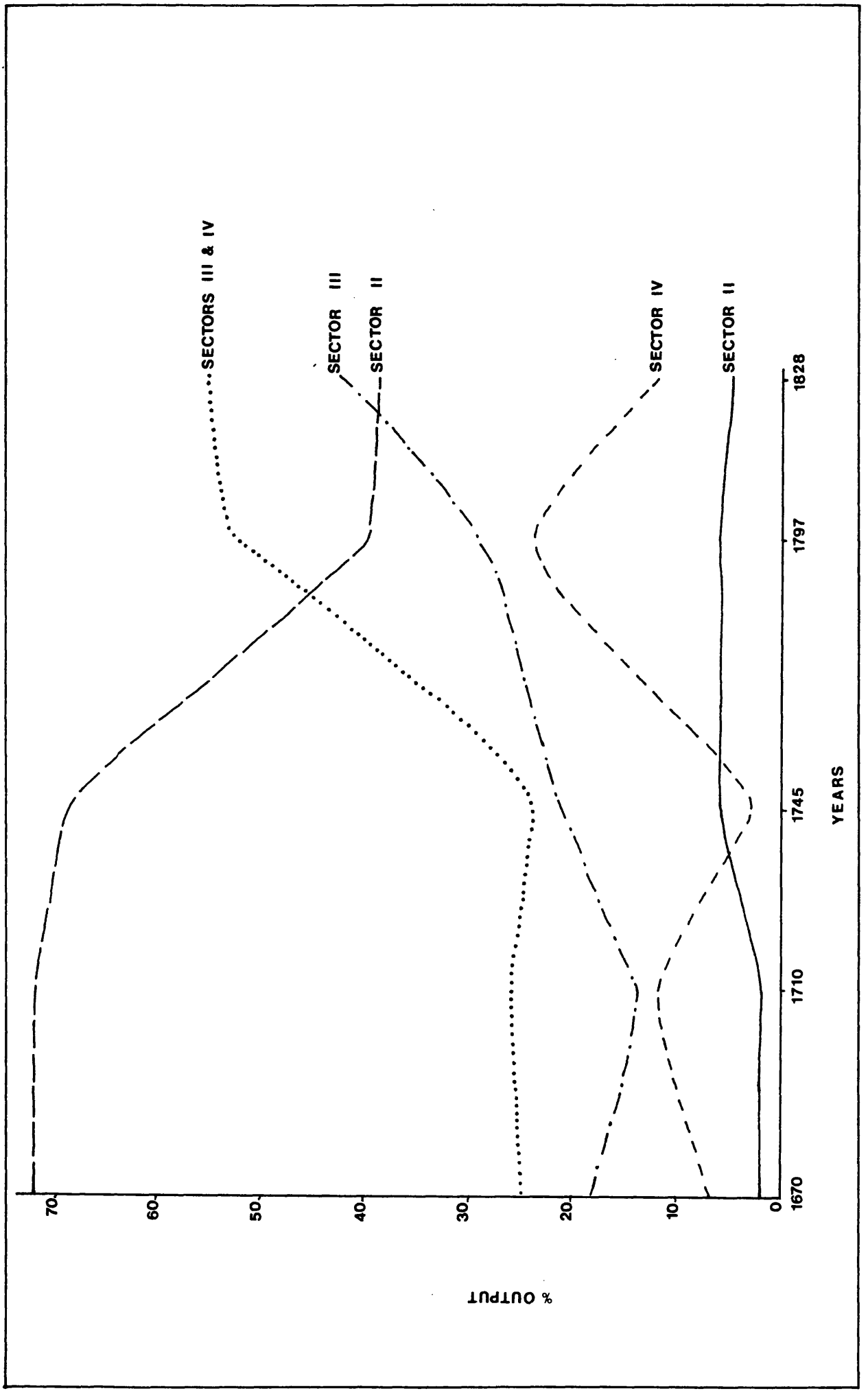



Fig 20:1 Sectoral contribution to output, Oswestry 1670 - 1828

to the nature of the economy prior to 1670.

It is possible that in this earlier and unrecorded period of Oswestry's past, the disproportionate number of wool merchants, drapers and mercers attracted to the town by its fame as a cloth market would have assured that sector III, made a substantial contribution to output. The same may be said of sector IV containing all the carriers who serviced the needs of the wool merchants. The relatively informal nature of the Oswestry wool market, which was without a market hall until the second half of the eighteenth century, meant that business was carried out in merchant's houses, inns and on the street. This again implies a form of trade affording maximum opportunity for inn-keepers, pedlars, hucksters and so forth to partake in commercial activity.

At the same time Oswestry, like all the other small towns in the system, would have had a substantial traditional sector in this case distinguished by a bias towards textile trades. It is important to remember that the people of Oswestry not only sold, but made cloth, and were engaged in finishing activities as well. Shearmen, dyers, weavers and clothiers are all recorded in the town in the seventeenth century. In addition in 1691 the corporation provided a workhouse in the town hall where the poor of the parish were employed in the manufacture of linen.[18] Probate inventories also suggest that the appurtenances of the textile industry were commonplace in the households of the town.[19]

The slope on figure 20:1 for the combined output of sectors III and IV shows a rise from 1670 to 1710. One could perhaps suggest that this represents the emergence of these sectors from a slight trough experienced after the removal of the wool staple from the town, and that prior to 1621 their contribution to output had been greater. It is further expected that the output of sector III would have been more substantial than that of sector IV , and that fluctuations in this sector after 1621 would also have been greater. It is suggested that sector I would have contributed over 70% of output in the earlier period. Its contribution would not have differed greatly from that which it made in 1670 and would perhaps have been

similar in size to Sector I in Ludlow in the 1620s (74%), a period of economic buoyancy in this town. Like Ludlow it may be that after 1621 sector I increased its share of output perhaps to as much as 80%, while that of sectors III and IV declined. The period 1670 to 1710 may be seen as one of recovery after the structural changes which one can postulate for the 1621 to 1670 period.

The structural changes discussed above were essentially retrogressive in nature, those taking place after 1745 are much more progressive in character and are symptomatic of Oswestry's development as a "proto-modern" town. The high growth estimates for the periods 1665-1710 and 1665-1745 seen in table 17:1 are the product of a period of economic stability. In this period output kept pace with population and output per head was the same in 1745 as it had been in 1665. Thus, although growth occurred it was of a type associated with a stable, rather than changing economy.

The period 1710-1797 on table 17:2 has been identified as a trough in Oswestry's growth profile. When one looks at the figures for output in table 20:1 and at the graph (figure 20:1), it is seen that this coincides with the period of economic restructuring. The contribution to output made by sector I falls from 72% in 1710 to 40% in 1797 while that of sector III rises from 14% to 29% and sector IV rises from 12% to 24%. The causal relationship between economic restructuring and the trough in the growth estimates is open to debate. The low point in terms of growth occurs in 1754 (the mid-point between 1710 and 1797) while structural change is concentrated after 1745. It could therefore be that structural change is a response to low growth rates.

More light may be shed on this question by a consideration of Oswestry's development in terms of the "Stages Model" of urban growth referred to in Chapter 9. The period 1745-1797 in Oswestry can be identified with the third stage in the model, that of inter-regional development. In the second half of the eighteenth century regional specialization and technological change meant that industries once firmly located in sector I made the transition to sector II. This was particularly the case with metal and textile industries. The

transformation of these into 'modern' and factory industries was accompanied by increases in output and output per head with which operatives in the domestic, traditional sector could not compete. Output in sector I therefore declined relative to that in Sector II. In a small town like Oswestry where the indigenous development of sector II was almost non-existent growth occurred in the tertiary sector instead and sector II goods had to be imported. Textiles would therefore have been imported from outside the region, from Lancashire, Yorkshire and the South West, while metal goods could have come from either inside the region, from the Severn Gorge, or from outside, from the Black Country or Holywell.

It should further be remembered that this is the period of the development of turnpike roads and of a perceived need to improve communications. Oswestry, traditionally a nodal centre through its importance as a textile market, remained a communications centre situated on the London to Holyhead road. The Welshpool to Wrexham road and the road to Chester and Manchester also passed through the town. All these routes were turnpiked in the years between 1752 and 1788.[20] In terms of the network of small towns as a whole Oswestry is among the third order of towns in the turnpike system in both 1752 and 1808.[21] Inter and intra-regional links were being developed in this period eroding the economic autarchy of Oswestry. The contracting space economy resulting from improved communications led to regional specialization. Oswestry therefore had to restructure its economy in order to maintain its position in the urban network and achieve growth.

Not all of the small towns in the system were able to do this. The versatility and flexibility offered by the stable economic base achieved by Oswestry in the earlier period was doubtless an important factor in its successful transition to the fourth and last stage of urban development in the model. It is noticeable that Oswestry makes this transition earlier than other towns. The combined contribution to output of sectors III and IV exceeds that of sector I by 1787, some 24 years earlier than in Ludlow (see figures 20:1 and 18:1). By 1797 the combined contribution to output of sectors III and IV accounted for over half the total output of the town. In this sense

the structure of the economy reached a developed stage and the opportunity for growth existed from a relatively early date compared with other towns in the sample of six. This is reflected in the growth estimates in table 17:2 which show a doubling of the growth rate between the 1710-1797 and 1745-1797 period. Growth is therefore substantial in the late eighteenth century achieving a rate of 2.3% per annum in the 1797 to 1828 period. It is suggested that such a growth rate would have been impossible without the structural transformation of the town's economy after 1745.

Further evidence of this is seen in the disaggregation of sector I into its primary, food, textile, leather, metal and construction sub-groups. The percentage contribution of each group to that of sector I as a whole, is shown in table 20:2. Of particular interest are the profiles of the textile, leather and construction trades. As suggested earlier, the textile trades are subject to the forces of economic rationalization exerted by the development of Oswestry in an inter-regional context. In common with the other trades in sector I output from textiles declines slightly over the 1670-1745 period. After this date however the rate of decline increases sharply as domestic production is hit by competition from imported goods from other regions. This is exactly the pattern one would expect in an industry which plays such an important role in the organizational and technological changes of the Industrial Revolution.

The fortunes of the leather trade provide an interesting comparison. The leather industry remained largely unaltered by the forces for change which acted so successfully upon the textile industry. Only with the advent of the sewing machine and with its mechanization in the mid nineteenth century did production techniques in the leather industries radically alter. Some regional specialization did occur but it was not on a scale to preclude the development of the industry at the domestic scale elsewhere. Thus output from this sub-group in sector I stabilizes after 1745 at between 11 and 12%. A similar pattern is seen in the construction sector. This, like sectors III and IV, deals with non-tradeable goods, buildings cannot be imported from outside the region. It is one of the only

sub-groups to experience an increase in its contribution to output over the the study period. This is particularly so after 1797 when Oswestry entered its period of fastest growth and when demand for new premises, houses and public buildings was greatest.[22] It must also reflect the necessity for improving the infrastructure, street paving, gas lighting (1821), water supply and sewerage.[23] Without these improvements the growth of the town in the nineteenth century upon which Pryce-Jones has remarked would not have been possible.[24]

By the turn of the eighteenth century a structural change in the urban economy as a whole and within sector I had taken place. This was to provide the basis for the high growth rates seen in the nineteenth century. These were growth rates in terms of output and output per head and it is the latter crucial distinction which contributes to the prosperity of the town after 1800. As table 20:2 shows, total output only exceeded the rate of population growth after 1797/1801. It is therefore only after this benchmark date that output per head and real incomes were rising. Pryce-Jones' thesis of an economic stagnation in Oswestry throughout the seventeenth and eighteenth centuries results from a failure to distinguish between growth in output and growth in output per head. As the economic analysis of Oswestry has shown, there was nothing stagnant about its economic performance before 1800. Quite to the contrary, it was in fact achieving structural transformation at an earlier date than other small towns in the system, thus ensuring its prospects for growth in real terms and for prosperity in the future. In this way Oswestry may be regarded as exceptional among the market towns of Shropshire.

FOOTNOTES

1. ROWLEY, T. The Landscape of the Welsh Marches (London 1986) p.77 Oswestry was burnt down by King John in 1215 and by Lewellyn of Wales in 1227.

2. PRYCE-JONES, J. Historic Oswestry (1982)

3. ibid

4. LELAND, J. The Itinerary in Wales (1906 edition ed. by SMITH, L. T.) p.75

5. MENDENHALL, T. C. The Shrewsbury Drapers and the Welsh Wool Trade in the XVI and XVII Centuries (Oxford 1953) p.13

6. PRYCE-JONES, J. op.cit.

7. BLOME, R. Britannia (1673).

8. PRYCE-JONES, J. op.cit.

9. PEVSNER, N. The Buildings of England: Shropshire (London 1958) pp.223-225.

10. ROWLEY, T. The Landscape of the Welsh Marches (London 1986) p.77.

11. Probate Inventories P.R.O. Chancery Lane and Nat. Lib. of Wales.

12. Register of the Election of Burgesses 1694-1908 O.T.H. E1.

13. Oswestry Quarter Sessions Order Book 1737-65 S.R.O. 4235/1.

14. Oswestry Corporation Assembly Book 1674-1821 O.T.H. A1/1.

15. Oswestry Corporation Tencery Books 1716-81 O.T.H. A16.

16. Oswestry Militia Rolls 1769, 1772 O.T.H. Q5.

17. Hearth Tax Population estimate from CLARK, P., GASKIN, K. and WILSON, A. Population Estimates of English Small Towns 1550-1851 (Centre for Urban History, University of Leicester1989) p. 139.

18. GOODMAN, P. H. "Eighteenth Century Poor Law Administration in the Parish of Oswestry". T.S.A.S. No.56 1957-60 p.328-342 O.T.H. A1/1 Oswestry Corporation Assembly Book 1674-1821, 28.8.1691.

19. Probate inventories in N.L.W. frequently list lengths of woollen cloth, bundles of flax and hemp, spinning wheels and yarn.

20. The Shrewsbury-Wrexham road was turnpiked in 1752 and minute books survive for the period 1752-1767 S.R.O. 321/5. The Welshpool to Wrexham road was turnpiked in 1756 and a copy of the act can be seen in the Shropshire Record Office, S.R.O. 1662/4. The Oswestry to Wrexham stretch was subject to a further act in 1763 S.R.O. 1662/5 and ammended in 1788 to add a branch of this road to Llangollen in 1788 S.R.O. 1662/7. Minute books of the Oswestry to Wrexham road 1768-1776 can be seen in Oswestry Town Hall O.T.H. MX/1.

21. See chapter 5 for diagrams of turnpikes in 1752 from the map of John Rogue and in 1808 from the map of George Baugh.

22. Oswestry had a theatre which was rebuilt in 1819 but no museum or library c.f. CATHRALL, W. The History of Oswestry (Oswestry 1855). The workhouse now known as Morda Hospital was built in

1791 c.f. PEVSNER, N. The Buildings of England: Shropshire (London 1958) p.225.

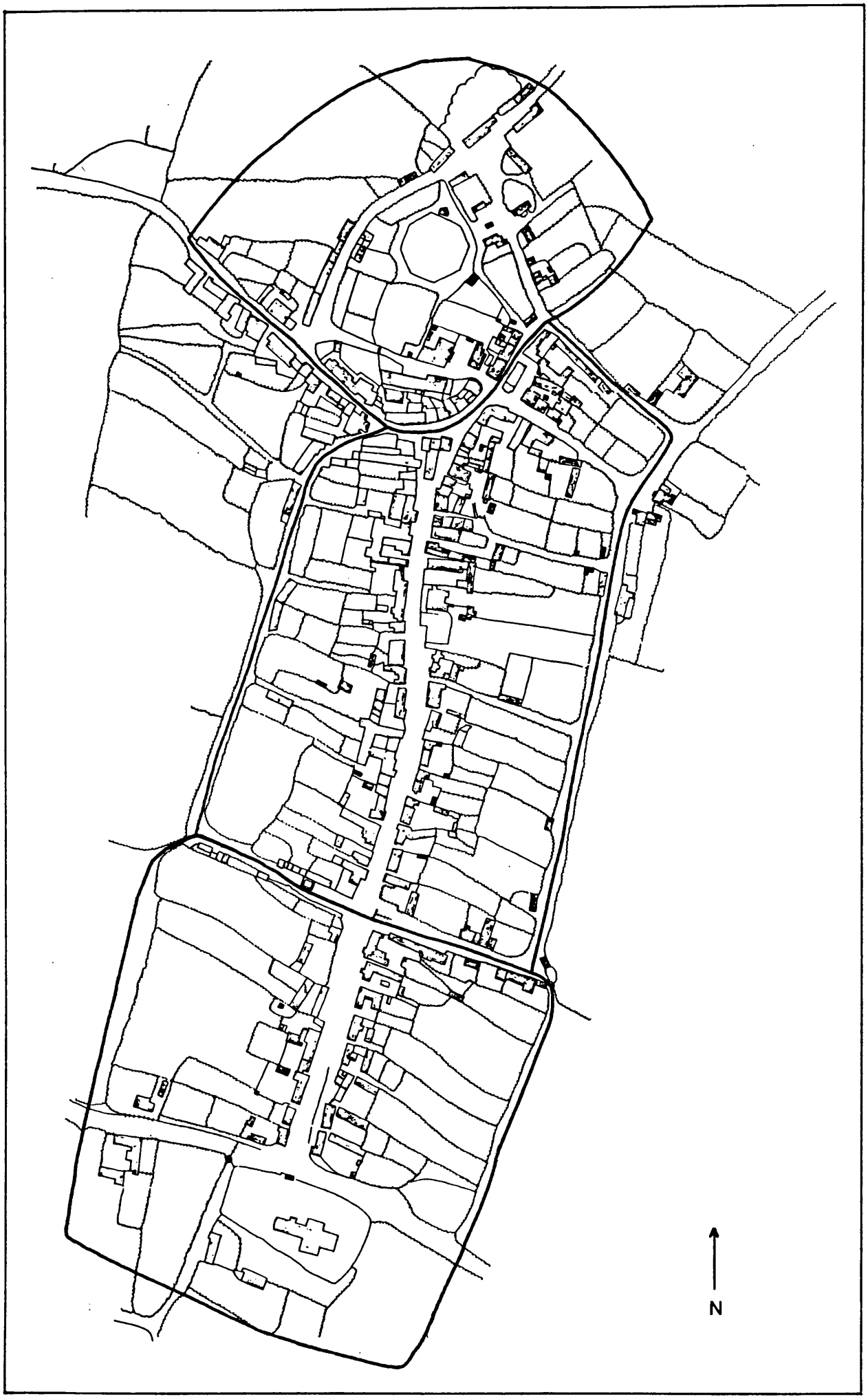
23. CATHRALL, W. The History of Oswestry (Oswestry 1855).

24. PRYCE-JONES, J. Historic Oswestry (1982).

## CHAPTER 21 : BISHOP'S CASTLE

Shropshire was an area of strategic importance during the struggle for Norman domination of the western regions of Britain. The Marcher counties, which formed a buffer zone between the Welsh and the Normans, were governed from a parliament in Ludlow.[1] However, many Marcher Lords had extensive rights and privileges in local government and administration that were not known elsewhere in the country. These rights were granted them so that they could better control their recently subjugated estates. The most successful method of settling and controlling such land was the establishment of castle boroughs. As a result the creation of new towns in the Marches during the twelfth and thirteenth centuries took place on a scale and at a pace similar to that of Roman times.[2] The line formed by the castle boroughs of Oswestry, Welshpool, Montgomery, Bishop's Castle and Clun running north-south indicates a Norman frontier which today forms the border between England and Wales in Shropshire.

This line of towns dates from the first of four phases of borough creation identified by Noble.[3] Bishop's Castle itself is thought to date from about 1127. It was a creation of the Bishop of Hereford from whom the town derives its name. The Bishop built a castle at the top of a hill from which a road, now the High Street, ran down to a chapel. The chapel was given a solid, defensible Norman tower and became the church of St.John the Baptist. The land between it and the castle was divided into burgage plots which can still be identified today in the property boundaries of the town. Town and common fields and wastes were designated and laid out. They survived well into the eighteenth century. In addition to the main street running down to the church, two back lanes either side were developed with passages and lanes connecting the three at right angles. The plan of Bishop's Castle, which has not changed through the centuries, was thus a typical grid form which can be recognized at Clun, Ludlow and in many other castle towns in the borders. Roberts (1989) identifies its nature: the three parts are the castle unit, the planned street area and the area near the church (see map 21:1); he claims they are topographically characteristic of a town rather than a village.[4] He also uses Bishop's Castle as an




Map 21:1 Bishop's Castle 1809, three morphological units (not to scale)

indication of the urban threshold in terms of settlement plans. Though some of the castle boroughs compared even with Bishop's Castle were extremely diminutive, (for example Longtown and Richard's Castle (Herefordshire)), there is no doubt that they were all planned in the urban context.

Bishop's Castle survived until 1967 as England's smallest borough having hardly changed in shape or size since it was created. Like many other castle boroughs set down by the Normans, Bishop's Castle enjoyed only moderate success as a market town in the centuries after the conflict which had brought it into existence. The density with which such towns were laid out in the countryside meant that the whole network could not be sustained into the early modern period. Indeed some towns had already declined to village status by 1400. Richard's Castle, Caus, Cefnllys and Clun had all lost population by this date; their borough rentals indicate much land lying empty, unused and worth nothing.[5] Bishop's Castle was more fortunate than these towns. It was able to develop a market of a size which allowed it to locate itself in an urban network which was delineated by trade and exchange rather than by the colonization and military strategy which had underlain its establishment in the Marcher era.

In terms of the network of small towns in Shropshire, Bishop's Castle is located in rather a remote situation. Set in the south Shropshire hills, it is close to the border with Wales and some distance from Shrewsbury, Ludlow or Church Stretton, the nearest English towns. However, seen in the context of settlement in the broader Marcher zone, Bishop's Castle is neatly located so as to form a gateway into Shropshire for traders from the nearby Welsh towns of Welshpool, Montgomery, Newtown and Knighton. Such a location may well have contributed to its successful transition from castle to market town; though its remoteness and lack of natural resources otherwise limited its development in the early modern period.

Occupational data was collected for Bishop's Castle, in common with the other small towns of Shropshire. These data form the basis of an analysis which sheds further light on the development of the

town through the study period from 1600 to 1830 (see Appendix 7). As with the other small towns in the sample of six, occupational data was collected from a variety of sources in order to extend the analysis as far back in time as possible. A Poll Tax of 1660, probate inventories, lists of burgesses, apprenticeship indentures and material from the Quarter Sessions and Chamberlain's Accounts were all used in compiling data around a series of mid-points.[6] The results of the analysis are shown in tables 21:1 and 21:2 and in figure 21:1.

Bishop's Castle was always located near the bottom of the population hierarchy of Shropshire small towns. In 1672 with a population of 431 the town was ranked eleventh in the hierarchy. It had fallen to rank fifteen in 1801 and was the second smallest town in the county after Church Stretton.[7] A comparatively high growth rate of 1.76% per annum between 1801 and 1831 meant that with a population of 1,729 Bishop's Castle had recovered by the latter date to thirteenth place in the hierarchy. In terms of size alone, Bishop's Castle has therefore always been one of the smaller small towns in Shropshire. Table 17:3 looks at the share of the total population of the six case-study towns to be found in each individual town. This shows that over the period from 1670 to 1831 Bishop's Castle maintained a very stable position, accounting for about 7% of the sample population throughout. In a period of rapid population increase it is only relatively high indigenous population growth rates that maintain Bishop's Castle's share of the urban population, since it did not possess an expanding secondary sector to attract migration in the manner, for instance of Broseley.

Compound growth estimates over the same period nevertheless suggest that population growth was sustained by economic growth after about 1740. Table 17:2 indicates that the 1665-1745 period was one of economic contraction. This is further illustrated by a negative contribution to the growth of output among the six case-study towns of -1%, (table 18:3). Both tables suggest a period of stabilization after this and rates of growth which would indicate the survival of Bishop's Castle in the urban network by virtue of its complementary role with respect to neighbouring towns. The percentage contribution

to the output of the six towns made by Bishop's Castle again remains stable after 1740 (see table 17:1) at around 9%. This also suggests that though small, the town fulfilled a necessary economic function in the network. This function, while it did not promote rapid growth was conducive to the maintenance of stability in the long-run.

