

**DERBY PORCELAIN
AND THE EARLY ENGLISH
FINE CERAMIC INDUSTRY, c. 1750-1830**

**Thesis submitted for the degree of
Doctor of Philosophy
at the University of Leicester**

by

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October 2000

ABSTRACT

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Derby Porcelain and the Early English Fine Ceramic Industry, c. 1750-1830

This thesis sets out to give contemporary commercial context to a luxury business, whose products have been traditionally studied as art-objects. The provincial firm, under the Duesburys, was the country's pre-eminent producer of fine porcelain from c. 1770, a position no other domestic manufactory rivalled for twenty years. But its success was not easily achieved: the proprietors regularly adapted their business. This work identifies such changes, and seeks to establish their causes: were they proprietorially led, or a reaction to some external influence? Importantly, the Duesburys' domination coincided with a period of general industrial and commercial transition, when luxury crafts were in decline, but before mass-production; when the capital was losing its industry to newer, specialised regional production centres like Staffordshire; and when London no longer dominated the fashionable market, as provincial towns became increasingly gentrified.

Distinct themes are analysed: the nature of the luxury market and the rôle of fine ceramics (the growth of 'alternative' consumer luxuries and the middle-class market, combined with the shift from rococo to neoclassical design); marketing and distribution, and the rôle of the Duesburys' London showroom (the manager's letters and accounts provide rare detail on sales); fashionable ceramics and the competition and cooperation within the fine-ceramic sector (notably the competition from France after the 1786 trade treaty, and relationships with Wedgwood and Flight of Worcester); the location of the Derby China Works, and the sourcing of raw materials (including communications and the rôle of the Derby Philosophical Society); and human and financial resources.

While porcelain production did not benefit from macro-inventions like, for example, the textile industry, the Duesburys' relatively small-volume luxury manufacture allowed a sophisticated use of the infrastructure of the early Industrial Revolution. By contrast, Duesbury II's partner, Kean, during the extended war years, was later obliged to exert more commercial rigour and scale to the firm.

DERBY PORCELAIN AND THE EARLY ENGLISH FINE CERAMIC INDUSTRY, 1750-1830

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ACKNOWLEDGEMENTS

This work would not have been completed without the aid of museum curators and librarians who are custodians of the various Duesbury and Kean manuscripts, some of whom have willingly assisted me for many years prior to my enrolment for formal research at Leicester University. I am particularly indebted to those at the Derby Local Studies Library (Janet Bowen, Linda Owen, and their staff); and Aileen Dawson and the study room staff of the Department of Medieval and Later Antiquities, and Hilary Young from the Ceramics Department in the Victoria and Albert Museum. I should like to acknowledge the valuable criticism and support offered over the last four years by staff of the History Department at Leicester University: my supervisors, David Johnson and Marilyn Palmer, and Professor R.J. Bonney, Professor N.J. Housley and Professor W.H. Brock.

In addition, I received essential cooperation and guidance from the Derbyshire County Records Office and Margaret O'Sullivan; Derby City Museums and Art Gallery; the Library and Museum of Freemasonry and Rebecca Coombes; Birmingham City Library and Archive; the British Library (including Newspaper Library); Westminster City Archives; Guildhall Library; Dyson Perrins Museum and Harry Frost; Manchester Public Library; Cumbria Record Office (Carlisle and Kendal); Imperial College Library and Science Museum Library; Bath Library; West Sussex County Council Record Office and Alise McCann; Leicester University Library; the National Art Library; and the Public Record Office.

Thanks are extended for permission to use and make reference to primary source material by courtesy of the Trustees of the Wedgwood Museum, Barleston, Stoke-on-Trent, Staffordshire, England, with help from Gaye Blake-Roberts and Helen Burton; and for access to the Royal Archives, by gracious permission of Her Majesty the Queen, with aid from Pamela Clark. Two particular organisations provided a much needed 'talking-shop' to stimulate ideas: the Morley College Ceramic Seminar and the Charles Norman Trust.