The sectoral breakdown of the economy given in table 21:1 and shown in figure 21:1 indicate the early development of sector III, the commercial sector; this already contributed 18% of output in 1665. The distribution of output among the four sectors fluctuates in the period from 1665 to 1740. Sectors I and III are the most developed and important to the town. An inverse relationship seems to exist between these two sectors; as output from Sector I temporarily declines, that from Sector III increases to take its place. The rise in output from Sector III in 1705 may have been a window of opportunity for Bishop's Castle in terms of achieving a more broadly based economic structure. The failure of Sector IV to develop in conjunction with Sector III may help explain why this opportunity was missed and the economy reverted to the traditional form dominated by sector I until 1740. After this, a further opportunity for the development of the urban economy took place. Increased production in Sector III was accompanied by an increase in output from Sector IV so that by 1797 the combined output of these two commercial sectors exceeded that of Sector I (see figure 21:1). The period after 1740 up to 1797 can thus be equated with the development of the "hinterland" stage in the "Stages Theory" of economic growth. By 1797 the successful integration of Bishop's Castle into the wider regional and national economy through the provision of turnpiked roads, coach and mail services was reflected in the development of a proto-modern economic structure.

The predominantly agricultural resource base of Bishop's Castle meant that any industrial development was located on an agricultural sub-structure. The opportunities to expand into the production of "export" goods for distant markets were therefore limited and the emphasis in Bishop's Castle remained upon production for the residentiary needs of the local market. In Broseley, which was almost of a size with Bishop's Castle in 1672, the existence of river

Table 21:1 - Bishop's Castle: Percentage Contribution to Output of Sectors I-IV 1665-1828

| | 1665 | 1705 | 1740 | 1797 | 1828 |
|---|---|---|---|---|---|
| Sector I | 81 | 69 | 75 | 47 | 50 |
| Sector II | 0 | 0 | 2 | 0 | 4 |
| Sector III | 18 | 30 | 20 | 34 | 30 |
| Sector IV | 0 | 0 | 2 | 19 | 15 |
| Sectors III & IV | 18 | 30 | 22 | 53 | 45 |

Table 21:2 - Bishop's Castle: Percentage Contribution to Output of Sector I Disaggregated

| | 1665 | 1705 | 1740 | 1797 | 1828 |
|---|---|---|---|---|---|
| Primary | 0 | 23 | 6 | 1 | 2 |
| Food Processing | 18 | 8 | 25 | 17 | 12 |
| Textiles | 0 | 0 | 16 | 5 | 9 |
| Leather | 45 | 30 | 21 | 14 | 9 |
| Metal | 0 | 7 | 4 | 5 | 3 |
| Construction | 18 | 0 | 2 | 4 | 15 |
| Total Sector I | 81 | 69 | 75 | 47 | 50 |

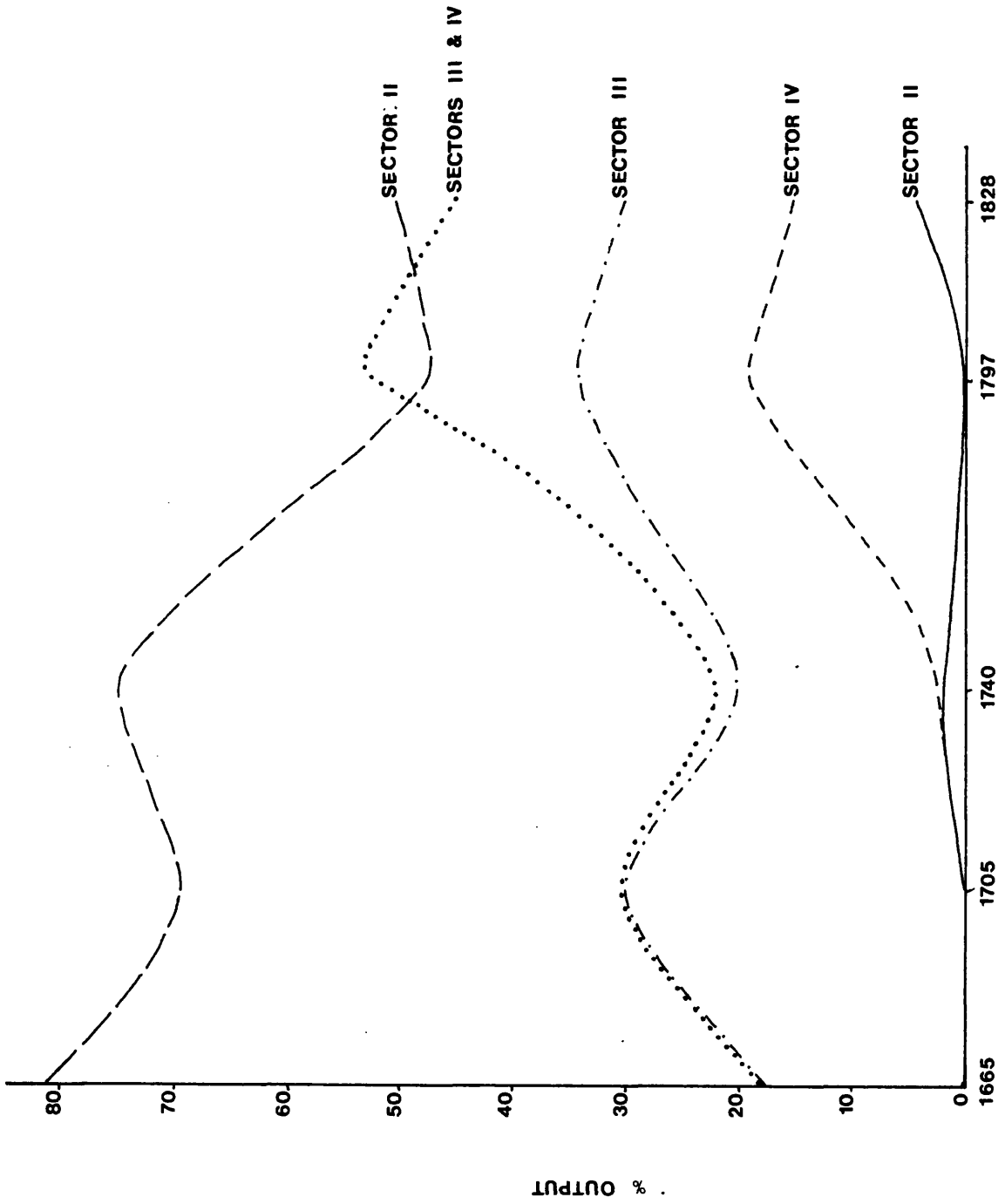



Fig 21:1 Sectoral contribution to output, Bishop's Castle 1665 - 1828

transport and mineral resources could promote growth through the development of such "export" activity for distant markets. Bishop's Castle had none of these advantages but had to rely on its role as a market centre serving local needs and a rural hinterland. The size of this hinterland depended ultimately on the quality of the roads radiating out from the town and the number of services operating on them.

Chapter 6 uses the two maps of 1752 and 1808 by Roque and Baugh to assess the extent of the road network linking Shropshire's small towns.[8] The towns were ranked according to the number of road connections they had with their neighbours. Bishop's Castle occupied a static position being ranked fifth in both 1752 and 1808. However, it seems probable that the quality of the roads between the two dates may have improved as three turnpike districts were established in 1768. The Bishop's Castle First District Trust took the turnpike north from the town, over Lydham Heath to Norbury and Castle Pulverbatch, and then on to meet the Shrewsbury turnpike at Longden.[9] It also encompassed a road out to the east, running parallel with the modern A489, but a mile or so to the south, joining the A49 just north of Craven Arms.[10] This was of course the Bishop's Castle to Ludlow road. Further amendments were made in 1785, turnpiking what is now the B4385, which joined the Bishop's Castle to Craven Arms road to the Clun to Craven Arms road.

The Second District Trust encompassed the road south to Clun and Knighton (today the A488), while the Third District was concerned with roads out to the west.[11]. The latter was a most extensive district. The main road, now the B4385, led straight from Bishop's Castle to Montgomery; about 3 miles south of Montgomery the turnpike to Newtown (A489) branched off, giving Bishop's Castle access to another Welsh small town. From Montgomery the turnpike ran northeast to Chirbury, Morton and Worthen to meet the Shrewsbury road at Westbury. A branch ran west from Brockton to Minsterley, a village which was growing under the influence of the lead mining and processing industry in the area.[12] A further link was added in 1785 to the Welshpool turnpike. The establishment of these turnpikes gave Bishop's Castle access to the seven towns that surrounded it, and to

numerous smaller settlements over a wide area.

Evidence from the two directories used in the spatial analysis of road services in Chapter 6 suggests that the establishment of the turnpikes and the improved condition of the roads led to an improvement in the communications services. The number of carriers, coaches, carts, mails and waggons listed in the directories of 1797 and 1822 were assessed for each small town, and a hierarchy was derived from these data to illustrate the level of services from urban centres.[13] Bishop's Castle, as a very small town (Type V) consistently ranked in the lowest order of towns. However, maps 6:3 and 6:4 showing the inter-urban linkages between this and other towns revealed some interesting findings. In 1797 Bishop's Castle had road services to Ludlow and Shrewsbury in Shropshire; Newtown, Montgomery and Welshpool in Wales; and to Bewdley in Worcestershire. In 1822 services were still operating to Welshpool, Shrewsbury and Ludlow and new ones had been established to Oswestry, Wrexham and Chester and to Aberystwyth.

This suggests a widening sphere of influence for Bishop's Castle as a central place. The establishment of links to such substantial centres as Aberystwyth and Chester accompanied the enhanced economic growth of the 1745 to 1828 period seen in table 17:2. Similarly, the improvement of communications after turnpiking in 1768 may be a contributory factor in the expansion of sectors III and IV after 1740 as shown on figure 21:1. These sectors are of fundamental importance to the function of Bishop's Castle as a central place. The provision of services was central to the spatial model designed by Christaller, and expansion in these sectors accompanied decline in the traditional sector and inactivity in the industrial sector. These features are characteristic of the developing central place economy. The work on transport services has shown that Bishop's Castle's main link was to Ludlow, rather than Shrewsbury; that is, not to the primate county town, but to the nearest town of a higher order than itself (see map 6:2 in Chapter 6). This pattern is also typical of that expected in a central place system where linkages through the urban network are hier .archical.

Contemporary references do not suggest any other function than that of a central place for Bishop's Castle. Blome in 1673 remarked that it had "a good Market for corn etc on Fridays" while Camden in his Britannia thought it "a well-frequented little town".[14] At this stage borough records indicate that it was a very traditional settlement, the organization and administration of which had changed little since the early seventeenth century. When the town was incorporated in 1572 the Earl of Northampton, its patron and landlord, was to receive as his due, all the fines, rents and amercements from the Corporation.[15] It was intended that the money thus collected should be used for the good of the town. However, in 1623 the Corporation petitioned for the Act to be repealed as it left them without money to manage the town. This may have been the reason behind the poor state of the urban fabric in the seventeenth century which is recorded in the Borough Minute Book.[16] The absence of funds with which to improve the town may also have contributed to the lack of interest and commitment displayed by its burgesses. In 1612 an order was passed denying all burgesses their customary privileges until they had taken the Burgesses' Oath in which they had to promise to take part in urban government.[17]

No records survive for the Civil War period, however it seems that little changed in Bishop's Castle. The diminutive size of the town and the small number of voters it contained (only about 100), in relation to its representation in Parliament (two Members of Parliament were regularly elected), may have brought the Borough Charter under scrutiny at the Restoration. Certainly the town had to defend its charter in the London courts and this became a financial burden to the Corporation from 1668 to 1675.[18] Other financial pressures were also a problem for the town at this time. The town hall, which had been rebuilt in 1613, was in need of repair, and by 1688 was "all but falling down".[19] It was still in need of repair in 1696, as were a number of bridges in the borough and the town washing pool. By 1709 the town hall was still not fully restored and the problem of the water conduit was still evident.[20] In an effort to raise money from the dilatory burgesses a lewn of 2/6d was laid on them in 1710, and non-payment was threatened with complete loss of all rights.[21] However, it was only in 1765 that the Town Hall was eventually

rebuilt and in 1775 that the Market Hall was constructed, despite an order in 1745 for the building work on the Town Hall to go ahead.[22] Similar inaction on the part of the Corporation affected the water supply which had, by 1725, become "almost completely ruined".[23] It was only in 1738 that the old conduit was replaced by a lead cistern. The collection of the necessary £30 was made under the threat of confiscating the personal goods of those who refused to pay and bringing actions of debt against them.[24]

The eventual construction of the town and market halls in Bishop's Castle coincides with the improvement of the roads. It is reasonable to postulate that these two infrastructural developments were related. The increase in trade brought to the town by the improvement of its communications, and revealed by the economic growth recorded in table 17:2, provided the necessary impetus for the building work. In a period when trade was moving away from the market place and into permanent shops, investment in a new market hall reflects the importance and prosperity of market trading. Bishop's Castle was rather more economically buoyant in the late eighteenth century than it had been earlier in the century. This is also suggested by its description in the Universal British Directory of 1797. Here the town is seen as "a flourishing place, with many good houses and the streets are kept exceeding clean". The market, which was "noted for cattle and all sorts of commodities" was also "much frequented by the Welsh".[25]

Probate inventories are available up to 1750 and they also indicate the importance of commercial service activities in the town and again portray it as primarily a central place. Smiths, grocers, mercers, shopkeepers, ironmongers and inn holders were typical members of Bishop's Castle society. Production was for the most part still firmly rooted in agriculture. 70% of all sampled inventories contain stock, crops or implements of husbandry. The economy was clearly based in the residentiary sector, though by the late eighteenth century the goods for sale in the town were becoming rather more sophisticated. The inventory of Elizabeth Wollaston indicates that the town was able to sustain retailers with considerable stock-in-trade. This mercer alone carried over £180 of

stock.[26] Most of this was in the form of cloth lengths: silk, gauze, crepe, worsted, wool, linen, dimity, holland, buckram, and haberdashery: pins, braids, hat bands, ribbons etc. Widow Wollaston also stocked tobacco, spices, currants and sugar.

The disaggregation of Sector I activities shown in table 21:2 reveals the importance of residentiary production in the central place economy. The food and leather trades are the most consistently important ones, though after 1740 textiles also feature. The strength of these trades is characteristic of the economy of a market town which serviced its surrounding rural area, rather than seeking "export" markets by developing long distance trade contacts. Such towns develop an almost symbiotic relationship with their hinterlands while their relationship with distant markets exhibits a tendency to "import" rather than to "export" goods. Though probably self sufficient in leather goods and most foods, delicacies like those sold by the mercer referred to above, and exotic fabrics or metal goods would have to be "imported". Bishop's Castle's only "exports" would have been from its primary sector; cattle, corn, sheep, horses and oxen. Without the presence of a growth inducing export base like that of Broseley or Madeley and lacking the sophistication of gentrified Ludlow with its specialized tertiary functions, Bishop's Castle's economy remained more self contained than that of other small towns in the county. It was suspended in the third stage of urban growth relatively unaffected by exogenous influences, performing essentially the same economic function as it had since the fifteenth century.

In this context its economic growth can be seen as of a "complementary" nature, merely keeping pace with that of the urban network as a whole. Just so much growth occurs as is necessary to maintain the town's position as the central place for south-west Shropshire. The development of a solid residentiary base in the seventeenth century and the absence of any similar sized settlement within a radius of at least 9 miles (if one excludes Clun, 6 miles if one includes it), virtually ensured the survival of Bishop's Castle as a necessary service centre in an otherwise sparsely urbanised region. Other towns of this type can be identified in the network,

for instance Ellesmere and Wem. Whitchurch may well have been in this category too, in the early period; but the emergence of commercialized dairy agriculture in its hinterland meant that it was able to develop a growth-inducing "export" trade in cheese and dairy products. Without such specialization, Bishop's Castle remains categorized as a very small, small town, which maintains its position in the urban network of Shropshire because of its function as a classic low order central place.

FOOTNOTES

1. See Chapter 18.

2. ROWLEY, T. The Landscape of the Welsh Marches (London 1986) p.103.

3. Ibid, p.103

4. ROBERTS, B. K. The Making of the English Village (Longman Group 1987) p.66.

5. ROWLEY, T. op.cit. p.112.

6. These records are found in the collection of B.C.B.R., they do not have reference numbers. The probate inventories are found in H.R.O. under Bishop's Castle.

7. The population growth rate for Bishop's Castle between 1672 and 1801 was 1.1% per annum. This rate is similar to that of Ludlow and Bridgnorth during the same period.

8. ROCQUE, J. Map of Shropshire, 1952, S.R.O.; BAUGH, G. Map of Shropshire 1808, (ed) TRINDER, B. (1983).

9. B.C.B.R. First District Turnpike Trust Order Book 1768-1836.

10. Ibid

11. B.C.B.R. Second District Turnpike Trust Order Book 1968-1835; B.C.B.R. Third District Turnpike Trust Order Book 1968-1835.

12. B.C.B.R. Third District Trust, Amendment to the 1768 Act.

13. BRFOOT AND WILKES, (eds) The Universal British Directory 1779-1797; PIGOTT, J. AND SLATER, I. (eds) London and Provincial New Commercial Directory (1822).

14. BLOME, R. Britannia (1673); CAMDEN, W. Britannia (1695) p.542.

15. B.C.B.R. Borough Minute Book 2 1612-1713 DA1/100/1 p.47.

16. Ibid. p.35. Orders to build a new Town Hall, to stop people

fouling the water conduit. p.13 Order to pave the gutters and repair the street.

17. Ibid, p.21

18. Ibid, p.85-135

19. Ibid, p.160

20. Ibid, p.174

21. Ibid, p.219.

22. PEVSNER, N. The Buildings of England : Shropshire (London 1958) p.76; B.C.B.R. DA1/100/2 Borough Minute Book 3, p.98.

23. B.C.B.R. DA1/100/2 Borough Minute Book 3, p.40.

24. Ibid, p.79

25. BARFOOT AND WILKES The Universal British Directory (1797) entry for Bishop's Castle.

26. P.R.O. PROB 31/722/737 Inventory of Elizabeth Wollaston 1783 Bishop's Castle.

## CHAPTER 22: MUCH WENLOCK

The small town of Much Wenlock developed round the monastery and church of St Mildburg and was under ecclesiastical control until the dissolution in 1540. Archaeology suggests that settlement on the site may have Romano-British origins. What form it took and how substantial it was are questions still to be answered however.[1] The presence of a religious institution can be traced back to around the year 670 when the King of Mercia established a nunnery in Much Wenlock for his daughter Mildburg. Having been sacked by the Danes in the late ninth century a monastery was built in place of the nunnery and the church was made into a priory.[2] Much Wenlock thus entered the phase in its history which was to establish it as an ecclesiastical centre and market town of some importance in the county. The morphology of the town which survives today was established in this period. It is therefore suggested that this is where the origins of Much Wenlock as an urban settlement may lie.

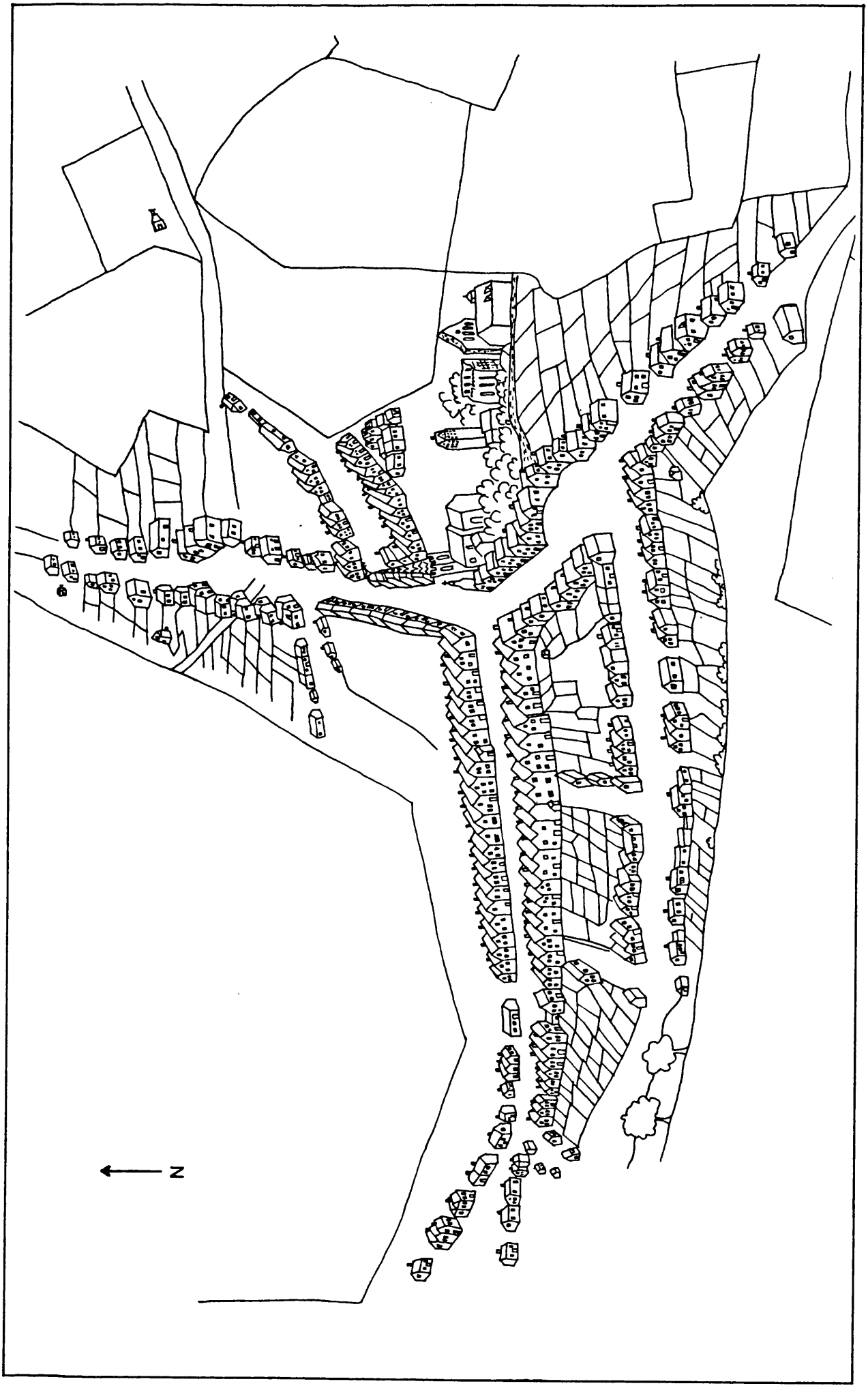
The fluctuating fortunes of the monastery in the thirteenth, fourteenth and fifteenth centuries are not the concern of this work. Suffice to say that the estate it amassed was substantial and became the basis for the Borough of Wenlock created by charter in 1468. From these estates the monastery took an income and a living. This income provided the means to extend the priory buildings and construct the large and luxurious prior's lodging in 1500, one of the finest examples of domestic architecture of this date in England.[3] The coal and metalliferous mines and limestone quarries located on its estates were, no doubt, of importance to the monastery's income. Copper and silver were also mined in the fourteenth century; there were two iron foundries working in 1540 at the time of the dissolution, as well as iron-stone quarries in Shirlett Forest and coal mines at Little Wenlock.[4] The monks of Wenlock were not alone in their early development of the industrial potential of their estates. The Cistercians at Buildwas Abbey mined coal in 1250 while the monks of Wombridge Priory, also on the coalfield, took an income of £5 a year from their mines.[5]

The organizational and entrepreneurial skills of the Wenlock

monks thus contributed greatly to the development of Much Wenlock. They brought prosperity and purpose to the town by encouraging the development of trade and industry. Indeed the association of the town and monastery proved so fruitful that after the dissolution Much Wenlock found it difficult to function as successfully on its own.

By the advent of the seventeenth century and the beginning of the study period Much Wenlock was territorially the largest non-county borough in England (and was to remain so until 1966). The contrast between the largely agricultural composition of its immediate hinterland, and the industrial nature of the outlying parishes under its jurisdiction,Broseley,Benthall,Madeley and Little Wenlock was of importance in the developoment of the town. Thus Much Wenlock is unique among the small towns of Shropshire in having two other towns from the county network within its political boundaries. In the previous century the emphasis had been on the administrative centre of Much Wenlock, but as the seventeenth century progressed the pattern of settlement bore less and less resemblance to its political and ecclesiastical origins and owed more to the dynamic forces of economic change at work in the coalfield. By the end of the eighteenth century Broseley and Madeley had become the important towns in this area while Much Wenlock paled into insignificance.

The movement of towns within the system in terms of their importance and status is shown by population change. In 1672 the population of Much Wenlock town was greater than that of the industrializing parishes of Broseley and Madeley and the town of Wellington.[6] At this stage Much Wenlock still ranked quite highly in the hierarchy in sixth position as the largest of the third order towns (see figure 13:1). Unfortunately figures for the township are not available in the 1801 and 1831 censuses and those for the parish have to be used. Much Wenlock was an extensive parish including the townships of Atterley, Bourton, Callaughton, Farley, Wyke, Bradley, Harley, Wigwig, Homer, Presthope and Walton (eleven in all). By 1801 the population of Much Wenlock had risen to 1,981, putting it in twelfth place in the hierarchy (see figure 13:2), however one has to take into account the fact that this figure is inflated by the inclusion of the townships named above. An estimate of the




Map 22:1 Much Wenlock 1713 (not to scale)

population for the town alone has been made on the basis of the relationship between the parish figure and the township figure derived from the Hearth Tax estimate of 1672. At this date the town accounted for 69.5% of the parish total, if one takes this percentage of the 1801 and 1831 figures then estimates of a township population of 1,378 and 1,686 respectively are achieved. The revised 1801 estimate does not make any difference to the position of Much Wenlock in the population hierarchy, however, the revised 1831 figure drops the town from twelfth place to fifteenth.

The contrast between the fortunes of this market town and its industrializing neighbours is seen in the rise of the latter through the hierarchy. Broseley, Madeley and Wellington were all ranked below Much Wenlock in 1672, by 1801 they are among the top four towns. Between 1672 and 1801 Broseley experienced a population growth rate of 1.5% per annum while that of Madeley was even higher. By contrast that experienced by Much Wenlock was only 0.6% per annum over the one hundred and twenty nine year period, this makes it one of the slower growing towns in the network during this period, even the very small town of Bishop's Castle grows at a faster rate than this.

Population is not the only measure of the decline of Much Wenlock in the hierarchy of Shropshire towns. The ranking of settlements in terms of their functional index carried out in Chapter 4 indicates that the role played by Much Wenlock as a central place in the urban system of the county also declined. This measure is only available over the period between 1797 and 1828, the dates of the two directories used in the exercise.[7] In terms of purely central functions (that is the functional index less the scores of unique occupations) Much Wenlock occupies eleventh place in the 1797 hierarchy as a fourth order town (figure 4:2). At this date five orders of town are identified so Much Wenlock is still not one of the lowest order towns. By 1828 however, it has fallen right to the bottom of the hierarchy and is the town with the lowest order of centrality in the Shropshire system (figure 4:4). When unique occupations are included in the calculation the degree of economic specialization occurring in Much Wenlock elevates it to ninth place in the 1797

hierarchy and pushes it up into the group of third order towns (figure 4:1). By 1828 however, it is clear that this specialization was not sufficient to support economic development in the town and it falls right to the bottom of the hierarchy again (see figure 4:3). From this enquiry one can see that Much Wenlock declines as a central place and that this decline is not countered by the development of a specialization but occurs throughout the economy.

Occupational data taken from such sources as probate inventories, Burgess rolls and Poor Law papers can be used to extend the economic analysis of the town through the seventeenth and eighteenth centuries.[8] Over this period Much Wenlock can be compared with the other towns in the sample of six. The small size of Much Wenlock, despite its borough status, means that the quality of data obtainable for the town is not always good. The two directories already used provide a reliable source for the later period, however, the data sets collected for 1620 and 1665 from the sources mentioned above are smaller (see appendix 8). They can therefore only really be taken as an indication of general patterns and trends and are not of a quality to allow a detailed statistical analysis. Analysis of economic structure is nevertheless considered a valid exercise as it allows analysis of a type that has not previously been employed on small towns. In addition it allows a comparison of Much Wenlock with the other towns in the Shropshire network.

It has already been suggested that the golden age of Much Wenlock occurred outside the period studied in this work and was a product of the town's relationship with the monastery. The construction of the overlapping growth rate estimates shown in table 17:2 suggests that the dissolution had a long term negative affect on the town's economic development.The figure for Much Wenlock in the 1620-1665 period is actually negative at -1.0% per annum. References in the Borough Minute Book in 1606 suggest that the corporation was uneasy about its status.In the September of that year a renewal of the Royal Charter was called for.[9] The fines put forward for the entry of burgesses to the corporation were considerable; £2 for all those living within the liberties and for foreigners bringing a new trade into the town, and £6:3:8 for foreigners pursuing trades already

present in the town. Many of the entries in the Minute Book for the first half of the seventeenth century are concerned with corporation finances, the need to raise money and to keep good accounts.[10]

The occupational breakdown for this period (appendix 8) indicates the traditional sector as the most important in the town's economy constituting 86% of output (see table 22:1). The traditional trades of the blacksmith, tanner, shoemaker, saddler, weaver and cooper are all represented in Wenlock at this time. These are trades which one might expect to see represented in any settlement even a village. It is only the presence of two blacksmiths and two tanners, and of a glover and butcher that suggest that the economy of Much Wenlock might have been more extensive than that of any of the rural townships within its liberties. Sector IV is also represented and may be taken as further evidence of urban status at this early date.

By 1673 a reference to the town made by Richard Blome in his Britannia of that date suggests that though not of such importance as it was in earlier ages, Much Wenlock is perhaps more buoyant than it was in the early decades of the seventeenth century. His entry for Wenlock Magna describes the town as "a place of note in the time of the Saxons ... it is of some account for its Lyme and Tobacco-pipes here made in great plenty; and hath a very good Market for corn and provisions on Mondays."[11] The graph (figure 22:1) shows that the town retained its traditional economic structure until 1740 much as the larger market towns of Ludlow and Oswestry did. This and Blomes reference to the quality of the corn and provisions market suggest that Much Wenlock managed to hold its own as a small, traditional market town into the eighteenth century and up to the time when improvements in transport and communications began to rationalize the urban network of the nation as a whole.

The importance of the market and the need to legislate in order to maintain its quality and status is reflected in the Borough Minute Book of 1660-1820. In the 1670s particularly, the traders and the corporation show an appreciation of the need to keep order in the market place and thus promote its efficiency. In 1671 an order was made to fine people selling bread and other commodities in the corn

Table 22:1 - Much Wenlock: Percentage Contribution to Output of Sectors I-IV 1620-1828

| | 1620 | 1665 | 1740 | 1797 | 1828 |
|---|---|---|---|---|---|
| Sector I | 86 | 72 | 79 | 54 | 28 |
| Sector II | 0 | 14 | 10 | 5 | 6 |
| Sector III | 7 | 0 | 8 | 33 | 45 |
| Sector IV | 7 | 14 | 3 | 8 | 21 |
| Sectors III & IV | 14 | 14 | 11 | 41 | 66 |

Table 22:2 - Much Wenlock: Percentage Contribution to Output of Sector I Disaggregated 1620-1828

| | 1620 | 1665 | 1740 | 1797 | 1828 |
|---|---|---|---|---|---|
| Primary | 7 | 27 | 38 | 4 | 0 |
| Food Processing | 13 | 0 | 1 | 11 | 9 |
| Textiles | 6 | 6 | 7 | 8 | 1 |
| Leather | 40 | 33 | 15 | 17 | 12 |
| Metal | 13 | 6 | 7 | 10 | 3 |
| Construction | 6 | 0 | 11 | 5 | 3 |
| Total Sector I | 86 | 72 | 79 | 54 | 28 |

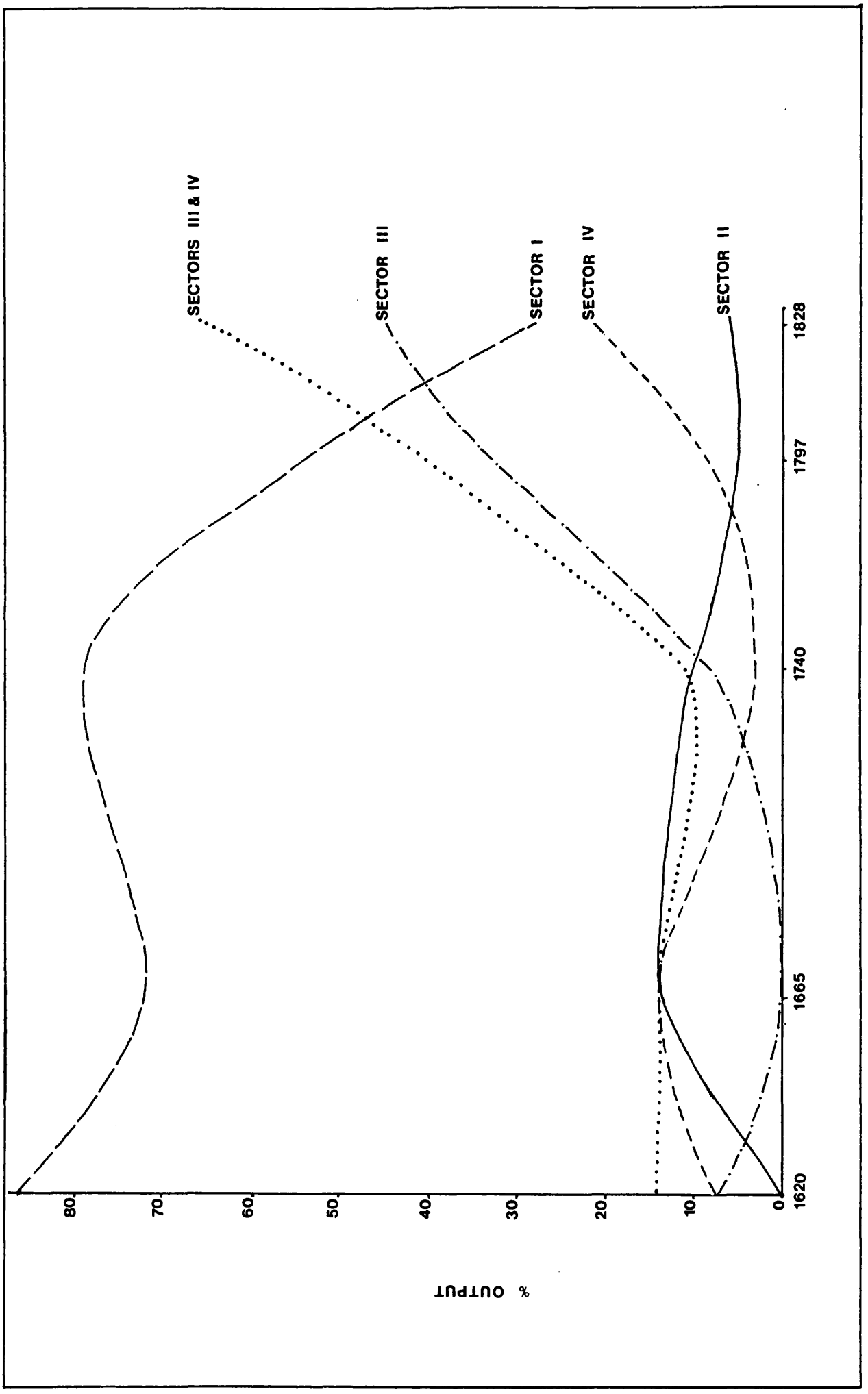



Fig 22:1 Sectoral contribution to output, Much Wenlock 1620-1828

market and so disturbing the latter.[12] In 1678 part of the town Hall was set aside as a butter market and a pentice was built to shelter the corn market from the weather.[13] In the following year the swine market was reorganised. The sties in Spittle Street were demolished and replaced by good fences in order to keep the street cleaner and encourage trade.[14] Some of this action was probably taken by the corporation in response to a suit brought against it in 1671 attempting to take away the toll of the market.[15] Much concern was expressed by the Corporation over the danger of the deterioration of the market should the suit be successful.

Table 17:2 suggests a peak in growth rates estimated for Much Wenlock between 1665 and 1745. After this period growth rates decline becoming negative by the turn of the eighteenth century. The calculation of real income estimates suggests a similar pattern (see table 17:4). In the early period the output growth rate is 1.5% per annum and the output per head growth rate is 0.9% per annum, the latter being taken as a proxy for growth in real incomes. The later period is a stark contrast to the town's previous performance. An estimated output growth rate of -1.8% per annum contributes to a decline in per capita output to a rate of -2.4% per annum, the only negative figure among the six case study towns at this date. When this information is compared with that given by figure 22:1 it suggests that growth in Much Wenlock was associated with a traditional economy in which sector I accounted for the majority of output. The restructuring of the urban economy in terms of sectoral contributions to output does not bring prosperity to this town. Indeed by contrast it seems associated its decline.

The reasons behind this pattern of development in Much Wenlock can only be fathomed when seen in the context of the urban system of Shropshire as a whole. The expanding economies of the industrializing towns and parishes in the borough were increasingly governed and organized by the industrialists and entrepreneurs responsible for their development. Though these individuals may have had to operate through the administrative medium of the Borough Courts etc the emphasis shifted away from the borough town toward the industrializing ones. Much Wenlock could have made the most of its affiliation

with Broseley and Madeley and the coalfield settlements by expanding its legislative role into a servicing role. However, the competition of neighbouring Shrewsbury and Bridgnorth, both of which were larger, more diversified towns, with the advantage of a Severn-side location, made this difficult for Much Wenlock which had to transport everything by road. Shrewsbury and Bridgnorth as river ports could both act as distribution points for products from the towns of the Severn Gorge. Much Wenlock had nothing to offer that could compete with these advantages. The economic expansion taking place within its borough boundaries went largely untapped by the borough town.

Occupational data suggests that the economic growth of the period between 1665 and 1745 in Much Wenlock, may not have been unrelated to that taking place in the borough's industrializing parishes. The limited potential of such growth is indicated by its traditional nature. Limestone, traditionally burnt and used as an agricultural fertilizer was also in demand for the iron industry of the Severn Gorge. Much Wenlock's position on the southern flank of Wenlock Edge, an extensive limestone outcrop, meant that it was well placed to supply this demand. Limestone was taken by road to cross the river at Buildwas for furnaces on the north bank of the Severn at Madeley Wood, and by road to the furnaces at Willey. The extent of such traffic is illustrated by a reference to the state of the roads made in the Quarter Sessions, held in Much Wenlock in 1682. At this time the road, where it passed through Barrow on route to Willey was reported as "out of repair because of the heavy use by vehicles for the coal and limeworks".[16] Pipe making was also carried out in Much Wenlock using clay mined in the borough. The inventories of two such pipemakers survive for 1668.[17] Reference has already been made to Blome's observation of the industry in the town in 1673. Other industrial occupations recorded in the Burgess rolls and settlement certificates for the town include needlemakers and nailers in the 1730s and 1740s. These trades are clearly associated with the iron-making activities in the urban hinterland.

This is the extent of the modern industrial sector in Much Wenlock. Of greater significance is perhaps the development of the traditional sector, still accounting for 79% of output in the town in

1740. Inventories of substantial value survive for shoemakers, saddlers, blacksmiths and tanners in the seventeenth and early eighteenth centuries. The breakdown of output in sector I shown in table 22:2 shows that the leather trades account for a high percentage of output and are a stable element in the economy. One can suggest that industrialization in Broseley and Madeley at this time resulted in the complementary growth of Much Wenlock as a centre supplying the expanding industrial workforce with clothes, shoes and household items. The growth in real incomes that this promoted and which is seen in table 17:4 is also reflected in the probate inventories.

Inventories with a value over £100 in the 1660s exist for a glover, blacksmith, saddler, shoemaker, barge owner and yeoman.[18] In the first decade of the eighteenth century yeomen appear to be the wealthiest individuals, but the two tanners in the sample also have inventories of a high value. Edward Mancocks tanner, died in 1708 leaving £1,101 and John Doughty died in 1707 leaving £284. Both had approximately £200 worth of leather, bark, lime and other goods associated with their trade.[19] Complementary growth of this type in Much Wenlock is typified by the traditional nature of the business contributing to it. All the inventories mentioned above, except that of Samuel Brown, a pipemaker, include goods of an agricultural nature. Crops and livestock often account for much of the inventories value. That these individuals had still not severed their links with agriculture is indicative of the comparative backwardness of Much Wenlock's urban economy. This is further illustrated by the high percentage contribution to output in sector I made by primary producers in 1665 and 1740 (table 22:2). Yeomen were still an important force in the town at these dates in the absence of wealthy grocers, mercers and attorneys etc.

The advantages of dependence on complementary growth began to be outweighed by the disadvantages of competition in the second half of the eighteenth century. The coalfield towns developed their own traditional industries and what they did not supply themselves they tended to import from Shrewsbury and Bridgnorth, rather than from Much Wenlock. The failure of the latter to develop a viable commercial sector contributed to this trend particularly when

Broseley and Madeley developed their own markets.

The anxiety of Wenlock tradesmen is reflected in the action brought by Thomas Evans a Wenlock maltster against some Broseley men for setting up a Wednesday market in their town. He took the action to the King's Bench in 1745 on two occasions and was successful.[20] His success was however, short-lived and Broseley obtained a warrant to hold a market in competition with that of Much Wenlock and built a market hall in the High Street in 1779.[21] Until this time the market for corn, provisions, wares and commodities had been an important advantage to Much Wenlock.For tradesmen from the industrial towns it was the nearest source of supplies. The end of this monopoly coincided with the construction of the ironbridge across the Severn. This provided an alternative crossing to the Buildwas Bridge on the Wenlock road, which meant that traffic could more readily by-pass the town. Both factors contributed to the inability of Much Wenlock to compete with its urban neighbours. By 1792 it had become an "insignificant borough".[22]

The relationship between Much Wenlock and the two industrializing towns in its borough can be seen in the records of the House and Window tax. These show that throughout the eighteenth century Much Wenlock was consistently assessed at a lower rate than either of its competitors.[23] The same relationship exists in the Assessed tax of 1785 which with its taxes on carriages, horses, waggons and servants is perhaps a more accurate measure of individual wealth.[24]

The decline of Much Wenlock in the centrality hierarchy of chapter four has already been referred to. A similar trend characterizes its position in the hierarchies of nodality and connectivity also seen in Chapters 5 and 6. Nodality was assessed in 1752 and 1808 using the maps of John Roque and Robert Baugh and between these two dates Much Wenlock fell from second to ninth position.[25] In terms of connectivity which was assessed as a measure of the numbers of carriers and coaches passing through and operating from the town in 1797 and 1822, Much Wenlock already occupied a position low in the hierarchy. From rank fifteen in 1797, it fell further to rank eighteen in 1822.[26]

The Shrewsbury, Wenlock and Bridgnorth road was turnpiked in 1752 and a further act for improvement passed in 1756.[27] In the list of trustees the names of industrial entrepreneurs are conspicuously absent. It is clear that roads through Much Wenlock were of little importance to them compared with those between Broseley, Madeley, Wellington, Shrewsbury, Bridgnorth and other townships on the coalfield. Much Wenlock was therefore increasingly isolated from the economic activity centred on the coalfield. The improvements in transport and communications made in the latter half of the eighteenth century favoured other towns at the expense of Wenlock.

A similar rationalization took place in the context of the modernization of Much Wenlock's economy. The combined contribution to output in percentage terms of sectors III and IV outstripped that of sector 1 in 1806 (see figure 22:1). In other case studies this has been used as an indication of a watershed between traditional and 'proto-modern' urban economies. In the case of Much Wenlock the decline of the traditional sector in the face of competition from 'modern' imported goods, does not mark the beginning of a period of growth. Although the sectoral balance displayed in the table 22:1 and figure 22:1 looks good, the absolute numbers involved and the economic diversity of the town were not sufficient to sustain growth. The economic decline which set in after the 1665-1745 period in table 17:2 was such that in 1792 Oldfield could treat the town with derision. He referred to it as "Much Wenlock; but from its being an ill-built, dirty little place, consisting of only two ordinary streets, it is called Muck-Wenlock by way of derision".[28]

It is possible that the exhaustion of the coal reserves in the Broseley area by 1800[29] and the closure of five blast furnaces in the 1820s[30] may have contributed to the decline of Much Wenlock in the early nineteenth century. Broseley as the centre for industrialization on the south bank of the Severn, the same side as Wenlock, would have been the town which most effect the economy of Much Wenlock. The fact that it was this town which entered a period of decline rather than Madeley on the north bank of the Severn is critical. Broseley may well have exerted forces of complementary decline on Much Wenlock, much as it had exerted those of growth in

the eighteenth century. Certainly the burden on the borough town in terms of maintaining the poor would have increased.

Much Wenlock is classified as the only declining town in the Shropshire network for the reasons given above. Towns were rationalized out of the system in the medieval period by the forces of economic change. The same fate could have fallen to Much Wenlock in the first decades of the nineteenth century, but for the maintenance of its built environment, its administrative role and the survival of a population of nearly 2,000. In this it is unique among the Shropshire towns. Other very small towns like Church Stretton, Cleobury Mortimer and Bishop's Castle also form part of the system but though small they were not in decline. A period of stabilization in the nineteenth century is postulated for Much Wenlock on the basis of the built environment surviving today. The economic characteristics of such a stabilization and the effect of industrial decline throughout the Shropshire coalfield town cannot form part of this study. It is suggested however, that the location of Much Wenlock as a neighbour to the Severn Gorge towns which display such dynamic economic characteristics is of prime importance in any consideration of the town's urban development.

FOOTNOTES

1. ROWLEY, T. The Landscape of the Welsh Marches (London 1986) p.141.

2. It is thought that it was Roger de Montgomery, the figure so important in the Marches counties at this time, who elevated the church to the status of a priory. Little remains of the buildings erected by Roger but it was he who established the ecclesiastical role of the settlement. cf. PEVSNER, N. The Buildings of England: Shropshire (London 1958) p.207.

3. Ibid, p.210

4. Ibid, p.228

5. ROWLEY, T. op.cit. p.228

6. CLARK, P., GASKIN, K., and WILSON, A. Population Estimates of English Small Towns 1550-1851 (Leicester 1989) pp.137-140.

7. BARFOOT and WILKES. Universal British Directory (1779-1797); TIBNAM. The Salop Directory (1828).

8. W. B. R. Wenlock Borough Minute Book 1495-1658 and 1660-1820 B3/1/3; settlement and removal papers Q1/5/1-265 and Q1/3/1-2; Probate inventories are located in the H.R.O. and P.R.O. under the parish.

9. W.B.R. B3/1/3 Wenlock Borough Minute Book 1495-1658, p.366 entry for September 1606.

10. Ibid, p.432, p.452, p.470 references for the years 1613-17 concerning the poor quality of accounts kept by the baliff responsible, and the need to raise lewns and make assessments for such on the inhabitants of the town.

11. BLOME, R. Britannia (1673).

12. W.B.R. Borough Minute Book 2, 1660-1820 B3/1/3 p.18.

13. Ibid, pp.65 and 67.

14. Ibid, p.70.

15. Ibid, p.18.

16. W.B.R. Q1/1/Box 1 Constables returns to Quarter Sessions held in Much Wenlock 10/1/1682.

17. H.R.O. pipemakers' inventories 1668: (1) Thomas Edwards 30/3/1668; (2) Samuel Brown 21/8/1668.

18. H.R.O. Probate records: (1) Richard Kidson (glover) 29/10/1665; (2) Thomas Cocke (Blacksmith) 16/3/1666; (3) Joseph Mason (Shoemaker) 25/1/1666; (4) Samuel Edwards (Yeoman/bargeowner) 16/3/1666; (5) Joseph Crowther (Sadler) 21/5/1667.