I would especially like to acknowledge the following, without whose support and enthusiasm the research would not have been completed: Ian and Betty Anderson, Anneke Bamberg, Robin and Ros Barkla, Geoffrey Bond, Sue Brown, Maxwell Craven, Timothy Clifford, Mairaid Dunlevy, David Fraser, Trevor Fawcett, Andrew Ledger, Richard Kilburn, Ronald Michie, Amanda Vickery, and Janet Spavold. Inevitably, some may have been omitted, but to them also my apologies, and my warm thanks. Particular gratitude goes to my husband, Dr David Wilson, for continued encouragement and proof-reading, and to my children: they have all been much neglected in the cause of this work

A BRIEF CHRONOLOGY OF THE DERBY CHINA WORKS ON NOTTINGHAM ROAD, DERBY, c. 1748-1848.

Planché period, c. 1748-1756.

c. 1748 First soft-paste porcelain produced; site of early production is unknown until late 1752.

1750 Three cream jugs survive variously marked 'D', 'Derby', 1750.

1751-3 William Duesbury selling and decorating Derby porcelain in London.

1753 Jan. 26: reported death in *Derby Mercury* of 'one of the workmen belonging to the China Works near Mary Bridge', missing since Christmas Eve.

1754 March 1 and 2: advertisement in *Daily Advertiser* re sale in Holborn of 'porcelaine ware, of the Derby manufacture, consisting of a curious parcel, both useful and ornamental'.

Heath & Co., 1756-?1779.

1756 Jan. 1: unsigned copy of partnership agreement between John Heath of Derby, 'Gentleman'; Andrew Planché of Derby, 'China Maker'; and William Duesbury of Longton, 'Enamellor'.

1756 July 30: advertisement in *Derby Mercury* re sale of freehold estate 'occupied by Mr. Heath and Company in the China Manufactory ...'

1757 Jan.: Thomas Williams, prestigious London dealer, advertising Derby for sale, becoming 'Factor for the Derby Porcelain Company' by following year.

1762 letter from Duesbury to Scottish cobalt mine re 'going into' blue and white.

1764-?9 Richard Holdship, 'printer' and ex-Worcester China Works, in Derby.

1765 Oct. 25: lease of Mill on St. Michael's Lane

Chelsea-Derby, 1770-84.

1770 Feb. 9: Duesbury and Heath transfer lease of Lawrence St property (Chelsea Works) from James Cox.

1773 March 1: lease site adjoining Chelsea Works; June 23: Castle Tavern leased - the first of a number of properties acquired by 1777 in Henrietta / Bedford Streets.

1774 June: London warehouse opens Bedford St., Covent Garden, under William Wood. Advertisements / trade card under 'Duesbury & Co'.

1775 March 28: Royal Appointment: Manufacturers to His Majesty.

1776 June 25: record of Queen's visit to showroom.

1777 further property leased in Bedford St / Henrietta St. Joseph Lygo appointed as assistant at showroom.

1779 John Heath declared bankrupt.

1780 August 1: works transferred to Duesbury by Heath's assignees.

1780 Aug. 12: Sun Insurance policy for factory and stock in Derby valued at £500 each.

1783-4 Duesbury senior's health deteriorating / stroke; Duesbury junior becoming active manager; arranging sale and demolition of Chelsea works.

William Duesbury and Co., Derby.

1785 Feb. 3: agreement between Duesbury snr and jnr to restrict improvements to buildings beyond the £69.6s. agreed for next two years.

1785 July 25: Duesbury I transferred half his property: messuages / manufactory in Derby, Bedford St and Pedlar's Acre wharf to son Duesbury jnr.

1785 Oct. 20: Sun Insurance policy for Bedford St. £100 for household goods,

£3,400 stock and utensils.

1785 Oct. 29: Sun Insurance policy re. Derby: £200 house, £100 household goods / wearing apparel: ware-, store-, slip-houses, packing and work rooms £600; utensils / stock £1000; 2 kilns and 2 houses, plus buildings £200.