19. H.R.O. Probate records: 1. Edward Hancocks (Tanner) 21/2/1708; 2. John Doughty (Tanner) 1/5/1707.

20. N.L.W. Wynnstay Collection Box 56/86 Kings Bench Judgement Trinity Term 18th and 19th Geo. II.

21. STAMPER, P. A., V.C.H. Shropshire XV (forthcoming) Broseley section.

22. OLDFIELD, T.H.B. History of the Boroughs (1792) pp.426-428.

23. P.R.O. E182/810 House and Window Tax Wenlock and Liberties 1710; P.R.O. E182/812 House and Window Tax Wenlock and Liberties 1720; P.R.O. E182/813 House and Window Tax Wenlock and Liberties 1740; P.R.O. E182/816 House and Window Tax Wenlock and Liberties 1760; P.R.O. E182/819 House and Window Tax Wenlock and Liberties 1780.

24. P.R.O. E182/819 Assessed taxes 1785 Wenlock and Liberties.

25. For calculations of "nodality" refer to Chapter 5.

26. Refer to Chapter 5 and calculations of connectivity.

27. S.R.O. 4001/Admin/6/47 Turnpike Act 1765.

28. OLDFIELD, T. H. B. (1792) op.cit. pp.426-428.

29. STAMPER, P. A. op.cit, Broseley section (forthcoming).

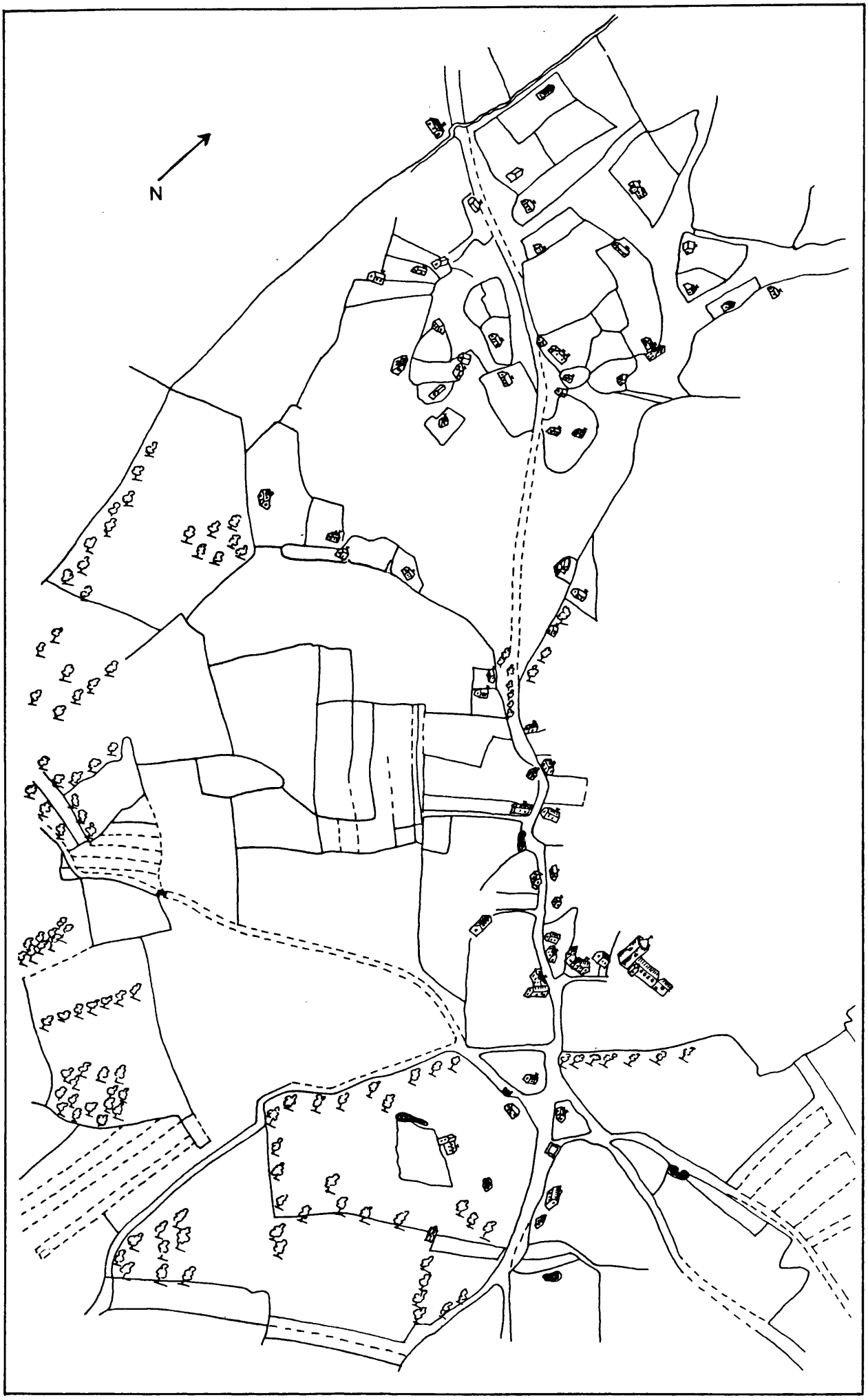
30. CENSUS statistics 1851, p.45.

CHAPTER 23 - Broseley

In comparison with many of Shropshire's small towns, Broseley as an urban settlement is a relatively recent historical phenomenon. Broseley parish is situated on the south bank of the Severn,in what was once a wooded zone, belonging to Wenlock Priory. As such it was subject to Forest Law, and the earliest references to settlement in the parish are a result of breaches of this law. In 1250 the prior of Wenlock, among others was fined for assarting land in Broseley.[1] Common fields were established here by the thirteenth century, though the parish was not officially disafforested until 1301, at which time substantial areas of woodland still remained within it.[2] Disafforestation at this date suggests that Broseley was cleared for settlement at a time of land shortage, when population growth in the country as a whole was outstripping agricultural production, and available lowland forested areas were being brought into cultivation.

There is little reference to Broseley in the period of demographic restructuring after the Black Death, but it seems probable that settlement continued in the parish, possibly as a result of its mineral wealth. In 1418-19 the Lord of Broseley Manor was supplied with fifty clods of household coal worth 49s 8d, probably taken from the mine of John Hadyngton and John Horsley.[3] Further references to private mining concerns renting coal mines exist for 1426-27. Wenlock Priory had also dug pits in the parish by 1514, and by 1528 ironstone was also being mined here. It has been suggested that land ownership by monasteries and priories restricted the development of mineral resources and that it was only after the Dissolution that these really began to be exploited on a commercial scale.[4] Whether or not this was the case in Broseley it seems that a settlement had emerged in the parish during the sixteenth Century following the radial pattern identified by Roberts.[5] There is also evidence that James Clifford, the Lord of the Manor, encouraged squatter settlements on Colepitt Hill, in Broseley Wood and on other common lands to the north of the village of Broseley, in order to provide a labour force to work his coal mines.[6]

Wanklyn (1982) has estimated the population of Broseley in 1570




Map 23:1 Broseley circa 1620 (not to scale)

to be 125 people.[7] By 1620 Stamper (1989) estimates the existence of approximately 27 houses in Broseley town, 33 on Colepitt Hill and a further 30 or so down towards the river in Broseley Wood.[8] This total of 93 houses, when subject to the household multiplier of 4.5, gives a population in 1620 of 418. The population has therefore increased possibly threefold in a period of fifty years.

By the start of the study period Broseley was a parish undergoing settlement as a result of industrial development. Population increase occurred at a rate more typical of urban than rural areas. Already by 1620 the estimated population of Broseley exceeded that of Church Stretton, Cleobury Mortimer, Ellesmere and Madeley in estimates of 1672, fifty two years later. If these settlements are classified as urban at this date, then in terms of population size alone, Broseley is clearly within the small town category by 1620.

Rapid rates of population growth are a feature which distinguish the development of the industrial towns of Broseley and Madeley from other towns in Shropshire. Between 1672 and 1801 the population of Broseley increased at a rate of 1.5% per annum.[9] This rate is greater than that of any other small town in the county except Madeley. In 1672 Broseley ranked tenth in the population hierarchy of Shropshire small towns, by 1801 it had risen to third place. Its sister settlement, Madeley, rose from fourteenth to fourth place. After 1801 the experience of these two industrial towns diverges. Madeley continues to grow and achieves a ranking of third place in 1831; by contrast Broseley suffers an absolute decline in population, losing 533 people and falling to rank eighth in 1831. (See figures 13:2 and 13:3). This is a quite singular pattern as no other small town in the county actually loses population during the period 1801-1831.

Notes in the census suggest that the decline is due to the closure of five blast furnaces in the parish.[10] However, in order to examine the development and apparent decline of the town in more detail it is necessary to refer to the economic analysis of Broseley undertaken in the context of the other case study towns in the sample

of six. Population figures are available for the parish rather than the town. The pattern of development in the latter may be indicated by that of the former, but the exact nature of population changes in Broseley town may be more obscure. The following economic analysis may help to place the urban development of Broseley in perspective.

Table 17:1 shows the percentage contribution to the total output of the six case-study towns. This table indicates that though Broseley's contribution to growth of output may have been a dynamic force in the urban economy of Shropshire, its actual contribution to output was never very extensive. Broseley's share of total output peaks in the eighteenth century with totals of 10 and 11% in 1745 and 1797. These figures are comparable with those for Bishop's castle, but at this date even Much Wenlock contributes proportionately more to total output than Broseley. The contrast between the figures for percentage contribution to total output suggest an economically very interesting situation in Broseley. More light may be shed on this by a sectoral disaggregation of output, see table 23:1 and figure 23:1.

In the context of the sample of six case study towns, table 18:3 shows that in the early period 1665-1740, Broseley is responsible for 44% of growth of output; that is, its contribution to growth is substantially greater than any of the other sample towns at this date. The same can be said of Broseley between 1740-1797, though by this time Ludlow and Bridgnorth also make a substantial contribution to growth of output. Broseley's percentage contribution has fallen from 44% to 24%, while that of Bridgnorth has risen from 15% to 22%, and Ludlow which used to contribute 6% of growth now contributes 18%. The figures for the 1797-1828 period in column 3 of table 18:3 describe a situation which could hardly be more different from that of 1665-1740 presented in column 1. Ludlow, Oswestry and Bridgnorth, all large, long-established, corporate towns, now dominate output growth. Even Bishop's Castle, one of the smallest small towns, contributes more to growth than Broseley. Only Much Wenlock, which has been identified as a declining town (see Chapter 22) contributes less to growth of output.

It seems that in the early period economic activity in Broseley

was of a growth-inducing type, and remained so well into the eighteenth century. As the economies of other small towns developed, they too became characterised by growth, thus diminishing relatively the role of Broseley as a centre of growth in the county. Already by the end of the eighteenth century, it seems that economic activity in Broseley had begun to contract, perhaps as a result of economic over-specialisation.

Occupational data for Broseley has been collected from various sources: probate inventories, settlement certificates, the Much Wenlock burgess roll, and from the two directories of 1797 and 1828.[11] As with the other small towns some sources provided a richer fund of information than others. To achieve a usable series of data it has been necessary to group data for a number of years around representative mid-points to create a time-series. (See Appendix 9). To allow comparison with the other small towns the data are expressed as percentages. The number of operatives in each occupation is taken as a proxy for output in order to calculate the proportional contribution to estimated output of each of the four sectors; traditional craft-production, industrial, commercial and service/professional. The resulting structural disaggregation is displayed in tabular and graphic form (table 23:1 and figure 23:1). What becomes immediately apparent, in comparison with similar figures for the other case study towns, is the importance of sector II, the industrial sector. In previous examples the relationship between sector I and sectors III and IV has been used as an indication of economic development proceeding towards the "proto-modern". This is normally in the late eighteenth or early nineteenth centuries, when the combined output of the latter two sectors exceeds that of the former. As figure 23:1 indicates this type of relationship simply does not exist in Broseley. The development of this town is clearly exceptional.

In 1620 all the estimated output is accounted for by sector IV and sector I, the traditional production base. The occupational data on sector IV largely consists of bargemen and carriers, members of the service "trades" rather than the "Professions". Wanklyn (1982) has shown how Broseley was an important region for the export of coal

Table 23:1 - Broseley: Percentage Contribution to Output of Sectors I-IV 1620-1828

| | 1620 | 1665 | 1740 | 1797 | 1828 |
|---|---|---|---|---|---|
| Sector I | 33 | 37 | 55 | 23 | 31 |
| Sector II | 0 | 37 | 35 | *40 | *50 |
| Sector III | 0 | 12 | 3 | 15 | 5 |
| Sector IV | 66 | 12 | 7 | 19 | 14 |
| Sectors III & IV | 66 | 24 | 10 | 34 | 19 |

* Figures reconstructed from 1801 and 1831 census material

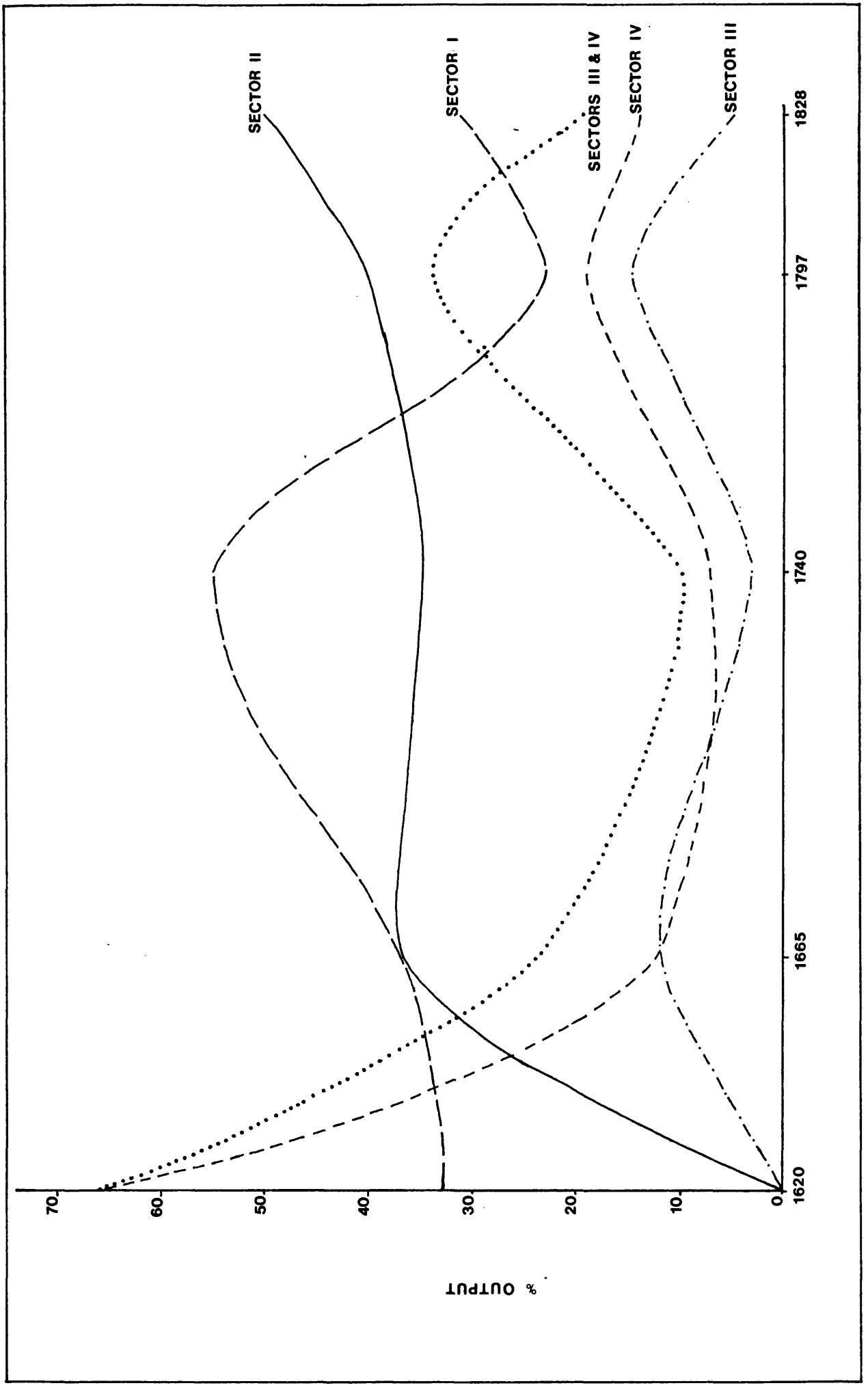



Fig 23:1 Sectoral contribution to output, Broseley 1620 - 1828

at this time, using the Severn to take coal down stream to Gloucester and Bristol for wider distribution.[12] The importance of sector IV is explained by by this development. The absence of output from sector II which is feature of table 23:1 in 1620 must be seen as a result of poor quality data.

By 1665 it appears that the economic balance of the town had altered. The joint contribution to output made by sectors III and IV was below that of both sector I and sector II. The estimate of 24% of total output remained comparatively high however, compared with other small towns at this date. Sector II continues to contribute over a third of all output right through the period to 1828, when it constitutes a half of total output. This is highly characteristic of the specialisation in industry present in Broseley. The emergence of this sector as one of prime importance at such an early date is indicative of the dynamic role played by mineral resources in the development of the town. It also suggests that concentration on an industrial function lies behind the high figures for Broseley in table 18:3 which shows the the contribution to growth of output among the six case study towns. The development of coal mining and metal working industries in Broseley in the seventeenth century, and the subsequent development of associated industries and processing plants was a much greater stimulus to economic growth at this time than than the continued pursuit of handicraft industries. At the same time much of Broseley's output was exported via the river Severn promoting growth in other areas outside the parish and the county. This meant that although the industrial development of Broseley was growth inducing, (see table 18:3) it was centred on a narrow economic base compared with other towns in the county. The percentage of Broseley to total output was limited (see table 17:1) therefore, compared with the other sample towns.

By 1828 50% of Broseley's output was from the industrial sector and the town's narrow economic base rendered it unstable. The increasing difficulty and growing expense of working deeper and deeper coal seams, and the competition of the iron industry on the Madeley side of the river, contributed to this. It is in this period that both the contribution to output and to output growth made by

Broseley are low and that population decline occurs.

Section III and IV suffered a decline in output in the early nineteenth century, suggesting that perhaps development in these sectors had concentrated on servicing industry, and neglected to expand into the wide range of central place functions taken up in other towns. The decline of particular elements in the industrial sector is therefore mirrored by a decline in the commercial and service sectors. The economy of the town is seen to some extent to fall back on the traditional basis of activity in sector I in this time of potential crisis. The percentage output of this sector rose from 23% in 1797 to 31% in 1828. Output from sectors III and IV, which had exceeded that from the traditional sector by the 1780's fell below it again in about 1817 (see fig. 23:1).

As one might expect in a town which underwent such rapid population growth, the economic structure of Broseley is characterised by dynamism. It is radically different to that of any other small town in Shropshire, except perhaps Madeley. From the above analysis it may be concluded that industrial development due to the riverside location of the parish and its rich mineral resources was the main factor behind Broseley's urban development. The economic balance of the town was perhaps most developed in the 1780's (see figure 23:1), when the traditional sector was of less importance than it had been earlier, and the proto-modern commercial and service sectors were still relatively well developed. However the continuing dominance of the industrial sector possibly destabilized the economy allowing the closure of pits and blast furnaces in the early nineteenth century. Broseley thus changed from specializing in growth-inducing and dynamic industries, to depending too greatly perhaps on the declining industries which grew out of its mineral resource base. Instability which, in the early period was essential to growth and development, had by the later period become a symptom of contraction and decline.

The analysis thus derived from the economic and occupational data for Broseley can be further illustrated by a body of historical material taken from other primary and secondary sources. The

earliest map of Broseley date from circa 1620.[13] At this time quite large areas of common land were to be found in the parish. Open field strip agriculture and a significant amount of woodland survived. the medieval radial settlement appears by this date to have lost its position at the centre of the town and now forms the eastern part of the built-up area. The town centre has moved to the north west and is shown as a linear development along the road to Colepitt Hill and Broseley Wood (see map 23:1). The early modern parish had thus developed as a result of the merger of the previously separate settlements of Colepitt Hill and the medieval village.

The settlement of Broseley parish is characterised at this time by squatter settlements; however there is some evidence to suggest that the town of Broseley was not a development of this kind, but had its origins in the deforestation of the area and the laying out of common fields and estates. Freeholders in the town are recorded as objecting to James Clifford's policy of encouraging squatter development on the wastes as a means of obtaining a labour force for his coal mines. Feeling was strong enough to provoke riots between the "townspeople" of Broseley and the newly arrived cottagers between 1605 and 1607.[14] Clark and Alfrey (1987) have suggested that Broseley has always exhibited a sharper segregation of social classes than the towns to the north of the river.[15] The occurrence of rioting between freeholders and industrial migrants, together with the spatial segregation of their housing at this date supports this assertion. By 1620, despite the townspeople's objections, Samuel Parson's map indicates that unplanned settlement, probably by a squatter population, had established itself in Broseley Wood, around Colepitt Hill, in the Priory common to the north, and in the coppice by the river.[16] These were all mining areas. Similar settlements had developed elsewhere in the parish at Jackfield, The Werps, Coalford and Calcutts, though these are outside the area covered by the 1620 map.[17] The settlements are distributed among the seven landed estates of the parish. All are related to the industrial activities of the various landlords.

Wanklyn (1982) has shown that barges bringing coal from the Broseley mines are recorded passing through Bridgnorth as early as

1500. By 1580 the coal trade on the river had developed further and Broseley exported coal down this route to Worcester, Tewksbury and Gloucester. The availability of river transport was of the utmost importance to the successful development of the Broseley pits. It meant that for urban centres like Worcester it was cheaper to buy Broseley coal, because of the cheaper river transport, than to buy coal from Stourbridge, twenty miles nearer, but which had to be brought over land.[18] The opening of the Avon navigation in the 1630's opened new markets yet further afield, and it is estimated that some 100,000 tons of east Shropshire coal was conveyed down the Severn every year.[19] The settlement and industrial development of Broseley was undoubtedly positively linked to the fuel crisis at the end of Elizabeth I's reign.[20] The price of wood for use in the construction trades and as a fuel rose dramatically during the sixteenth century. Hence the use of coal as a substitute for wood fuel was taking place widely in the early seventeenth century. Broseley's economy was therefore linked into a network of national demand at an early stage in its urban development.

The ability of Broseley to respond successfully to national demand for coal was to some extent a feature of the relief, vegetation and system of land holding prevalent in the parish. Broseley can be seen as a typical "bocage" zone. The forested nature of the area and its undulating terrain, cut into by the steep sided Severn valley, meant that unlike areas further east and north in the plains of the Midlands and Cheshire, Broseley did not develop a grain growing or dairying economy. The land was thus not highly valued for agriculture and systems of landholding were such as to allow squatter settlement to take place. Elsewhere in the "fielden" areas of the county informal settlement of this type would have been impossible because of the rigid control exercised by landowners over their holdings. On the microscale the development of Broseley town to the north and west, rather than to the south and east, reflects similar differences in land holding. The existence of freeholders in the town and of town fields in the south and east meant that squatters would have been evicted from the latter, while to the north competition for land was much less and informal settlement could take place.

The other industrial settlements in the parish would have had similar origins. Their location at mining sites or on the river is a result of the geology of the coalfield in Broseley and the continued demand for coal. The existence of these settlements confuses the urban development of Broseley parish. When looking at other small towns in Shropshire it has been possible to distinguish quite clearly between the urban centre and the rural hinterland containing hamlets and villages. In Broseley the line drawn between urban and rural settlement is confused by industry which encourages dispersed settlement throughout the parish. Jackfield, Coalford and Ladywood are in fact industrial villages. It is the density of their housing, their industrial buildings and their independence from agriculture which gives them the flavour of urbanity (see map 23:2). It is necessary therefore to look closely at their economic function in order to distinguish between them and and the small town of Broseley itself.

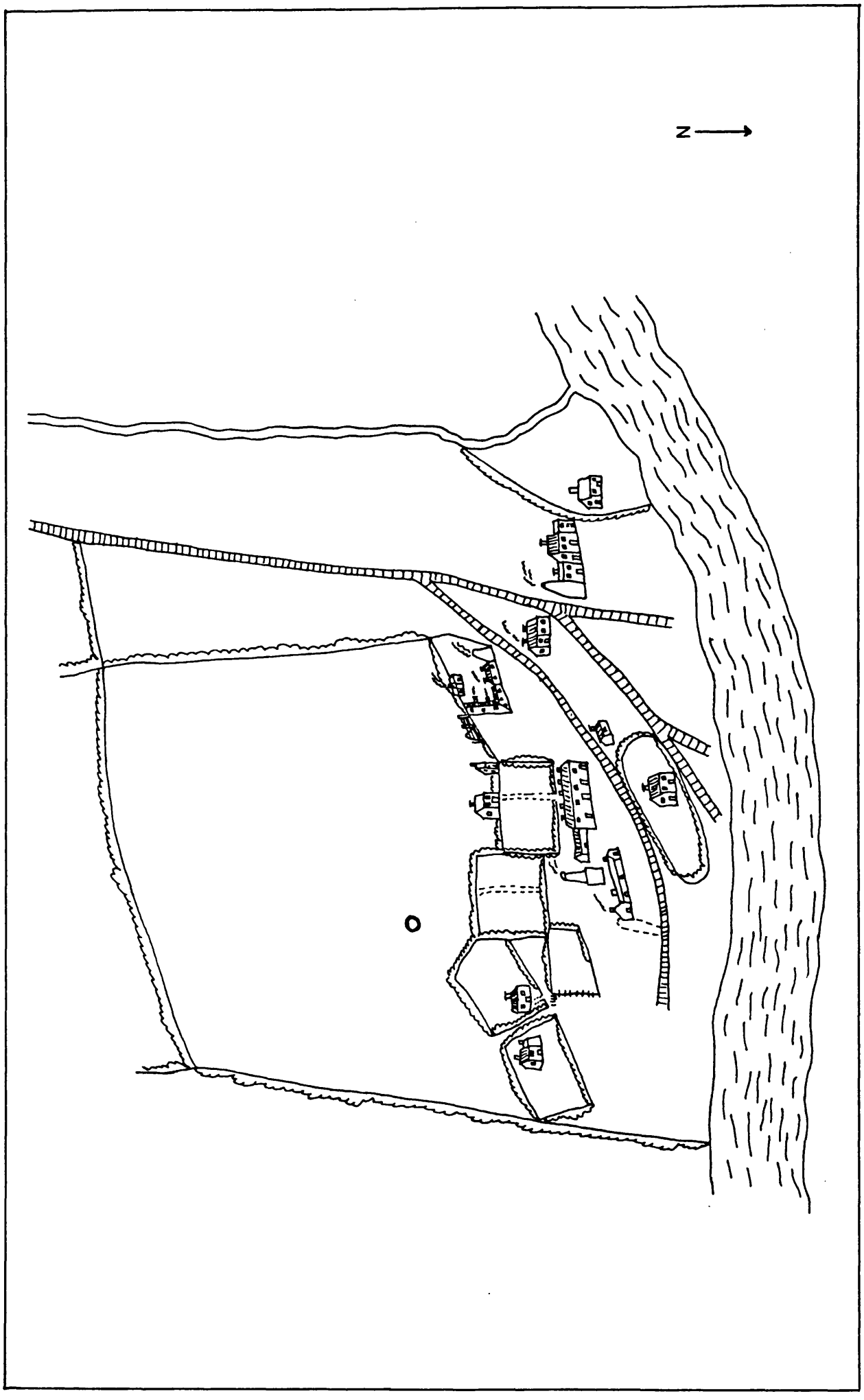
The features which make Broseley a town while Jackfield, for example remained a village, may be brought out using the "Stages Model" of growth referred to in Chapter 9. The evidence for the first stage of development, in which agriculture dominates in a subsistence economy, suggests that Broseley was the only self-sufficient agricultural settlement to develop in the area. This stage is located in the medieval period when Broseley parish underwent disafforestation. The existence of strip agriculture in fragmented ownership, together with common rights around Broseley town, suggests the emergence there of a self-sufficient agricultural community. Elsewhere in the parish, settlement was based around large estate farms, with no fragmented ownership and little evidence of individual small holdings.[21] Settlements of this type were a form of estate village populated by agricultural labourers, lacking the necessary autonomy to develop into urban forms.

The second, "hinterland" stage of development sees handicraft production for a local market, using raw materials derived from agriculture. This is almost completely overshadowed in Broseley by the early development of the third stage in the model, that of interregional trading. This is a function of the rich coal reserves

in the parish and it is this stage which promotes the development of the industrial villages of Calcutts, Ladywood and Coalford. Only in Broseley town can one really identify the second stage of urban development. The existence of individuals engaged in the dual economies of agriculture and industry, which is typical of this stage, is seen in most of the settlements in the parish before 1500. However, by the mid sixteenth century it was already common for the inhabitants of such places as Jackfield and Calcutts to work, not for themselves but for mine owners and master colliers, only maintaining a minimal interest in agriculture. By comparison, in Broseley town dual occupations were more likely to include forms of craft production. Shoemakers, maltsters, weavers, carpenters, tailors and grocers who also owned strips of agricultural land, were all present in the town in the seventeenth century.[22] The establishment of residentiary functions is thus more typical of Broseley town than of other settlements in the parish. An urban centre is characterised by the existence of a range of both "residentiary" and "export" functions; this criterion can thus be used to distinguish between the urban development of Broseley and the village development of Jackfield, Calcutts and Coalford.[23]

A further indication that the mixed economy necessary for truly urban development exists in seventeenth century Broseley is illustrated by sector I activity which makes a proportionately greater contribution to output than the industrial activities of sector II until about 1770. Probate inventories indicate the existence of a wide range of craftsmen in the town in the eighteenth century: masons, glaziers, joiners, carpenters, dyers, shoemakers, cordwainers, glovers and tobacco-pipe makers.[24] The poor law records list people engaged in in other residentiary functions, for example: grocers, haberdashers, bakers, blacksmiths, locksmiths and weavers.[25]

As the stages model suggests, there is evidence that the extensive development of export activities: coal mining, iron working, lead smelting and brick making, was a growth inducing phenomenon. This has already been discussed with reference to the economic analysis of tables 17:1 and 18:3. The survival of probate inventories for residents of Broseley engaged in both residentiary




Map 23:2 Jackfield circa 1728 (not to scale)

and "export" functions lends further support to this argument.

Probate inventories were sampled for the ten years after 1660, the ten years after 1700 and the ten years after 1740; in total 67 inventories were examined. Of these 31% were of a value greater than £30 and 13% were of a value greater than £100, indicating a priori that the economy of the town was such to allow the accumulation of wealth. It should be added that none of the three sample groups included members of the estate-owning class, who would have had inventories valued in thousands of pounds rather than hundreds. The importance of the coalfield and the river is shown by the fact that out of the 42 inventories in which occupations were given, 19% were from the coal mining sector, and 36% were river traders: bargemen and trowmen. In the 1660's sample, the wealthy inventories are those of the coal masters: Thomas Edwards and Francis Adams had goods to the value of £486 and £549 respectively.[26] Francis Adams in particular enjoyed a good standard of living, owning carpets and cushions, a quantity of linen, books, guns and armour. His oxen and horses alone were valued at £77; by comparison, the value of the waggons, ropes, chains and other items at his coal works, was only £20. Inventories do not of course give valuations of real estate; the estates of both these individuals would presumably have been worth a good deal more had the value of their properties been included.

In the sample of inventories for 1700-1710 the wealthiest individual was once more engaged in coal mining.[27] John Pearce owned goods to the value of £319; he lived in a two storey house which was modestly furnished with some £20 worth of goods. He had pewter, brass, tin and iron wares but no plate; he did however, have over £84 of ready money. Pearce's inventory suggests a man more involved in business than in pursuing a high standard of living. In addition to his holdings of cash he also left £169 worth of goods and debts related to the coal mine.

By the 1740's the inventories suggest that wealth in Broseley was beginning to "trickle down" from those engaged in mining to those servicing the demands of the growing industrial population. During this period inventories with values of over £100 exist for two

trowmen, a shoemaker and a shopkeeper.[28] The inventory of Mary Penn, shopkeeper, dated 1742 is indicative of the prosperity to be derived from trade rather than industry in Broseley.[29] She owned a ten roomed house including a red, a blue and a green room and a servants chamber, which contained goods to the value of £67-6-7. The naming of rooms in this fashion is an indication of the social aspirations of Mary Penn which are themselves a characteristic of an urban environment. The shop, though it does not say of what kind it was, contained a counter, boxes, shelves, draws and goods of a kind found in the developed shop form, worth £38-3-7: this was not just a room at the front of the house where Mary sold things, it was a formalized, urban, commercial unit.

The inventory of Andrew Buckley, trowman, is also quite detailed. He occupied an eight room house as well as investing in a trow or barge worth £30. He also owned three chattel leases in the town of £50 in value.[30] Buckley's inventory is typical of the involvement of Broseley people in a dual economy; his main business was clearly in river trade but he also had enough land to keep a store pig and cow for his own use. During the 1740's figure 23:1 shows a decline in sector I activities accompanied by a rise in those of sectors III and IV. One can suggest that it was at this time that Broseley was expanding its urban functions. Prior to 1744 the town had not actually had a market, but had been forced to rely on those of neighbouring towns such as Much Wenlock, Bridgnorth, Shifnal and Wellington. In 1744, John Francis of Wyke, a yeoman, and Robert Corbett of Broseley, a pedlar, set up a market in Broseley for corn, other wares and commodities, it was held on Wednesdays. A maltster from Much Wenlock, no doubt worried that such a market would disadvantage that held in his home town, informed against them, and took his case successfully to the court of Kings Bench. Later in the same year a butcher, cheesefactor, tailor and yeoman attempted to re-open the illegal Wednesday market and they too were taken to court, once more by the same maltster, Thomas Evans, who was again successful in his action.[31] The privilege of holding a market was finally won by Broseley and formalized by the construction of a market hall in 1777.[32] There is some evidence of a market being held prior to this in the yard of Whitehouse farm. Thus we can conclude

that in the second half of the eighteenth century efforts were being made to consolidate the role of Broseley as an urban centre in the coalfield.[33]

Further developments include the construction of two school houses: one in 1767 and a further one at Harris's Green in 1770.[34] In 1792 Easter Monday was designated as a fair day, though Plymley suggests that it was not until 1803 that fairs in the town really became established.[35] Edward Blakeway, the one-time owner of Thursfield Pottery in Jackfield, set up a bank in Broseley in the late eighteenth century, and in 1791 John Pritchard an attorney and solicitor came to live in the town.[36] In 1799 he joined with Valentine Vickers and Son (Land Agents and Surveyors) to open a bank in Broseley and Bridgnorth. Pritchard family documents suggest that the Broseley branch became the head office, while the Bridgnorth bank, though larger, played a subsidiary role.[37] The services available to Broseley people and the inhabitants of the surrounding parish were therefore wide-ranging by the end of the eighteenth century: indeed Pevsner has referred to Broseley in this period as "the town of the Coalbrookdale coal field, its only urban centre".[38] The wealth derived from industry and commerce displayed itself in some fine late seventeenth and early eighteenth century houses around the church. Quality housing of this type is confined to Broseley. it is not seen in the industrial suburbs of Calcutts or Broseley Wood, though the money made through industrial endeavour in the latter settlements played a large part in the construction of urban buildings.

The second half of the eighteenth century is an important period in the history of Broseley's urban development. At this time some diversification of industry took place in the parish with the establishment of blast furnaces and ironworks in Calcutts, Barnett's Leasow, Conebury and in Broseley town itself.[39] By the 1780's the Jackfield pottery was producing a wide range of products (yellow wares, saltglaze ware and blackwares) which were exported as far as America.[40] At the same time Lord Dundonald established a manufactory for the production of tar from coal. A textile warehouse was opened in 1792, and the brick and tile industry continued to prosper.[41]

Diversification of this kind was necessary as the coal seams in Broseley were beginning to run out. Mining became more difficult as the coal face got deeper, and pits to the north of the river became competitive. The establishment of the ironworking industry in Coalbrookdale and Madeley by the Darby family gave rise to an increasingly local demand for coal, and exports down the river began to decline, to be replaced to some extent by the carriage of ironwares, bricks, tiles and pottery.

The Darby's brought prosperity to Madeley during the eighteenth century, in the same way that the export of coal had brought it to Broseley in the seventeenth century. An analysis of overlapping growth estimates for Broseley shows a peak growth rate of 2.4% per annum in the period 1665-1745; by 1797-1828 this rate has declined to 0.3% per annum (see table 17:2). The sharpest rate of decline is in the 1745-1797 period, this periodicity fits with the attempts at industrial diversification made by Broseley, and the perception of a need to establish its urban role through market structures. One can suggest that this activity was a result, to some extent, of the pressure of growing competition from the economic growth brought to Madeley by the expansion of its own export activities. The towns people of Broseley would have seen the establishment of traders on the other side of the river as a threat to their livelihood. In this light the opening of a market in the town appears as an official proclamation of Broseley's role as the urban centre for the coalfield. However, evidence from tax records suggests that this action may have come just too late.

If the assessments of the House and Window Tax are taken as a measure of regional prosperity it can be seen that until 1760 Broseley was the dominant settlement, consistently assessed at a higher rate than Madeley.[42] After 1760 this position is reversed. Though it is interesting to note that in the 1787 Shop Tax Broseley again appears as the more urban of the two settlements being assessed at £1-14-4 compared to Madeley at 12/-.[43] An Income Tax assessment of 1800 provides conclusive evidence as to which of the settlements was more wealthy; the inhabitants of Madeley were assessed at over £2,000 while those of Broseley had to pay only £337-19-7½.[44] The

construction of the Iron Bridge, only two years after the opening of Broseley market hall, and the subsequent development of the settlement of Ironbridge was a further element in the decline of Broseley relative to the rise of Madeley. Situated on the north side of the river, Madeley and Ironbridge enjoyed a more nodal position than Broseley; Shrewsbury, Wellington, Shifnal, and the towns of the industrialising Midlands could all be reached with greater ease.

The urban development of Broseley is therefore closely linked to cycles of industrial activity. The coal trade which was of such importance to the town led to its urban dominance of the coalfield in the seventeenth and early eighteenth centuries. Ironmaking then became of greater economic significance in the area, and though Broseley engaged in this trade, it did not pursue it to the same extent as Madeley. Madeley's comparative advantage in the iron trade led to the rise of this town in the eighteenth and early nineteenth centuries. Meanwhile Broseley returned to an economy increasingly dominated by craft-based industry and particularly by ceramics. Together with the surrender of tertiary functions to towns on the north bank of the Severn, this meant that Broseley survived as a small town, but did not maintain a sufficiently broad economic base to allow further urban growth. This is illustrated in figure 23:1 by the change in the sectoral structure of the economy after 1797, and is emphasised by the fall in population between 1800 and 1831. Thus the study period allows us to view the full cycle of economic development in this small industrial town.

FOOTNOTES

1. CLARK, C. and ALFREY, J. Jackfield and Broseley: Fourth Interim Report of the Nuffield Archaeological Survey of the Ironbridge Gorge (Ironbridge Institute 1988) p.15.

2. Ibid. p.15.

3. STAMPER, P.A. "Broseley", in V.C.H. Shropshire vol.X. (forthcomming)

4. NEF, J.U. The Rise of the British Coal Industry (1932).

5. CLARK, C. and ALFREY, J. op.cit. p.16 quote ROBERTS, B.K. The Making of the English Village, (1987).

6. STAMPER, P.A. op.cit.

7. WANKLYN, M.D.G. "Industrial Development in the Ironbridge Gorge Before Abraham Darby", W. Midlands Studies XV (1982) p.4.

8. STAMPER, P.A. op.cit.

9. CLARK, P., GASKIN, K. and WILSON, A. Population Estimates of English Small Towns 1550-1851 (Centre for Urban History, University of Leicester 1989) pp.137-138.

10. Population Census 1851 p.45.

11. Probate inventories in the H.R.O. under Broseley; settlement certificates, W.B.R. Q1/5/1-265 Box 1-2, Q1/3/1-2; Burgess roll, W.B.R. B3/1/3; Directories are the Universal British Directory (1797) and Tibnam's Salop Directory (1828) op.cit.

12. WANKLYN (1982) op.cit.

13. "Broseley" circa 1620 by Samuel Parsons, S.R.O. 1224/1/32.

14. STAMPER, P.A. op.cit.

15. CLARK, K. and ALFREY, J. Benthall and Broseley Wood: The Third Interim Report of the Nuffield Archaeological Survey of the Ironbridge Gorge (Ironbridge Institute 1987) p.119.

16. "broseley" circa 1620, op.cit.

17. These settlements have been identified as existing in the seventeenth century by CLARK, K. and ALFREY, J. (1988) op.cit. Documentary evidence for this comes from the papers of the Forester Collection S.R.O. 1224, which are no longer open to the public. I therefore have to thank Clark and Alfrey for all the references which come from this collection. CLARK, K. and ALFREY, J. (1988) op.cit. p21.

18. WANKLYN (1982) op.cit. pp.4-6.

19. Ibid.

20. NEF, J.U. "Coal Mining and Utilization", in SINGER, HOLMYARD, HALL and WILLIAMS (eds), A History of Technology vol.III (Oxford 1957) p.77.

21. CLARK, K. and ALFREY, J. (1988) op.cit. p.16.

22. H.R.O. Probate inventories 1660-1710. WANKLYN (1982) op.cit. pp.4-6. For discussion of the development of a class of small tenant farmers who were primarily industrial workers see; WORDIE, J.R. "Social Change on the Leveson-Gower Estates 1714-1832", EC. H.R. vol.27 (1974) pp.601-602.

23. PFOUTS and CURTIS (1960) op.cit. make this point, saying that

though export activity may lead to growth, it relies heavily on the support of residentiary goods and services. Thus one can suggest a scenario in which the export activity of the industrial village is fueled by the residentiary functions of Broseley as a small town and vice versa. Broseley develops as a town because it has both types of function; Calcutts remains an "industrial Village" because its economy is overwhelmingly export based. See Chapter 9 for a discussion of "export" and "residentiary" goods.

24. H.R.O. Broseley probate inventories 1660-70, 1700-10, 1740-50.

25. W.B.R. Q1/3-5.

26. H.R.O. Inventory for Francis Adams, 27/3/1668 (Broseley). P.R.O. Prob 4/12789 Inventory for Thomas Edwards (Broseley) 1667.

27. H.R.O. Iventory for John Pearce, 25/7/1709 (Broseley).

28. H.R.O. Inventories for Andrew Buckley, 28/5/1740 (Broseley, trowman); William Yates, 3/6/1748 (Broseley, trowman); John Clibbery, 27/5/1740 (Broseley, shoemaker); Mary Penn, -/3/1742 (Broseley, shopkeeper).

29. H.R.O. Inventory for Mary Penn, -/3/1742 (Broseley).

30. H.R.O. Inventory for Andrew Buckley, op.cit.

31. N.L.W. Wynnstay Collection Box 56/86, Kings Bench judgement Trinity Term 18th and 19th. Geo. III. (1745).

32. PEVSNER, N. The Buildings of England: Shropshire (1958) p.87.

33. S.R.O. 2991/T/1.

34. STAMPER, P.A. "Broseley" op.cit.

35. PLYMLEY, J. A General View of the Agriculture of Shropshire (1803) p.336.

36. STAMPER, P.A. op.cit.

37. S.R.O. Mason Collection 1190/3/1-85.

38. PEVSNER, N. op.cit. p.86.

39. CLARK, K. and ALFREY, J. (1988) op.cit. pp.70-74.

40. Ibid. p.53.

41. STAMPER, P.A. op.cit.

42. P.R.O. E182/810-813 House and Window Tax 1700-1740, E182/816 and 819 House and Window Tax 1760 and 1781.

43. P.R.O. E182/820 Shop Tax 1787.

44. P.R.O. E182/823 Income Tax 1800.

## CHAPTER 24 - Conclusion

The concluding stage of analysis of the small towns of Shropshire in the seventeenth, eighteenth and early nineteenth centuries will attempt to provide first, an assessment of the contribution of this piece of research to our understanding of the role of small towns in the wider historical context, and secondly a synthesis of the three approaches adopted in Sections I, II and III. In respect of the first set of conclusions the focus of study upon small towns will be justified in a number of ways. These settlements will firstly be considered in their own right, and secondly as elements within an urban system. The validity of a systems approach to urban history will then be assessed in terms of the example of the urban system existing in Shropshire. The representativeness of this particular urban system and its role within the wider regional, national and international context will also be considered. The existence of the primate county town of Shrewsbury in the system can not and should not be ignored. Its role and significance will also be considered at county, regional and national levels in the context of the development of the urban system of England and Wales during the early modern period.

Considered first in their own right, the conclusions that may be drawn from this study are that too much emphasis has been placed on mapping the demographic development of small towns. This was shown in the analysis carried out in chapter 13 of the relationship between demographic and economic characteristics of small towns. Population characteristics have perhaps been taken too seriously as an indicator of economic and social significance. In the first instance there have been considerable definitional problems regarding what actually constitutes the population of a small town. Before the first census there are a few potentially useful estimates of urban populations.[1] It has been necessary to employ these estimates in order to refine output estimates derived from aggregative data to a per capita level. The bench-mark estimates derived from this process have greatly enhanced the coverage, and hopefully the quality, of the time-series estimates constructed from the wide range of contemporary data employed in the study. It must be re-iterated however, that these per

capita estimates of output are intrinsically less reliable indicators of the economic and social development of small towns within the urban system, than gross output estimates. This is precisely because they are dependant on inherently unreliable pre-census population estimates.

Secondly, in considering small towns in their own right within the urban system, they constitute the vast majority of urban settlements within the period studied. At the 1801 census 94% of urban settlements were small towns of less than 5,000 population.[2] This figure is taken from Corfield's work on English towns which was criticised in chapter 1 for attempting to define towns unhistorically in terms of population alone. Thus small towns were defined as having between 2,500 and 5,000 inhabitants. Given this interpretation, over a third of the small towns in this study: Newport, Much Wenlock, Cleobury Mortimer, Shifnal, Bishop's Castle and Church Stretton, are below the threshold of academic urban visibility in 1801. Corfield suggests that this demographic definition of a small town is viable for the two centuries preceding the first census. By this reckoning all of Shropshire's small towns fail to achieve urban status at 1672, as Hearth Tax population estimates for this date show them all to be below the 2,500 threshold.

It is concluded that if settlements of less than 2,500 were considered as small towns then the percentage of urban settlements accounted for by this category would exceed even 94%. It is further concluded that it is the functional characteristics of towns relative to their spatial characteristics, rather than, and as distinct from, their populations, which are significant historically. The significance of function can be illustrated by the distribution of Attorneys in the 1780 Law List.[3] Rather inevitably, given the significance of the metropolis in the English legal system, London contains 34% of listed attorneys. Other towns and cities of over 5,000 population contain 20%, and places smaller than 5,000, 46%. Thus the functional representativeness of attorneys at the small town level is more significant than at any other level of the urban hierarchy. "The diffusion of legal services," Corfield concludes "provides one interesting indication of the role of small towns."[4]

The second area of consideration relates to the small towns as elements within an urban system. In so far as urban historians have analysed systems of towns they have tended to concentrate on the demographic, social and economic aspects of their development.[5] It has been a major concern of this study to consider the often neglected spatial context of urban development, and to relate this to the functional role of towns in an urban system. The conclusions to Part I of this thesis in chapter 8, indicate that it is not simply demographic size or functional development that determine the position of a town in an urban system. The geographical location of a town in relation to its neighbours and to other towns in the system is equally as significant as its demographic and functional/economic relevance. Though it is difficult methodologically to separate these various dimensions, this study has provided an informative perspective on the ability of location theory to shed light on the evolution of an urban system. The techniques used could be applied to any urban system, there is nothing in them that makes them applicable to Shropshire alone.