1786 July 2: commencement of some nine-and-a-half years of regular surviving letters from Lygo to Derby.

1786 Oct.13: £11.5s. insurance premium paid on London stock.

1786 Oct. 30: death Duesbury senior.

1787 Jan. 4: marriage of Duesbury II and Elizabeth Edwards; Feb. 20: birth of son.

1787 March: trade treaty with France ratified, in force by May, lowering duty on ceramics and glass to flat 12%.

1788 August: royal visit to Flights' china factory at Worcester, followed by orders.

1789 March 26: Lygo requested 'something could be done...to prevent...flying' pots.

1789 Aug. 10: first mention of William Barker, as very sober, good lad to work in warehouse.

1790 Dec. 17: Duesbury's 'intention immediately to make a body that will stand sudden heat better'.

1792 Oct.: brother-in-law, Richard Egan, opens ceramic shop in Bath.

1793 Feb. 1: war with France declared.

1793-6 trouble with leading artists, time and motion studies.

1794 Nov. 11: Barker to leave showroom to set up china / glass shop in Derby.

1795 Lygo has difficulty recovering debts; Mr Marshall from Giles's creditors pressing for payment.

1795 April 11: first reference to Michael Kean.

1795 May 19: Tatem hired as showroom assistant.

1795 Nov. 12: Lygo received money to pay Marshall from mortgage.

Duesbury II and Kean, 1795-6.

1795 Nov. 15: partnership agreement between Duesbury II and Kean to commence after Christmas.

1796 Jan. 28: last dated letter from Lygo to Derby.

1796 Oct. 8: death of Duesbury II from unknown cause, and without a will.

Kean, 1796-1811.

1797 Feb. 7: agreement between Kean and Elizabeth Duesbury re Kean as sole manager.

1797 March 30: Kean leases adjacent 'Lot 1' of Calver Close property.

1797 May?: Charles King, manager of works, replaced by William Barker.

1797 Sept.: commencement of building earthenware factory on Lot 1 Calver Close.

1798 Barker replaces Lygo at showroom, Tatem replaces Barker in Derby.

1798 July 5: Kean's earthenware advertised for sale at warehouse on site in *Derby Mercury*.

1798 Oct. 28: Kean marries Elizabeth Duesbury. (Duesbury III sent away to Repton School.)

1799 Dec.: earthenware factory closes, subsequently 'Old China Works' moves into 'New' site.

1801 onwards. Sales in Hull, 'Edenbro', Glasgow, and later Liverpool, etc.

1802 Kean enters partnership with Mr Dews to make earthenware at Ashby Woulds.

1802 June 24: Lot 2 Calver Close property leased by Kean.

1806 Failure of Kean's marriage.

1807 March: first documentation relating to Robert Bloor, for expenses visiting Ashby Wolds etc. on Kean's behalf.
 1809 William Locker joins firm as clerk and warehouseman, post held until 1848.
 1809 June 15: Derby China Manufactory first offered for sale.
 1809 Nov. 8: expenses of £442 claimed by Kean on 'sales in Ireland'.
 1811 July 29: Kean gives notice to withdraw from partnership on Nov. 15.
 1811 Nov. 13: London showroom stock sold to Tatem for £7,999.

Bloor, 1811-1844.

1811 Dec. 25: sale of New China Works to Bloor for £5,000, and stock valued at £11,000.
 1814 March: breakdown of Kean's marriage; commencement of legal wrangle over the division of Duesbury II's estate, not finalised until 1820.
 1814 May 23: commencement of 30-day auction by Bloor; also auction on Oct. 12.
 1815 Thomason joins works as 'cashier and confidential manager'.
 1815 June: Bloor rents Old China Works from Duesbury III.
 1817 Bloor advertised for Japan painters.
 1819 Chancery Court, Duesbury v. Kean. Joseph Strutt receiver. Various signed affidavits, audits especially relating to valuations of 1796 stock etc.
 1819 June 3: Duesbury III mortgages Old China Works, now partly reopened by Bloor.
 1819 Duesbury III enters copartnership with Wm. Chawner as 'chemists and colour makers'.
 1821 Bloor dismisses apprentice-trained artists: 1 landscape and 3 flower painters.
 1822 Haslem starts apprenticeship.
 1822 Sept.: Bloor holds 30-day auction.
 1822 Dec. 30: Bloor pays final instalment on his 1811 purchase of porcelain firm.
 1823 Nov.: Death of Kean.
 1824 Michaelmas: Bloor starts paying rent on New China Works.
 1826 Duesbury III is declared bankrupt as his colour-making business fails; goes to the United States.
 1826 Bloor discharges Japan painters.
 1828 Bloor's mental health deteriorates; Thomason manages firm until 1844.
 1829 June 15: advertisement of Dublin auction of 100 hogsheads or £3000-worth of Derby China.
 1840 Elizabeth Duesbury died.
 1844 Statute of Lunacy declared on Bloor. The husband of Bloor's only surviving relative (his grand-daughter), Thomas Clarke, takes on management.
 1845 Site of original Duesbury works sold; factory to be pulled down and Nunnery erected.
 1846 March: Bloor died.
 1847 May 23: advertisement in *Derby Mercury* of sale of 'extensive stock', and sale or let of premises.
 1848 Factory closed.
 1849 Feb. 14: advertisement in *Derby Mercury* tells of disposal to Messrs Boyle and Sons, Fenton. Boyle removed plant, moulds, unfinished stock etc. to Staffordshire in 20 canal boats.