The third perspective to be considered is the extent to which Shropshire is historically representative. The task here is to reconcile the spatial interpretation of the urban system dealt with in Part I, with the historical dimension in parts II and III. It would be intolerable to argue that Shropshire, or indeed any other county, represented a suitable microcosm from which meaningful generalizations could be drawn about the course of urban/historical development in Britain as a whole. However, Shropshire is, in many historical respects, an interesting unit of study. It is characterized by the first flush of heavy industrialization, and as the case studies in Part III (especially chapter 23) make clear, has already entered into an early species of de-industrialization before the end of the study period.

It is suggested that the early and rapid industrialization of the Ironbridge George, which by virtue of its attendant technological developments was of global significance, be seen in the regional context. As discussed in chapter 1, this context constituted an area of commercial dairy farming and pig fattening on the North Shropshire

TABLE 24:1 A time series of aggregate output indicators in the form of index numbers for the six case-study towns, 1620-1830 (1797 average = 100)

| | BC | BN | BR | LL | MW | OS | X | SX |
|---|---|---|---|---|---|---|---|---|
| 1625 | - | 66 | 30 | 87 | 50 | - | 58 | 24 |
| 1665 | 45 | 73 | 41 | 102 | 50 | 71 | 63 | 23 |
| 1745 | 73 | 87 | 75 | 111 | 83 | 97 | 87 | 14 |
| 1797 | 87 | 114 | 91 | 119 | 94 | 104 | 100 | 13 |
| 1828 | 100 | 125 | 94 | 143 | 81 | 124 | 111 | 23 |

BC = Bishop's Castle
BN = Bridgnorth
BR = Broseley
LL = Ludlow
MW = Much Wenlock
OS = Oswestry

TABLE 24:2 Long-run compound growth estimates and sector weighted growth estimates for the six case-study towns 1797-1828 : per cent per annum gross output.

| | compound growth estimate | sector weighted growth estimate |
|---|---|---|
| Bishop's Castle | 1.7 | 2.3 |
| Bridgnorth | 1.3 | 1.7 |
| Broseley | 0.3 | 1.4 |
| Ludlow | 1.7 | 2.3 |
| Much Wenlock | -1.8 | -1.6 |
| Oswestry | 2.3 | 3.3 |

(correlation coefficient r = 0.98)

TABLE 24:3 Typological growth rate estimates derived from the sample data and from the small town database, 1797-1828.

Sample data estimates of gross and net output growth rates by type of town and rank 1797-1828 : per cent per annum

| | Average gross output growth rate | Rank | Average net output growth rate | Rank |
|---|---|---|---|---|
| Type A | 2.4 | 1 | 1.4 | 2 |
| Type B | 1.7 | 3 | 0.2 | 3 |
| Type C | -1.8 | 5 | -2.4 | 5 |
| Type I | 2.0 | 2 | 1.6 | 1 |
| Type V | 1.2 | 4 | 0.1 | 4 |

Database estimates of gross and net output growth rates by type of town and rank 1797-1828 : per cent per annum

| | Average gross output growth rate | Rank | Average net output growth rate | Rank |
|---|---|---|---|---|
| Primate | 3.9 | 1 | 2.3 | 1 |
| Type A | 2.1 | 3 | 1.2 | 3 |
| Type B | 1.5 | 4 | 0.2 | 5 |
| Type C | -1.2 | 6 | -2.0 | 6 |
| Type I | 2.2 | 2 | 1.8 | 2 |
| Type V | 1.2 | 5 | 0.1 | 4 |

Correlation coefficient r = 0.99 (excl. P)

Plain, and an area of mixed farming with cattle, sheep and arable crops to the south in the upland zone. The three regions of economic development thus identified may constitute an economic system which possesses the potential for balanced growth. It is certainly the case that without considering the relative inter-regional export orientation of the three, it is difficult to understand the development of the Shropshire urban system. By the same token it is important to see the changing role of the county within the wider economy and the impact this has on the elements of the urban system. Analysis of this type was undertaken in Parts II and III of this thesis.

The regional dimension may also be considered in terms of the role of Shrewsbury as a regional centre. This aspect is dealt with in the second part of the conclusion where a statistical analysis of its role is undertaken. However, it is also appropriate to examine how representative Shrewsbury is of other shire-county-towns in the period. In the Marcher Counties other county towns tended to be cathedral cities: Chester, Hereford, Worcester and Gloucester. Though lacking the social advantage of cathedral city status Shrewsbury held its own as a significant county town. This was of course partly a result of spatial factors which rendered Shrewsbury a highly nodal settlement with a considerable role to play as a central place. It was also a function of the fact none of the above mentioned Marcher Capitals expanded to fill the role of regional capital. Carter has noted that the eastern half of the country was well endowed with regional capitals: London, Norwich, York and Newcastle.[6] The West by contrast had only two, Exeter and Bristol, with Liverpool emerging as a third in the course of the eighteenth century. The Marches were therefore divided between Bristol and Liverpool and the county towns and cathedral cities of the area all failed to compete with these two centres.

Shrewsbury may therefore be considered quite typical of towns of comparative status in western England and Wales. Its development and that of the small towns around it must be seen in the context of the greater opportunities for industrialization which existed in the areas around Liverpool to the north and Birmingham to the east.

After its flash of industrial brilliance Shropshire was already, by the time of Queen Victoria's accession and Peel's premiership, on the road to industrial decline. By the time of Gladstone and Disraeli it had reverted to a virtual back-water in rural England.

* * *

Parts I, II and III have each been characterised by a distinctive methodology: first the spatial, geo graphical approach; secondly the economic, historical approach, and thirdly, the case study approach. Such a methodological synthesis can arise out of the comparative analysis in respect of sections one and two, of the hierarchies and rankings of towns derived from their respective approaches. A synthesis of the case studies of section three, and their preceding sections, is concerned essentially with the statistical representativeness of the relationship of the evidence of the sample data and the system-wide perspective.

This chapter will, therefore, attempt to consolidate the findings which have emerged, progressively, from the processes of historical enquiry foreshadowed in the introduction. There it was proposed that the methodology would develop from a cross-sectional technique of enquiry to a time-series technique. The optimal data-sets have been derived from particular sources: in the first instance the occupational data contained in the directories. These provided cross-sectional data for 1797 and 1828, towards the end of the study period. Data sets were then derived from a variety of other contemporary historical sources: probate inventories, poll, house and window tax, other fiscal indicators; data derived from the poor law statistics to produce material, and commercial data based on the evidence of transactions recorded at fairs. These were the basis of inter-temporal spatial models of the regional economy. In addition, they were employed to produce a series of cross-sectional estimates of economic magnitudes. Employing this technique it has been possible to extend the cross-sectional estimates back in time to the early seventeenth century. The resulting sequence of bench-mark estimates, when analysed in chronological relationship to one another, provide basic time-series (see Table 17:2).

The quality of these time-series varies between towns and between types of towns. It is possible that the best data could have been derived to create a time-series composed of a sequence of benchmark estimates for the county town, Shrewsbury. This has not been the purpose of this piece of research. Shrewsbury is not irrelevant to the exercise. The relationships that exist over time, spatial and economic, between the primate town and its urban satellites, is obviously seminal to the wider regional perspective which has informed this enquiry. The focus, however, is upon the small towns; and the enquiry has examined the relationship between the primate settlement and its satellites from the perspective of the periphery, rather than from that of the centre.

The relationship of the particular to the general can be defined statistically as the extent to which the sample employed in the selection of towns for case study is representative of the small towns of the Shropshire regional economy as a whole. This is not a material consideration in respect of the sample of nine towns, which was the focus of enquiry in section two. These were selected, not on account of their ability to represent the heterogeneity of the small town economy, but on the contrary, to represent the norm. Hence the epithet "normal" towns has been used to describe them. They are, of course, not homogeneous; no group of nine small towns could be characterised in this way. They are, however, relatively typical of the small town economy in the wider national economy in the range of towns with populations between one and five thousand at the first census.

One of the first conclusions that can be reported is that these demographically representative settlements are indeed, truly urban. The historiography of urban settlement has been slow to come to terms with the fact that such relatively small communities may exhibit the hall-marks of urban status. This has been the case, as it was occasion to remark in the introduction, in the European as well as in the English perspective. In this study, indeed, the urban threshold, even at 1801, extends below the one thousand population datum. This has occasioned the creation of a category, possibly unique in urban history, of the very small town. In Shropshire this is characterised

by Church Stretton, Bishops Castle, Cleobury Mortimer and Shifnal.

In terms of the relationship between the case study towns of section three and the typology derived in section two, it has been necessary to take Bishops Castle as representative of the very small towns. In this respect it performs a dual role in the analysis, since it also represents the "normal" town with below average growth characteristics. Hence there exists in the system of small town classification derived from the data, an interface between the "normal" and the "very small". In addition Much Wenlock, a contracting town, also has a population of below 2,000. The very small urban settlement was then sufficiently common in Shropshire to be considered "normal". Since the five towns cited above constitute a third of the total, very small towns are a significant group in the six-fold typology which was developed in chapter thirteen.

The extent to which the sample of six towns is representative of the typology of five urban forms (see tables 24:2 and 24:3) must however be qualified at these points. The historical record of these very small towns was such that it was possible to include only Bishops Castle and Much Wenlock. Hence, these towns represent both very small declining, and below average growth rate towns. Since the latter category includes Shifnal also, very small towns effectively constitute half the towns with below average growth. As a group of five these towns are Bishops Castle, Church Stretton, Cleobury Mortimer, Much Wenlock and Shifnal. They are characterised by relatively high population growth between the first and fourth censuses of 1801 and 1831. Three out of the four are in the top five towns of Shropshire when ranked by population growth rate. Their estimated rate of growth of gross output of goods and services is below average: 0.9% compared with 1.4% and when population growth has been taken into account: -0.4% compared with 0.7% (see table 13:3) in the period 1797 to 1828.

When the four towns that are contracting on the basis of the estimates of their net output growth rates, Cleobury Mortimer, Market Drayton, Much Wenlock and Shifnal are analysed, the average gross growth rate falls to 0.3% per annum This group of towns has a net

TABLE 24:4 Typological analysis of the sectoral sources of growth and decline in the urban system, 1797-1828 : per cent

| Type | Sector I | Sector II | Sector III | Sector IV |
|---|---|---|---|---|
| P | 7 | 5 | 53 | 35 |
| A | 27 | 7 | 43 | 22 |
| B | 9 | 7 | 60 | 22 |
| C | -74 | -1 | -22 | -3 |
| I | 65 | 10 | 8 | 17 |
| V | 2 | 1 | 1 | 96 |

TABLE 24:5 Sectoral rankings of the sources of growth and decline by Urban Type, 1797-1828.

| Type | Sector I | Sector II | Sector III | Sector IV |
|---|---|---|---|---|
| P | 4 | 4 | 2 | 2 |
| A | 2 | 2 | 3 | 3 |
| B | 3 | 3 | 1 | 3 |
| C | 6 | 6 | 6 | 6 |
| I | 1 | 1 | 4 | 5 |
| V | 5 | 5 | 5 | 1 |

rate of output contraction of -1.0% per annum in the period 1797 to 1828. Thus although only two small towns are characterised by negative gross output estimates; Market Drayton and Much Wenlock, when these estimates are corrected for population growth, they are joined by two very small towns. Thus it can be said that the combination of below average output growth rates and above average population growth rates creates a minor Malthusian dilemma for the very small towns in early nineteenth century Shropshire. As urban settlements they have particularly unbalanced sectoral compositional and growth parameters (see tables 14:3-14:7). These factors continue to present a challenge to their long-run functional viability as central places throughout the study period.

In terms of the spatial measures of the urban hierarchy this group of towns is thus quite distinctive. In the functional index of urban rank for 1797 (Figure 4:1) Cleobury Mortimer, ranked tenth; Shifnal ranked twelfth; Bishops Castle ranked thirteenth and Church Stretton ranked fifteenth. All are fourth order towns. The other contracting town, Much Wenlock has by 1828 declined to the bottom of the functional index below Church Stretton, and all five towns are fourth order settlements on this criterion by this date (figure 4:3).

When the economic performance of this group of the five smallest towns; Bishops Castle, Church Stretton, Cleobury Mortimer, Much Wenlock and Shifnal is compared with other cross-sectional spatial indicators similar findings emerge. All five towns are ranked as fourth order urban places in terms of central functions in both 1797 and 1828. (Figures 4:2 and 4:4). Similarly hierarchies of connectivity based on Baugh's data of 1808 place all five towns as fourth order towns, or lower (figure 5:3B). It is of interest to note than an earlier quantification of comparable data based on Rocque's map of 1752, places Much Wenlock and Shifnal as third order towns, above Bishops Castle (fourth order) and Cleobury Mortimer and Church Stretton (fifth order) (Figure 5:2b).

A more detailed examination of the four of these five Shropshire towns with 1801 populations between 1,000 and 2,000 (that is excluding Church Stretton which is below 1,000) reveals that a strong

TABLE 24:6 Typological small town gross and net output estimates by trend periods, per cent per annum, 1620-1830

| | 1620-1665 | | 1665-1745 | | 1745-1797 | | 1797-1828 | |
|---|---|---|---|---|---|---|---|---|
| | Gross | Net | Gross | Net | Gross | Net | Gross | Net |
| Type A | 1.2 | 0.8 | 0.8 | 0.2 | 1.3 | 0.7 | 2.4 | 1.4 |
| Type B | - | - | 2.1 | 1.5 | 0.7 | 0.0 | 1.7 | 0.2 |
| Type C | -1.0 | - | -0.6 | -1.3 | 0.6 | -0.1 | -1.8 | -2.4 |
| Type I | 2.1 | - | 2.4 | 0.9 | 1.4 | -0.1 | 2.0 | 1.6 |
| Type V | - | - | 0.7 | 0.1 | 1.3 | 0.7 | 1.2 | 0.0 |
| Average | 0.7 | | 1.0 | 0.6 | 1.0 | 0.3 | 0.9 | 0.6 |
| Standard Deviation | 1.6 | | 1.2 | 1.0 | 0.4 | 0.4 | 1.6 | 1.4 |

TABLE 24:7 A typological small town hierachy ranked by trend period growth rates, 1620-1830

Hierachy of long-run gross growth rates by Urban Type.

| Type | 1620-1665 | 1665-1745 | 1745-1797 | 1797-1828 |
|---|---|---|---|---|
| A | 2 | 3 | 2 | 1 |
| B | - | 2 | 4 | 2 |
| C | 3 | 5 | 5 | 5 |
| I | 1 | 1 | 1 | 2 |
| V | - | 4 | 2 | 3 |

Hierachy of long-run net growth rates by Urban Type.

| Type | 1620-1665 | 1665-1745 | 1745-1797 | 1797-1828 |
|---|---|---|---|---|
| A | - | 3 | 1 | 2 |
| B | - | 1 | 3 | 3 |
| C | - | 5 | 4 | 4 |
| I | - | 2 | 4 | 1 |
| V | - | 4 | 1 | 1 |

correlation exists between measures of their spatial role in the regional economy and estimates of their economic performance. It is not unexceptional that a relationship should exist between functional index and centrality on a theoretical level. The rankings of the small Shropshire towns in 1828 reveal a particularly strong relationship, r=0.96. Furthermore, the correlation coefficient between estimated net output growth/decline 1797-1828 with functional index in 1828 is r=0.98, and with centrality in 1828 is r=0.96.

The next step in this concluding analysis is to take the towns which are characteristically represented at the top of the urban hierarchies. In this way it can be estimated whether the relationships which hold good for towns which may variously be described as very small, slow-growing or declining in terms of their spatial and economic parameters, also hold good for the larger, faster-growing, expanding towns. Towns which are prominent in the upper ranges of the urban hierarchies are Ludlow, Bridgnorth, Newport and Ellesmere. The correlation co-efficient between their estimated net output growth rate (aggregate growth corrected for population change) for the period 1797 to 1828 were calculated in respect of their ranking in the functional index of 1828 (Figure 4:3) and their ranking on the urban hierarchy of centrality for 1828 (figure 4:4). The results were respectively r=0.88 and r=0.86.

Thus we may conclude that the relationship that exists for four of the smallest towns between their growth rate in economic terms and their ranking in spatial hierarchies, also exists for larger towns, but that the relationship is not as strong. However, when the ranking in terms of nodality derived from the Roque data of 1752 is considered the correlation coefficient is r=0.97. Since the nodality estimates are derived from the turnpike data it can be seen that the integration of this group of towns into the transport infrastructure of the region is functionally related to their estimated rates of growth.

An important aim of the case studies has been to consider the nature of these relationships in a long-run historical perspective. It is difficult to establish firm statistical relationships between

various measures of long-run change in the spatial and economic dimensions before the middle of the eighteenth century. However it has been possible by using contemporary sources to construct cross-sectional estimates of the six case study towns for bench mark dates in the early and late seventeenth and the mid-eighteenth centuries (section II passim), and these have been converted into time series of index numbers based on 1797=100, (table 24:1). Unfortunately estimates for the pre-Civil War period of the seventeenth century are available only for four of the six towns. Equally limited data is available for the early eighteenth century, although some estimates for 1710 have been employed in the case-study analysis (see table 17:2). Hence the main estimates are for 1625/35, 1665, 1745 and subsequently 1797 and 1828.

From the point of view of the sampling technique employed it is important to be able to establish statistically how representative of the small towns of Shropshire as a whole the sample of six is (see table 24:3). It has been noted above that the very small towns are represented in the sample in the form of Bishops Castle and Much Wenlock, both of which have populations between 1,000 and 2,000 at the first census. Otherwise, in terms of the typology of towns derived in Chapter 13 above average growth rate (Type A) towns, below average growth rate (Type B) towns, industrialising (Type I) and contracting (Type C) towns are represented in the sample. In order to estimate the statistical representativeness of the sample the index of output growth which has been calculated for each town in the sample at each bench mark date is employed (table 24:1). This has been compared with the average index number for each type of town in the sample; all Type A, Type B, Type I and Type C towns respectively. The resulting correlation co-efficient for the benchmark date 1797 is r=0.99. It may be concluded, therefore, that the sample is representative of the population from which it was drawn, and thus some confidence may be attached to generalisations about the small town system derived from the evidence of the sample.

This correlation between the sample of six case study towns and all the towns in the Shropshire urban system is based on data which is aggregative and cross-sectional at 1797. It does not, therefore,

TABLE 24:8 Percentage share of output and population by Urban Type : 1797 and 1828

| Type | 1797 Output | 1797 Population | 1828 Output | 1828 Population |
|---|---|---|---|---|
| P | 25 | 19 | 29 | 23 |
| A | 32 | 31 | 35 | 31 |
| B | 20 | 25 | 17 | 22 |
| C | 8 | 7 | 6 | 7 |
| I | 11 | 13 | 9 | 11 |
| V | 4 | 5 | 4 | 6 |

necessarily follow that the sectorally disaggregated estimates derived from the sample data are representative of the experience of the groups of towns identified typologically. However, it has been argued that the time-path of changes in the sectoral composition of output is a significant determinant of urban growth outcomes. Hence the characteristics of the sample towns, and the towns as a whole grouped by type, have been examined for the period for which overlapping data sets are available, namely 1797 to 1828. Both the sample and the towns as a whole classified by type display similar trends in their standard deviations, taken as a measure of dispersion. The composition of both groups is becoming more divergent. Using the index numbers, the sample changes from SX=13 in 1797, to SX=23 in 1828. The typology from SX=18 in 1797, to SX=34 in 1828. The correlation co-efficients of sample indices and type indices for 1797 and 1828 are r=0.88 and r=0.83 respectively. Such statistical indicators are not of course conclusive, but again they represent broadly similar trends in the behaviour of the two data sets considered over time. Thus both the time series and cross-sectional comparisons yield results which suggest that the sample is broadly representative.

The next step in this concluding analysis is, therefore, to consider the series of bench mark estimates of the output in the sample case study towns as a time series. Such a time series approach yeilds long-run estimates of growth (tables 24:6 and 24:7) and structural change (tables 24:4 and 24:5). For the three towns which represent Type A, the larger, higher ranking towns with above average growth of output: Ludlow, Bridgnorth and Oswestry, the average growth rate for the period 1665 to 1745 is 0.8% per annum in gross terms, and 0.2% when corrected for population change (tables BC:3 and 24:2). Type B towns, although characterised as towns with below average long-run growth rates are in fact faster growing than Type A towns in this period. Their population growth rate is on average the same as that of Type A towns, hence their gross and net growth rates are respectively 2.1 and 1.5% per annum. Type B towns comprise at this stage Much Wenlock, Shifnal, Wem and Whitchurch. Type C towns represented at this stage by Bishops Castle have a negative gross output change of -0.6% and a population growth rate of

0.7% per annum, producing a negative growth rate of -1.3%. Type I towns are represented by Broseley which has a gross output growth rate of 2.4% per annum significantly above the average, offset by above average population growth of 1.5%. The net growth rate characteristic of industrialising towns in this period is therefore 0.9% per annum. Finally the very small towns have an estimated growth rate of 0.7% per annum, which is virtually wiped out in per capita terms by their commensurate population growth of 0.6%. Hence their long-run net rate of growth of output is estimated at 0.1% per annum for the period 1665-1745.

The next trend period for which it is possible to devise estimates by type spans from the mid-eighteenth century to the end of the century; 1745 to 1797. Type A towns rise from third rank in the growth hierarchy to first rank (see Table 24:3). Their gross estimated rate of growth of output rises from 0.8 to 1.3% per annum; corrected for population growth this represents a rise from 0.2 to 0.7. There is no similar improvement in the growth performance of Type B towns, whose gross growth rate falls from 2.1 to 0.7. This is a level at which all the gains of increased output are offset by population growth, resulting in zero net growth. By contrast the scale of contraction of Type C towns is ameliorated in this period, and they too experience virtually zero net output growth. Interestingly Type I towns are also characterised by zero or slightly negative growth, since, although their gross output growth rate ranks first, this measure is accompanied by population growth at about double the average rate. Very small towns share the experience of Type A towns in this period. Although their gross growth rate is effectively halved by population growth, the resulting net growth estimate ranks this group of towns equal first with their counterparts at the other end of the urban spectrum.

The trend of output in both gross and net terms of Type A towns continues in the period 1797-1828 when they rank first in the gross hierarchy (Tables 24:6 and 24:7). By this time their net growth rate has risen to 1.4 per cent per annum. This is below the rate of the next type by rank, the industrial town, which has a net growth rate of 1.6. The tendencies making for below average growth in Type B

towns result in a growth rate of 0.2% per annum for this category. The very small towns confront their malthusian dilemma in microcosm, with relatively high gross output and population growth rates of 1.2. These effectively cancel one another out, resulting in zero net growth. Output growth of 1.6% per annum characterises the Type I towns (see Tables 14.1 and 14.2). These industrial towns unlike the more traditional very small towns, have quite high rates of net migration which affects population growth. This leads in the case of Broseley, to a demographic contraction between the first and fourth censuses. This influences the net effect of retardation in output growth, as industry migrates to the more rapidly expanding urban-industrial settlements on the more accessible northern side of the Severn Gorge. The aggregate effect of this movement is also offset by the inclusion of figures for Madeley in this same category. Madeley is of course, one of the destinations of Broseley migrants and another industrial small town. The estimates indicate, however, that by this period the small towns of the Shropshire coal and iron industrial region are already beginning to lose out in competition with other industrialising regions of the North East, North West and West Midlands of England, South Wales and the Clyde.

Finally, the rate of contraction of Type C towns accelerates in this period, while their populations continue to grow. These are traditional, and often very small towns, the populations of which probably have a lesser propensity to migrate than those of the industrial towns. This factor increases the estimate of net decline from -1.8% per annum to -2.4%. Thus it can be seen (Table 24.2) that the overall tendency across the long-run trend periods is for the small town economies to converge in terms of their long-run growth characteristics, and then to diverge again. The standard deviation of growth rates for the three periods analysed: 1665-1745, 1745-1797 and 1797-1828 are 1.05, 0.42 and 1.43 respectively. This is reflected in a similar convergence in the index numbers of estimated output of the sample case study towns. Their standard deviations are 24, 23, 14, 13 and 23 for each of the long-run bench mark dates: 1625/35, 1665, 1745, 1797 and 1828 respectively.

In terms of the analytical interface between the spatial net-

work and the economic models, this finding has interesting implications. This is particularly so if the typology of five is extended to six, by the inclusion of the primate town, Shrewsbury. Obviously the much greater dimensions of the primate economy, demographic and economic, will increase the size of a measure of dispersion such as the standard deviation and indeed this proves to be so. The value of SX for the five small urban types in 1797 is 18, while that for six, including Shrewsbury rises to 28. The spatial models derived from Auerbach's rank/size rule (see Chapter 2) predict that the social, economic and cultural development of a society will be reflected in a rank/size pattern (figure 2:1) that conforms to the rule. The evidence of the trend of standard deviations over the period 1625 to 1797 would indicate that the forces of convergence were predominant, and that the relative importance of the regional primate town was therefore declining.

The evidence of the period 1797 to 1828 indicates a reversal of the trend. Therefore it contradicts the rank/size rule, and provides empirical evidence that the relationship at the regional level constitutes a reassertion of the primacy of the county town. The ratio of primate town (Shrewsbury) to highest ranked second order town measured in terms of functional index in 1797 (Market Drayton) is 1.6:1. The same statistic in 1828, Shrewsbury:Ludlow, reveals a ratio of 4:1 (figures 4:1 and 4:3).

Equally conclusively the ratio of the index of urban rank by centrality between primate and highest second order town in 1797 (Bridgnorth) is 1.4:1; ;and in 1828 this ratio, Shrewsbury:Ludlow is 3:1 (figures 4:2 and 4:4). The demonstrable growth of the significance of Shrewsbury in the spatial urban network is clearly evidence in these figures.

From the first census Shrewsbury's population at circa 14,000 was half that of what has been denominated a regional capital for instance, Newcastle (population in 1801: 28,000). Such regional capitals, and "towns which had counties named after them" have been identified[7] as maintaining their status, and thus creating stability in the upper ranges of the English urban hierarchy.[8] There are, how-

ever two regions which have been identified as lacking either such focus in the study period,[9] the North-West of England; Wales and the Marches. In the latter instance it is agreed that Bristol was the effective regional capital of South Wales and the Southern Marches, and Liverpool that of North Wales and the Northern Marches. Shrewsbury together with Chester, Hereford, Worcester and Gloucester remained a potential candidate for the role of a central urban focus to the Marcher country throughout this period. None of these contenders emerged however to fill this role, and all remained county towns in role as well as in administrative status: locally effective central places which lacked regional command within the urban hierarchy.

The evidence of the interaction between Shrewsbury and its urban hierarchy in spatial terms is supported in economic and demographic terms. Whereas in 1797 the estimated output of goods and services in the county town is 24%, a third of century later it is approaching 30% (table 24:8). It is growing at a rate which increases its share of county urban population from 19% to 23%, overtaking the combined populations of all but type A towns between the censuses of 1801 and 1831 (table 13:1). Their share remains constant at 31%, that of Type B towns falls from 25% to 22% and that of Type I towns falls from 13% to 11%. The share of Type C, the contracting towns, remains constant at 7%, their contraction being economic, not demographic. The only group to increase its share in addition to the primate town is the group of very small towns, Type V; their share rises from 5% to 6%. Demographic buoyancy is therefore demonstrated at either end of the urban spectrum when analysed typologically.

Thus while the small towns of Shropshire exhibit varying degrees of dynamism, stability and stagnation, their overall position remains dominated by the primate urban centre in the form of the county town. The reordering of the spatial, economic and demographic hierarchies of the small town system may therefore be seen as a series of challenges and responses to opportunities for growth and threats of decline. In the long run perspective the relative dominance of the primate town is obviously subject to some variation. However, unlike the small towns, its role and its viability are never

effectively challenged, either from within the county nor by neighbouring county primate towns in the Marcher region. In this respect the role of Shrewsbury within the small town system may be viewed as a force marking for the long-term stability of the system. Its long-term function may therefore be characterised as complementary to, rather than competitive with, that of the network of small towns within the county of which it is the centre.

FOOTNOTES

1. CLARK, P., GASKIN. K. and WILSON, A. Population Estimates of English Small Towns 1550-1851 (Centre for Urban History, University of Leicester 1989).

2. CORFIELD, P. "Small towns, large implications", British Journal for Eighteenth Century Studies, vol 10. (1987)p.133

3. CORFIELD, P. ibid. p.134

4. CORFIELD, P. ibid. p.134

5. CLARK, P. (ed) The Transformation of English Provincial Towns (London 1985) pp.13-61.

6. CARTER, H. "Towns and urban systems 1730-1900" in DODGSHON, R. A. AND BUTLIN, R. A. (eds), An Historical Geography of England and Wales (New York 1978) p.372.

7. DARBY, H. C. "The age of the improver: 1600-1800" in DARBY, H. C. (ed), A New Historical Geography of England (Cambridge 1973), p.381.

8. CHALKIN, C. W. The Provincial Towns of Georgian England (1974), pp.13-17.

9. CARTER, H. "Towns and urban systems 1730-1900" in DODGSHON, R. A. and BUTLIN, R. A. (eds), An Historical Geography of England and Wales (New York 1978), p.372.

## APPENDIX 1 - Frequency Grouping of Occupations in the Universal British Directory 1797

Group 16 - Clergy, gentry

Group 14 - Baker, butcher, clockmaker, grocer, innkeeper, maltster, sadler, shoemaker, surgeon

Group 13 - Blacksmith, carrier, ironmonger, tailor

Group 12 - Attorney, breechesmaker, mercer, staymaker, school teacher, victualler

Group 11 - Draper, glazier, milliner, wheelwright

Group 10 - Cooper, skinner, timber merchant

Group 9 - Cabinet maker, farmer, hairdresser, hatter, joiner, mason, plumber, tanner

Group 8 - Brazier, gardener, stationer

Group 7 - Apothecary, druggist, huckster, nailer

Group 6 - Corporation officer, exciseman, liquor merchant

Group 5 - Banker, bookseller, bricklayer, dyer, glover, ladies school, miller, painter, weaver

Group 4 - Auctioneer, builder, carpenter, carrier, chandler, cheesemonger, confectioner, flaxdresser, haberdasher, linen draper, mantuamaker, perukemaker, plasterer, post office, roper, turner

Group 3 - Bookbinder, chairmaker, chandler (wax), clothier, cutler, doctor, farrier, gunsmith, heelmaker, hosier, Justice of the Peace, land surveyor, seedsman, stamp office, tea merchant

Group 2 - Architect, basketmaker, boarding school, chemist, china dealer, dancing master, glass factor, glazier, habitmaker, linen and woollen draper, merchant, musician, navy officer, organist, papermaker, perfumer, stocking weaver, upholsterer, whitesmith, wine and spirit merchant, wool draper, writing master

Group 1 - Appraiser, army officer, bargeowner, brassfounder, brass manufacturer, broker, brushmaker, carver, carver and gilder, cheesefactor, cheeseman, coachmaker, coach master, coal agent, coalmaster, collermaker, cork cutter, corn merchant, cotton manufacturer, cutter, engineer, engraver, fishmonger, flourman, fruiterer, gardener, gingerbread maker, goldsmith, hairbristle manufacturer, hair weaver, hardwareman, harness maker, hat dealer, heal and last maker, huntsman, leather worker, limeburner, locksmith, master of the poor house, merchant tailor, midwife, millwright, mopmaker, navigator, oil refiner, owner, physician, potter, salesman, salt agent, sawyer, shopkeeper, sievemaker, silk dealer, silk mercer, silversmith, slater, spinning wheel maker, soap boiler, starch manufacturer, stonecutter, superintendant, tin manufacturer, tinner, tinworker, tobacconist, toymaker, toyman, undertaker, upholder, wire maker, wool cloth maker, wool merchant.

APPENDIX 2 - Frequency Grouping of Occupations in Tibnam's Salop Directory 1828

Group 17 - Carrier, grocer, maltster, sadler, shoemaker, surgeon

Group 16 - Baker, glazier, ironmonger, taverns

Group 15 - Attorney, auctioneer, carrier, hatter, flour dealer

Group 14 - Brazier, cabinetmaker, clockmaker, coach service, cooper plumber, wheelwright

Group 13 - Fire and life assurance office, linen and wool draper, painter, tinplate worker

Group 12 - Banker, bookseller, druggist, straw hat manufacturer, tanner, timber merchant, wine and spirit merchant

Group 11 - Chandler (wax), draper, innkeeper, joiner, milliner, printer, seedsman, stationer

Group 10 - Blacksmith, leather seller

Group 7 - Academy

Group 6 - Breechesmaker, builder, hop merchant, nailer, perfumer, roper, school, tea dealer

Group 5 - Bookbinder, carpenter, chairmaker, corn miller, glover, nurseryman

Group 4 - Boat builder, bricklayer, chandler, corn factor, dressmaker, glass dealer, mercer, paper manufacturer, physician, seed merchant, shopkeeper, upholsterer, water carrier, wharfinger

Group 3 - Cheese factor, clothier, coal master, coal merchant, cutler, dancing master, dyer, flaxdresser, furniture broker, gunmaker, haberdasher, hosier, ironmaster, ironfounder, jeweller, lime master, millwright, pipemaker, stamp office, surveyor, whitesmith, woolstapler

Group 2 - Basketmaker, brass founder, brick and tile manufacturer, clothes broker, coach maker, farrier, fishmonger, furrier, glove manufacturer, hat dealer, linen manufacturer, music teacher, pattern maker, pawnbroker, plasterer, port-wine agent, salt dealer, silversmith, staymaker, stocking master, tea agent, tinman, toy dealer, wool manufacturer

Group 1 - Accountant, acid manufacturer, architect, artist, barometer maker, bell-hanger, bendware manufacturer, brawnmaker, broker, brushmaker, butter factor, canal company, carpet maker, carrier's agent, carver and gilder, china dealer, china manufacturer, conveyancer, corkcutter, corsetmaker, cutlery dealer, distributer, drawing master, earthenware dealer, exciseman, fellmonger, fishing-tackle maker, flannel merchant, flax and tow spinner, florist, gardener,

glasshouses, habitmaker, huckster, iron merchant, ivory turner, library, machinemaker, malt and coffee mill cutler, merchant, musical instrument maker, music repository, newspaper, pastry cook, pattern-ring maker, picture restorer, pistol dealer, potter, pumpmaker, shoe warehouse, snuff dealer, soap dealer, solicitor, spoonmaker, timber valuer, tobacco dealer, turner, umbrella maker, veterinary forges, whipmaker, willow worker, wool cloth dealer, woollen draper, worsted dealer

## APPENDIX 3 - The Classification of Occupations into Sectors I, II, III and IV

### Sector I (the traditional sector)

| | |
|---|---|
| Primary: | Farmer, gardener, nurseryman, woolstapler |
| Food: | Baker, brawnmaker, butcher, chandler (of wax), chemist, confectioner, corn miller, gingerbread maker, pastrycook, tobacconist |
| Textiles: | Brushmaker, carpetmaker, clothier, collar maker, corset maker, dressmaker, dyer, flaxdresser, habitmaker, hair weaver, hatter, hosier, mantuamaker, milliner, perukemaker, roper, spinner, staymaker, tailor, umbrella maker, upholsterer |
| Leather: | Breechesmaker, bookbinder, carrier, furrier, glover, harness maker, heelmaker, heel and last maker, leather worker, pattern maker, sadler, shoemaker, skinner, tanner, whipmaker |
| Metal: | Bell-hanger, blacksmith, clockmaker, cutler, engraver, farrier, goldsmith, gunmaker, locksmith, malt and coffee mill cutter, silversmith, spoon maker, toymaker, vet forger, wheelwright, whitesmith |
| Construction: | Barometer maker, basketmaker, boatbuilder, bricklayer, builder, cabinet maker, carpenter, carver, carver and gilder, chairmaker, coachmaker, cooper, fishing-tackle maker, glazier, ivory turner, joiner, mason, painter, picture, restorer, plasterer, plumber, potter, sawyer, slater, spinning wheel maker, stone cutter, turner, willow worker |

### Sector II (the industrial sector)

Acid manufacturer, bendware manufacturer, brassfounder, brass manufacturer, brazier, brick and tile manufacturer, china manufacturer, coalmaster, cork cutter, cotton manufacturer, cutter, engineer, glasshouse, glove manufacturer, hairbristle manufacturer, hair manufacturer, ironfounder, iron master, limeburner, lime manufacturer, linen manufacturer, machinemaker, millwright, mopmaker, nailer, oil refiner, papermaker, pattern-ring maker, pumpmaker, sievemaker, soap boiler, starch manufacturer, straw-hat-maker, stocking maker, stocking weaver, superintendant, tinman, tin manufacturer, tinner, tiplate worker, tinworker, winemaker, wool cloth manufacturer, wool manufacture

### Sector III (the retail and wholesale trade sector)

Bookseller, broker, butterfactor, chandler, cheesefactor, cheeseman, cheesemonger, china dealer, clothes broker, coal agent, coal merchant, cornfactor, cutlery dealer, draper, druggist, earthenware dealer, fellmonger, fishmonger, flannel merchant, florist, flour dealer, flourman, fruiterer, furniture broker, glass dealer, glassfactor, grocer, haberdasher, hardwareman, hat dealer, hop merchant, huckster, innkeeper, iron merchant,

ironmonger, jeweller, leather seller, linen draper, linen and woollen draper, liquor merchant, mercer, merchant, merchant tailor, musical instrument seller, pawnbroker, pistol dealer, port-wine agent, salesman, salt agent, salt dealer, seed merchant, seedsman, shoe warehouse, shopkeeper, silk dealer, silk mercer, snuff dealer, soap dealer, stationer, tavern, tea agent, tea dealer, tea merchant, timber merchant, tobacco dealer, toy dealer, victualler, wine and spirit merchant, wool cloth dealer, wool draper, wool yarn and worsted dealer

Sector IV (the service and professional sector)

Academy, accountant, apothecary, appraiser, architect, army officer, artist, attorney, auctioneer, banker, bargeowner, boarding school, canal company, carrier, carrier's agent, coach master, coach service, conveyancer, dancing master, distributer, doctor, drawing master, exciseman, fire and life assurance office, gardener, hairdresser, huntsman, Justice of the Peace, ladies school, land surveyor, library, master of the poor house, midwife, musician, music repository, music teacher, navigator, navy officer, newspaper, organist, owner, physician, post office, school, schoolteacher, solicitor, stamp office, surgeon, surveyor, timber valuer, vet, water carrier, wharfinger, writing master, undertaker

APPENDIX 4 - AN OCCUPATIONAL BREAKDOWN OF LUDLOW 1625-1828

| | 1625 | 1665 | 1705 | 1745 | 1797 | 1828 |
|---|---|---|---|---|---|---|
| Sector I | | | | | | |
| Baker | 7 | 4 | 1 | 3 | 10 | 10 |
| Basket maker | | | 1 | 1 | | |
| Blacksmith | 3 | 5 | 3 | 3 | 2 | |
| Bookbinder | | | 1 | | 1 | |
| Breechesmaker | | | | 3 | 2 | 1 |
| Bricklayer | | | | 1 | | |
| Builder | | | | | | 4 |
| Butcher | 1 | 11 | 1 | 4 | 7 | 9 |
| Buttonmaker | | | 1 | | | |
| Cabinetmaker | | | | 1 | | 5 |
| Carpenter | 1 | 4 | | 4 | | |
| Carpetmaker | | | | 1 | | |
| Chandler (wax) | | 2 | | | | 3 |
| Clockmaker | | | | 1 | 3 | 4 |
| Clothier | 3 | 2 | | | | |
| Cobler | 1 | | | | | |
| Confectioner | | | | | | 3 |
| Cooper | | 1 | | 5 | 2 | 4 |
| Cordwainer | 6 | | | 1 | | |
| Cornmiller | | | | | | 6 |
| Corvisor | 2 | 21 | 2 | 1 | | |
| Cup carver | 1 | | | | | |
| Currier | | | | | | |
| Cutler | 1 | | | | 1 | |
| Distiller | | | | | | |
| Dyer | 1 | 7 | 1 | 2 | 3 | |
| Farmer | | | | | | |
| Farm Servant | | 1 | | | | |
| Farrier | | | | | 1 | |
| Felt maker | 2 | 5 | | | | |
| Flax dresser | | | | | | |
| Furrier | | | | | | 1 |
| Gardner | | | | 2 | | |
| Glazier | | | | | | |
| Glover | 5 | 16 | 5 | 16 | 12 | 1 |
| Gunsmith | 1 | 4 | | 1 | 1 | 2 |
| Hatter | 1 | | | 1 | 2 | 3 |
| Heel & lastmaker | | | | | 1 | |
| Heel cutter | | | | 1 | | |
| Husbandman | | | | | | |
| Joiner | 1 | 4 | | 1 | 14 | 4 |
| Journeyman | | | | 2 | | |
| Labourer | 4 | | 6 | 13 | | |
| Maltster | | 2 | | 5 | 10 | 30 |
| Mason | 2 | 9 | 1 | 1 | 7 | |
| Miller | | 1 | | | 2 | |
| Milliner | 1 | | | | 2 | 9 |
| Nursaryman | | | | | | 4 |
| Painter | | | | | 3 | 5 |
| Perfumer | | | | | | 3 |
| Peruke maker | | | | 1 | 3 | |
| Plasterer | | | 2 | 3 | 1 | 1 |
| Plumber | | | | | | 7 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Roper | | | | | 1 | 1 |
| Sadler | 1 | 7 | | 1 | 3 | 5 |
| Sawyer | | | | 2 | 1 | |
| Shoemaker | 4 | 1 | 2 | 14 | 12 | 7 |
| Skinner | 1 | | | 4 | 1 | 2 |
| Staymaker | | | | 1 | 3 | |
| Stone cutter | | | | | 2 | |
| Stone mason | | | | | | 9 |
| Tailor | 5 | 14 | 2 | 12 | 9 | |
| Tanner | 3 | 10 | 3 | 1 | 2 | 2 |
| Tiler | | 2 | | 2 | | |
| Upholsterer | 1 | | | | | 4 |
| Weaver | 2 | 4 | 3 | 1 | 1 | |
| Wheelwright | | | | 2 | 1 | 4 |
| Whitesmith | | | | | | 1 |
| Willow worker | | | | | | 1 |
| Wood collier | | | 1 | | | |
| Wood cutter | | | 1 | | | |
| Wood worker | | | 1 | | | |
| Wool comber | | | 1 | 1 | | |
| Yeoman | | 23 | 4 | 4 | | |
| Total | 61 | 166 | 46 | 126 | 135 | 165 |

Sector II

| | | | | | | |
|---|---|---|---|---|---|---|
| Brass founder | | | | | | 1 |
| Brazier | | | | 1 | 2 | 4 |
| Brickmaker | | | | | 2 | |
| Cutter | | | | | 1 | |
| Glove manufacturer | | | | | | 9 |
| Ironfounder | | | | | | 2 |
| Nailer | | 1 | 1 | 7 | | 1 |
| Paper manufacturer | | | | | | 1 |
| Papermaker | | | | 6 | | |
| Printer | | | | | 1 | 5 |
| Straw hat maker | | | | | | 1 |
| Superintendant | | | | | 1 | |
| Tinplate worker | | | | 1 | | 4 |
| Wool manufacturer | | | | | | 1 |
| Total | 0 | 1 | 1 | 15 | 7 | 29 |

Sector III

| | | | | | | |
|---|---|---|---|---|---|---|
| Bookseller | | 1 | | | | 5 |
| Broker | | | | | | 1 |
| Chapman | | | 1 | | | |
| Cheesemonger | | | | | 1 | |
| China dealer | | | | | | 3 |
| Coal agent | | | | | 1 | |
| Corn merchant | | | | | 1 | |
| Draper | | | | | | 6 |
| Druggist | | | | | 2 | 4 |
| Florist | | | | | | 4 |
| Flour dealer | | | | | | 10 |
| Glass dealer | | | | | | 3 |
| Grocer | | | | | 11 | 11 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Haberdasher | | 1 | 1 | | 1 | 3 |
| Hat dealer | | | | | | 7 |
| Hop merchant | | | | | | 1 |
| Innholder | | | 2 | 5 | | |
| Innkeeper | | 4 | 1 | 4 | 35 | 4 |
| Ironmonger | 2 | 4 | | 1 | 5 | 4 |
| Leather seller | | | | | | 3 |
| Linen draper | | 1 | | | | |
| Linen & wool draper | | | | | | 7 |
| Mercer | 7 | 5 | | 1 | 5 | |
| Pedlar | | | | 2 | | |
| Petty chapman | 1 | | | | | |
| Salesman | | | | 1 | | |
| Seedsman | | | | | | 4 |
| Shop assistant | | | | 1 | | |
| Shopkeeper | | | | 2 | | 1 |
| Stationer | 1 | | | | 2 | 5 |
| Taverns | | | | | | 43 |
| Timber merchant | | | | | | 1 |
| Toy dealer | | | | | | 1 |
| Victualler | 1 | 11 | | | 4 | |
| Wine/spirit merchant | | | | | | 4 |
| Total | 12 | 27 | 5 | 17 | 66 | 135 |

Sector IV

| | | | | | | |
|---|---|---|---|---|---|---|
| Apothecary | 2 | | | | 1 | |
| Academy | | | | | | 7 |
| Attorney | 2 | | | | 6 | 11 |
| Auctioneer | | | | | | 3 |
| Banker | | | | | | 1 |
| Barber | 2 | 3 | | 1 | | |
| Carrier | | 2 | | | 1 | 14 |
| Chimneysweep | | | | 1 | | |
| Clerk | 1 | 2 | | | | |
| Coachman | | | | 3 | | |
| Coach service | | | | | | 5 |
| Doctor | 1 | 1 | | | 1 | |
| Exciseman | | | | 1 | | |
| Fire & life assurance | | | | | | 5 |
| Gardner | | | | | 7 | |
| Hairdresser | | | | | 2 | 1 |
| Huntsman | | | | | 1 | |
| Hustler | | | | 1 | | |
| Musician | | | | | 1 | |
| Organist | | | | | 1 | |
| Physician | | | | | 1 | 3 |
| Ratcatcher | | | | | 1 | |
| Sailor | | | | 2 | | |
| Schoolteacher | | | 1 | | 4 | |
| Scrivenor | 1 | 1 | | | | |
| Servant | | | | 7 | | |
| Soldier | | | 1 | 2 | | |
| Surgeon | 1 | 1 | 2 | | 6 | 4 |
| Surveyor | | | | | | 1 |
| Total | 10 | 10 | 4 | 18 | 33 | 55 |

APPENDIX 5 - An Occupational breakdown of Bridgnorth 1635-1828

| | 1635 | 1660 | 1680 | 1705 | 1745 | 1797 | 1828 |
|---|---|---|---|---|---|---|---|
| Sector I | | | | | | | |
| Apprentice | | | 1 | | | | |
| Baker | 1 | 1 | 2 | 3 | 2 | 8 | 9 |
| Basket maker | | | | | | 1 | |
| Blacksmith | 2 | 2 | 2 | 5 | 2 | 6 | |
| Boatbuilder | | | | | | | 1 |
| Bookbinder | | 1 | | | | | |
| Breechesmaker | | | | | | 4 | |
| Bricklayer | | | | | 1 | 2 | |
| Bucklemaker | | | | 1 | | | |
| Butcher | 2 | 3 | 3 | 7 | 2 | 10 | |
| Buttonmaker | | | | 1 | | | |
| Cabinetmaker | | | | | | 1 | 2 |
| Carpenter | | | 1 | 2 | 3 | 2 | |
| Carpetmaker | | | | | | | 1 |
| Chemist | | | | | | 1 | |
| Chairmaker | | | | | | 1 | 1 |
| Chandler (wax) | | | | | | | 3 |
| Clockmaker | | | | 1 | | 5 | 4 |
| Clothier | | | | 4 | | | |
| Cloth worker | 2 | 2 | 1 | | | | |
| Confectioner | | | | | | 2 | 4 |
| Cooper | | 1 | 2 | | 3 | 3 | 4 |
| Cordmaker | | | | 1 | | | |
| Cordwainer | | 1 | | 1 | | | |
| Cornmiller | | | | | | | 1 |
| Corvisor | 1 | 3 | 3 | 9 | | | |
| Currier | | | | | | 2 | 3 |
| Cutler | 1 | 1 | | | | 1 | |
| Dyer | | 1 | 1 | 1 | | | 1 |
| Farmer | | | | | | 4 | |
| Feltmaker | 3 | 1 | 2 | 3 | | | |
| Fisherman | 1 | 1 | 1 | | | | |
| Gardner | | | 1 | 1 | | | |
| Glazier | | | 1 | | | 1 | 4 |
| Glover | 5 | 2 | 1 | | 3 | | |
| Gluemaker | | | 1 | | | | |
| Gunsmith | | | 1 | 1 | | 1 | |
| Hatmaker | | | 1 | | | | |
| Hatter | | | | | 2 | 2 | 3 |
| Heelmaker | | | | | | 1 | |
| Hosier | | | | | | 1 | |
| Husbandman | 1 | 1 | | 1 | | | |
| Joiner | | | 1 | 3 | 3 | | 6 |
| Labourer | 1 | 2 | 1 | | 1 | | |
| Leather dresser | | | | | 2 | | |
| Locksmith | | | | 2 | | | |
| Maltster | | 1 | 1 | 1 | 1 | 9 | 17 |
| Mason | 2 | 4 | 3 | 10 | 3 | 1 | |
| Miller | | 1 | 2 | | | 2 | |
| Milliner | | | 1 | 1 | | 2 | 1 |
| Nursaryman | | | | | | | 1 |
| Painter | | | | | | 1 | 4 |
| Perfumer | | | | | | | 3 |
| Plasterer | 1 | | 2 | | | 1 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Plumber | | | | | | 1 | |
| Ropemaker | | 1 | | | | | |
| Sadler | | | | 1 | | 5 | 3 |
| Sailmaker | | | 1 | | | | |
| Sawyer | | | | 1 | 2 | | |
| Shearman | | 1 | | | | | |
| Shingler | | | 1 | | | | |
| Ships carpenter | | | | | 3 | | |
| Shoemaker | | | 1 | 1 | 10 | 16 | 8 |
| Silk weaver | | | 1 | | | | |
| Silversmith | | | 2 | | | | |
| Skinner | | | | 1 | 1 | | |
| Staymaker | | | | | | 4 | |
| Stone mason | | | | | | | 3 |
| Tailor | 1 | 2 | 3 | 1 | 3 | 7 | |
| Tanner | | 3 | 1 | 1 | 2 | | 2 |
| Toy maker | | | | | | 1 | |
| Turner | | | | 1 | | 1 | |
| Weaver | 2 | 1 | 2 | | | | |
| Webster | 1 | | | | | | |
| Wheelwright | | | | | | 3 | 1 |
| Yeoman | 3 | 2 | 1 | 2 | | | |
| Total | 30 | 38 | 50 | 66 | 50 | 103 | 84 |

Sector II

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Brass founder | | 1 | | | 1 | 1 | |
| Brazier | 1 | 1 | | | 1 | 2 | 5 |
| Brickmaker | | | 2 | 1 | | | |
| Ironfounder | | | | | | | 1 |
| Millwright | | | | | 5 | 1 | |
| Mop maker | | | | | | 1 | |
| Nailer | | 1 | 1 | 1 | 1 | | |
| Needlemaker | | | 2 | | | | |
| Pipe maker | | | | | | | 1 |
| Printer | | | | | | | 3 |
| Stocking weaver | | | | | | 1 | 1 |
| Straw hat manufacturer | | | | | | | 2 |
| Tinplate worker | | | | | | | 5 |
| Total | 1 | 3 | 5 | 2 | 4 | 6 | 18 |

Sector III

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Bookseller | | | | | | | 3 |
| Chandler | 1 | | | 3 | | | 2 |
| Draper | | | | 2 | | | |
| Druggist | | | | | | | 5 |
| Earthenware dealer | | | | | | | 2 |
| Fellmonger | | | | | | | 1 |
| Fishmonger | | | | | | 1 | |
| Flour dealer | | | | | | | 9 |
| Glass dealer | | | | | | | 2 |
| Glass factor | | | | | | 1 | |
| Grocer | | | | 2 | 2 | 14 | 13 |
| Haberdasher | 1 | | | | | | |
| Hop merchant | | | | | | | 4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Innholder | 1 | | | 2 | 1 | | |
| Innkeeper | | | 1 | | | 11 | 3 |
| Ironmonger | | | 1 | | | 4 | 5 |
| Jeweller | | | | | | | 4 |
| Leather seller | | | | | | | 3 |
| Linen draper | | | | | | 2 | |
| Linen & wool draper | | | | | | 6 | |
| Mercer | 1 | 4 | | 1 | 2 | 3 | |
| Merchant | | | | | | 1 | |
| Pistol dealer | | | | | | | 4 |
| Seed merchant | | | | | | | 4 |
| Seedsman | | | | | | 1 | 1 |
| Soap dealer | | | | | | | 3 |
| Stationer | | | 1 | | | 4 | 3 |
| Taverns | | | | | | | 43 |
| Tea agent | | | | | | | 1 |
| Timber merchant | | | | 1 | | 1 | 3 |
| Victualler | 1 | | | 1 | | 27 | |
| Wine/spirit merchant | | | | | | | 3 |
| Total | 5 | 4 | 3 | 12 | 5 | 70 | 127 |

Sector IV

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Academy | | | | | | | 3 |
| Apothecary | | 1 | 1 | 3 | | | |
| Appraiser | | | | | | 1 | |
| Army officer | | | | | | 1 | |
| Attorney | | | 1 | | | 5 | 7 |
| Auctioneer | | | | | | 1 | 3 |
| Banker | | | | | | 1 | 2 |
| Barber | | | 2 | 1 | 2 | | |
| Bargeman | | | | 1 | | | |
| Barge owner | 1 | | | | | | |
| Carrier | | | | | | | 1 |
| Clerk | | | | 1 | | | |
| Coach service | | | | | | | 5 |
| Dancing master | | | | | | 1 | 1 |
| Exciseman | | | | | | 5 | |
| Fire & life assurance | | | | | | | 5 |
| Gardner | | | | | | 1 | |
| Hairdresser | | | | | | 5 | 3 |
| Ladies school | | | | | | 2 | |
| Land surveyor | | | | | | 1 | |
| Law clerk | | | 1 | | 1 | | |
| Navy officer | | | | | | 2 | |
| Physician | | | | | | | 1 |
| Sailor | | 1 | | 1 | | | |
| School | | | | | | | 1 |
| Schoolteacher | | | | | | 2 | |
| Scrivenor | 1 | | | | | | |
| Servant | | | 2 | | | | |
| Surgeon | | | | 3 | | 5 | 5 |
| Trowman | 2 | 4 | 2 | 4 | 1 | | |
| Vet | | | | | | | 1 |
| Water carrier | | | | | | | 1 |
| Waterman | | | 6 | 11 | 17 | | |
| Wharfinger | | | | | | | 4 |
| Wherryman | | | | | 1 | | |

APPENDIX 6 - An Occupational Breakdown of Oswestry, 1670-1828

| | 1670 | 1710 | 1745 | 1797 | 1828 |
|---|---|---|---|---|---|
| Sector I | | | | | |
| Baker | 2 | 5 | 4 | 4 | 7 |
| Barometer maker | | | | | 1 |
| Blacksmith | | 2 | 1 | 3 | |
| Bookbinder | | | | | 4 |
| Breechesmaker | | | | 2 | 2 |
| Brewer | | 1 | | | |
| Bricklayer | | 2 | 1 | | |
| Builder | | | | 1 | |
| Butcher | 5 | 4 | 2 | 2 | |
| Cabinetmaker | | | | 3 | 4 |
| Carpenter | | | | 1 | |
| Chandler (wax) | | | | | 2 |
| Clockmaker | | | 1 | 2 | 3 |
| Clothier | 4 | | | 1 | |
| Coachmaker | | | | | 1 |
| Confectioner | | | 1 | | 4 |
| Cook | | | 1 | | |
| Cooper | | 2 | | | 4 |
| Corvisor | | 3 | 4 | | |
| Currier | | 2 | 2 | | 3 |
| Cutler | | | 1 | | 1 |
| Dairyman | | | 1 | | |
| Dyer | 1 | 2 | 2 | | |
| Farmer | 1 | | 1 | | |
| Felt maker | | 1 | | | |
| Flax dresser | | 2 | 4 | 1 | 2 |
| Gardner | | 2 | 6 | | |
| Glazier | | | | 6 | 5 |
| Glover | 4 | 5 | 3 | | |
| Grazier | | | 3 | | |
| Gunmaker | | | | | 1 |
| Hatter | | 2 | 2 | 1 | 2 |
| Hosier | | 2 | 2 | | |
| Joiner | | 3 | 4 | | 9 |
| Labourer | 2 | 1 | 1 | | |
| Maltster | 3 | 6 | 5 | 3 | 12 |
| Mason | | | | 1 | 3 |
| Meatman | | 1 | | | |
| Milliner | | | | 2 | |
| Oatmeal woman | | | 1 | | |
| Painter | | | | | 2 |
| Peruke maker | | 2 | | | |
| Plumber | | | | | 5 |
| Potter | | | 2 | 1 | |
| Printer | | | | 2 | 4 |
| Sadler | 1 | 1 | 3 | 8 | 8 |
| Salter | | 1 | | | |
| Shearman | 1 | | | | |
| Shoemaker | 2 | 1 | 2 | 4 | 8 |
| Silversmith | | | | | 1 |
| Skinner | | | | 1 | 1 |
| Slater | 1 | 1 | 3 | 1 | |
| Staymaker | | | | 2 | |
| Stone cutter | | | 1 | | |

| | | | | | |
|---|---|---|---|---|---|
| Tailor | 3 | 4 | 3 | 4 | |
| Tanner | 2 | 3 | | | 2 |
| Tobacconist | | 1 | 1 | | |
| Turner | | 1 | 2 | | |
| Weaver | | 3 | 5 | | |
| Wheelwright | | 1 | | 2 | 2 |
| Yeoman | | 1 | | | |
| Total | 32 | 67 | 83 | 52 | 103 |

Sector II

| | | | | | |
|---|---|---|---|---|---|
| Brazier | 1 | | 1 | | 3 |
| Collier | | 1 | | | |
| Engineer | | | | 1 | |
| Millwright | | | 2 | | |
| Nailer | | 1 | 3 | | |
| Paper manufacturer | | | | | 1 |
| Plate worker | | | 1 | | |
| Straw hat manufacturer | | | | | 2 |
| Tin manufacturer | | | | 1 | |
| Tinplate worker | | | | | 3 |
| Wool clothmaker | | | | 1 | |
| Total | 1 | 2 | 7 | 3 | 9 |

Sector III

| | | | | | |
|---|---|---|---|---|---|
| Basket hawker | | | 1 | | |
| Bookseller | | | 1 | 1 | 4 |
| Card seller | | 1 | | | |
| Chandler | 1 | | | | |
| Cheesefactor | | | | | 2 |
| Cheeseman | | | | 1 | |
| China hawker | | | 1 | | |
| Clothes broker | | | | | 1 |
| Druggist | | | | 1 | 6 |
| Draper | | | 1 | 2 | |
| Flax seller | | | 1 | | |
| Flour dealer | | | | | 7 |
| Fruiterer | | | | 1 | |
| Grocer | | 1 | 1 | 4 | 17 |
| Furniture broker | | | | | 1 |
| Haberdasher | | | 1 | | |
| Hawker | | | 4 | | |
| Huckster | 1 | | | | |
| Innkeeper | | 10 | 7 | 1 | 3 |
| Ironmonger | | | | 2 | 5 |
| Leather seller | | | | | 3 |
| Linen draper | | | 2 | | |
| Linen & wool draper | | | | | 11 |
| Licquor merchant | | | | 1 | |
| Mercer | 5 | 1 | | 1 | |
| Pedlar | 1 | | 3 | | |
| Seedsman | | | 2 | | 14 |
| Stationer | | | | | 4 |
| Taverns | | | | | 25 |
| Timber merchant | | | | 4 | 3 |

| | | | | | |
|---|---|---|---|---|---|
| Victualler | | | 8 | 14 | |
| Wine merchant | | | | 2 | 5 |
| Wool yarn/worsted dealer | | | | | 1 |
| Total | 8 | 13 | 25 | 35 | 112 |

Sector IV

| | | | | | |
|---|---|---|---|---|---|
| Apothecary | 1 | 5 | 1 | 4 | |
| Attorney | | | | 5 | 9 |
| Auctioneer | | | | | 3 |
| Banker | | | | 1 | 1 |
| Barber | | 2 | | | |
| Boarding school | | | | 1 | |
| Carrier | | 2 | 1 | 6 | 3 |
| Clerk | 1 | | | | |
| Coach service | | | | | 5 |
| Curate | | 1 | | | |
| Fire & life assurance | | | | | 4 |
| Gardner | | | | 1 | |
| Hairdresser | | | | 1 | |
| JP | | | | 1 | |
| Land surveyor | | | | 2 | |
| Musician | | | | 1 | |
| P | | 1 | | | |
| Post service | | | | 1 | |
| Schoolteacher | | | | 1 | |
| Surgeon | | | 1 | 3 | 4 |
| Tollman | | | 1 | | |
| Vet | | | | | 2 |
| Vicar | 1 | | | | |
| Total | 3 | 11 | 4 | 28 | 31 |

APPENDIX 7 - An Occupational Breakdown of Bishops Castle, 1665-1828

| | 1665 | 1705 | 1740 | 1797 | 1828 |
|---|---|---|---|---|---|
| **Sector I** | | | | | |
| Baker | | | | 1 | 6 |
| Blacksmith | | 1 | 2 | 2 | 3 |
| Breechesmaker | | | | | 1 |
| Butcher | 1 | | 10 | 8 | 5 |
| Carpenter | | | | | 3 |
| Chair maker | | | | | 1 |
| Chandler (wax) | | | 1 | | |
| Clockmaker | | | | 2 | 2 |
| Cooper | | | | 2 | 1 |
| Corvisor | 3 | 1 | | | |
| Currier | 1 | 1 | | 2 | 1 |
| Dressmaker | | | | | 5 |
| Dyer | | | 1 | | |
| Farmer | | | | 1 | |
| Gardner | | 1 | | | 1 |
| Glazier | | | | | 2 |
| Glover | | | 4 | 2 | |
| Hatter | | | | | 1 |
| Heelmaker | | | | 1 | |
| Husbandman | | 1 | 1 | | |
| Joiner | | | | 3 | 3 |
| Labourer | | 1 | 2 | | |
| Maltster | | 1 | | 4 | 2 |
| Mason | 2 | | 1 | 1 | 4 |
| Milliner | | | | 2 | 4 |
| Painter | | | | 2 | 2 |
| Peruke maker | | | | 2 | |
| Sadler | | | | 2 | 2 |
| Shoemaker | 1 | 2 | 6 | 3 | 7 |
| Skinner | | | | | 1 |
| Slaughterman | 1 | | | | |
| Staymaker | | | 1 | 1 | |
| Tailor | | | 4 | | 2 |
| Tanner | | | | 1 | 1 |
| Weaver | | | 2 | | |
| Wheelwright | | | | | 1 |
| Wool stapler | | | | | 1 |
| Yeoman | 40 | | | | |
| Total | 49 | 9 | 37 | 44 | 60 |
| **Sector II** | | | | | |
| Brazier | | | | | 1 |
| Miner | | | 1 | | |
| Straw hat maker | | | | | 1 |
| Tinplate worker | | | | | 1 |
| Total | 0 | 0 | 1 | 0 | 3 |
| **Sector III** | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Bookseller | | | | 1 | 1 |
| Chandler | | | 1 | 2 | |
| Draper | | | | | 4 |
| Flour dealer | | | | | 6 |
| Grocer | | 1 | | 2 | 6 |
| Haberdasher | | | | 1 | |
| Innholder | | | 2 | | |
| Innkeeper | | | 3 | 4 | |
| Ironmonger | | | 2 | 1 | 4 |
| Leather seller | | | | | 1 |
| Mercer | 2 | 1 | 1 | 11 | |
| Seedsman | | | | 2 | |
| Shopkeeper | | 2 | | | 5 |
| Stationer | | | | 1 | 1 |
| Taverns | | | | | 11 |
| Victualler | | | 2 | 6 | |
| Total | 2 | 4 | 11 | 29 | 41 |

Sector IV

| | | | | | |
|---|---|---|---|---|---|
| Academy | | | | | 1 |
| Attorney | | | | 2 | 3 |
| Auctioneer | | | | | 1 |
| Carrier | | | | | 6 |
| Clerk | | | 1 | | |
| Exciseman | | | | | 1 |
| Gardner | | | | 2 | |
| Hairdresser | | | | | 1 |
| JP | | | | 1 | |
| Land surveyor | | | | 1 | |
| Music teacher | | | | | 1 |
| Post service | | | | 1 | |
| School | | | | | 3 |
| Schoolteacher | | | | 1 | |
| Total | 26 | 0 | 1 | 8 | 17 |

APPENDIX 8 - An Occupational Breakdown of Much Wenlock, 1620-1828

| | 1620 | 1665 | 1740 | 1797 | 1828 |
|---|---|---|---|---|---|
| **Sector I** | | | | | |
| Baker | | | | 1 | |
| Blacksmith | 2 | 1 | 4 | 4 | |
| Breechesmaker | | | | 1 | |
| Butcher | 2 | | | 6 | |
| Cabinetmaker | | | | | 1 |
| Carpenter | | | 4 | 3 | |
| Chandler (wax) | | | | | 1 |
| Clockmaker | | | 1 | 2 | 1 |
| Cooper | 1 | | 1 | 2 | |
| Corvisor | 1 | | 2 | | |
| Currier | 1 | | 1 | 4 | 2 |
| Farmer | | | 1 | 4 | |
| Glover | 1 | 2 | 2 | | |
| Habit maker | | | | 1 | |
| Hatter | | | | 1 | 1 |
| Hired servant | | | 1 | | |
| Husbandman | | 1 | | | |
| Joiner | | | 2 | | 1 |
| Labourer | | | 21 | | |
| Leather worker | | | | 1 | |
| Maltster | | | | 4 | 5 |
| Miller | | | 1 | | |
| Milliner | | | | 1 | |
| Sadler | 1 | 1 | 1 | 4 | 3 |
| Saddle tree maker | | | 1 | | |
| Shoemaker | | 2 | 4 | 5 | 2 |
| Skinner | | | | 1 | |
| Staymaker | | | | 1 | |
| Tailor | | | 2 | 3 | |
| Tanner | 2 | | | 1 | 1 |
| Towdresser | | | 1 | | |
| Weaver | 1 | 1 | 3 | 1 | |
| Wheelwright | | | 1 | 4 | 1 |
| Yeoman | 1 | 3 | 5 | | |
| Total | 13 | 11 | 59 | 55 | 19 |
| **Sector II** | | | | | |
| Brazier | | | | 1 | 1 |
| Lime burner | | | | 1 | |
| Lime master | | | | | 2 |
| Nailer | | | 1 | 2 | |
| Needlemaker | | | 3 | | |
| Papermaker | | | 2 | | |
| Pipemaker | | 2 | 1 | | |
| Soap boiler | | | | 1 | |
| Tinplate worker | | | | | 1 |
| Total | 0 | 2 | 7 | 5 | 4 |
| **Sector III** | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Chapman | 1 | | 1 | | |
| Draper | | | | 3 | 1 |
| Flourman | | | | 1 | |
| Grocer | | | | 5 | 3 |
| Hardwareman | | | | 1 | |
| Hat dealer | | | | | 1 |
| Huckster | | | | 1 | |
| Innholder | | | 4 | | |
| Innkeeper | | | 1 | 5 | |
| Ironmonger | | | | 3 | 1 |
| Linen & wool draper | | | | | 3 |
| Mercer | | | | | 1 |
| Stationer | | | | 1 | |
| Taverns | | | | | 20 |
| Victualler | | | | 13 | |
| Total | 1 | 0 | 6 | 33 | 30 |

Sector IV

| | | | | | |
|---|---|---|---|---|---|
| Attorney | | | | 2 | 1 |
| Banker | | | | | 1 |
| Barge owner | | 1 | | | |
| Carrier | | | | | 2 |
| Clerk | 1 | 1 | 1 | | |
| Coach service | | | | | 2 |
| Exciseman | | | | 5 | |
| Hairdresser | | | | 2 | |
| Ladies school | | | | 1 | |
| Schoolteacher | | | | 1 | |
| Soldier | | | 1 | | |
| Stamp office | | | | 1 | |
| Surgeon | | | | 2 | 2 |
| Total | 1 | 2 | 2 | 14 | 8 |

## APPENDIX 9 - An Occupational Breakdown of Broseley 1620-1828

| | 1620 | 1665 | 1710 | 1740 | 1797 | 1828 |
|---|---|---|---|---|---|---|
| **Sector I** | | | | | | |
| Baker | | | | | | 2 |
| Basketmaker | | | | | | 1 |
| Blacksmith1 | | | 1 | | | |
| Cabinetmaker | | | | | | 2 |
| Carpenter | | | 1 | 1 | | |
| Chandler (wax) | | | | | | 3 |
| Clockmaker | | | | | 1 | |
| Cooper | | | | 2 | | |
| Fisherman | | 1 | | | | |
| Glazier | | | | | | 2 |
| Hatter | | | | | | 1 |
| Labourer | | | | 8 | | |
| Locksmith | | | | 1 | | |
| Maltster | | | | | | 13 |
| Painter | | | | | | 1 |
| Periwig maker | | | | 1 | | |
| Plumber | | | | | | 2 |
| Sadler | | | | | | 2 |
| Ships carpenter | | | | 1 | | |
| Shoemaker | | | | 2 | | 1 |
| Tailor | | | | 4 | | |
| Weaver | | 1 | | 1 | | |
| Wheelwright | | | | | | 1 |
| Yeoman | | 1 | | 1 | | |
| Total | 1 | 3 | 1 | 23 | 1 | 31 |
| **Sector II** | | | | | | |
| Brazier | | | | | | 1 |
| Brick & tile manufacturer | | | | | | 6 |
| Coal master | | | | | | 3 |
| Coalminer | | 1 | | | | |
| Collier | | 1 | | 11 | | |
| Crate maker | | | | 1 | | |
| Iron master | | | | | | 1 |
| Mine owner | | 1 | | | | |
| Mug maker | | | | 1 | | |
| Pipe maker | | | | | | 2 |
| Platter maker | | | | 1 | | |
| Potter | | | | 7 | | 1 |
| Tinplate worker | | | | | | 1 |
| Total | 0 | 3 | 0 | 21 | 0 | 15 |
| **Sector III** | | | | | | |
| Draper | | | | | 2 | |
| Flour dealer | | | | | | 2 |
| Grocer | | | | 1 | | 3 |
| Haberdasher | | | | 1 | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Hop merchant | | | | | | 1 |
| Inns | | | | | | 1 |
| Ironmonger | | | | | | 1 |
| Linen & wool draper | | | | | | 1 |
| Liquor merchant | | | | | 1 | |
| Mercer | | 1 | | | 2 | |
| Tea dealer | | | | | | 3 |
| Wine/spirit merchant | | | | | | 1 |
| Total | 0 | 1 | 0 | 2 | 5 | 13 |

Sector IV

| | | | | | | |
|---|---|---|---|---|---|---|
| Apothecary | | | | | 4 | |
| Attorney | | | | | | 2 |
| Auctioneer | | | | | | 1 |
| Banker | | | | | | 1 |
| Bargeman | 1 | | 1 | | | |
| Barge owner | | 1 | | | | |
| Carrier | 1 | | | | | 2 |
| Coach service | | | | | | 3 |
| Fire & life assurance | | | | | | 1 |
| Surgeon | | | | | 4 | 3 |
| Trowman | | | 5 | | | |
| Waterman | | | | 6 | | |
| Total | 2 | 1 | 6 | 6 | 15 | 13 |

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v) Maps


1. Plan of the Town of Bishop's Castle, 1809, by Stephens and Sayce. (S.R.O. Powis Collection SS2/8/639, Bundle 708).

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3. Broseley circa 1620, by Samuel Parsons, (S.R.O. 1224/1/32).

4. Jackfield, A Survey of the Broseley Hall Estate circa 1728, by Thomas Bryan (S.B.R. MSS 2366).

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