King Street China Works, 1848-1935.

Osmaston Road China Works, 1877-present.

Abbreviations used in text footnotes:

<i>WD</i>	William Duesbury (I and II if appropriate).
<i>Lygo, date.</i>	Letters from Joseph Lygo, the London showroom manager to William Duesbury in Derby, unless otherwise stated.
<i>DLS</i>	Derby Local Studies Library (untraced or old ref. no., or current. Parcel 17x).
<i>DL82</i>	Duesbury Papers in Derby Local Studies Library.
<i>BM.BP.</i>	British Museum. Bemrose Papers
<i>JW</i>	Letters from Josiah Wedgwood to Thomas Bentley, unless otherwise stated.
<i>KUL.Wedg.Acc.</i>	Keele University, Wedgwood Accumulation.
<i>DAJ</i>	Derbyshire Archaeological Journal.
<i>DPIS</i>	Derby Porcelain International Society.
<i>ECC Trans.</i>	English Ceramic Circle Transactions.
<i>EHR</i>	Economic History Review.
<i>NCS</i>	Northern Ceramic Society.

INTRODUCTION

Traditionally, eighteenth-century Derby porcelain has been viewed and interpreted as a collector's or art object, and the fine quality of surviving pieces would suggest that the proprietors, the Duesburys and Kean, found it relatively easy to produce luxury wares. Yet many before and after them invested in English china works, most of which failed. By 1770 the Derby porcelain factory, sited away from London and North Staffordshire, was the pre-eminent producer of fine china. Despite periods of recession and competition, including the emergence of Wedgwood, and the flood of French imports after 1787, the factory survived, and appears to have thrived, before the general economic turmoil of the extended war years at the close of the century. How is this achievement explained? Was the firm principally a commercial enterprise from its inception, or did a preoccupation with quality and aesthetics rule its management? Even in the 1750s Duesbury I styled his firm 'the second Dresden', although the factory went through various changes of direction, producing 'middling' blue-and-white wares in the 1760s, and a decade later selling fine pieces to royalty. The variety of factory and showroom documents, from c. 1770 to 1800, along with the porcelain and excavated sherds, indicates that the Duesburys' success was hard-won, and not easily sustained. Production and marketing were frequently a balancing act between providing the finest porcelain and maintaining commercial viability. From the mid-1780s there was a shift in emphasis in the manner goods were sold in London to the trade, soon followed by Duesbury II's considerable developments in the actual manufacture and firing of the porcelain in Derby. The subsequent acquisition of a new partner, Kean, late in 1795, and erection of the New Works, appear to have been amongst the most noticeable alterations to the business since 1756. What is the explanation for these developments?

The main theme of this thesis is contained in the question: 'Although striving for excellence may well have been a suitable goal in the 1770s and 1780s, as competition increased from France and Worcester, and later from the large Staffordshire firms, was this viable as a business strategy?' Does a study of other references related to the fine ceramic industry suggest that the Derby managers fared any differently from contemporary entrepreneurs, and that increased commercialisation was the way forward? The thesis has significance outside the narrow confines of ceramic history, as its subject-matter represents all the hundreds of relatively small enterprises that fired the Consumer and Industrial Revolutions. Derby's production of the finest china, attracting the

admiration of the most fashionable and wealthy clients in the country, was a significant achievement which was much more than a temporary phenomenon.

The thesis is based upon a large body of scattered manuscripts relating particularly to the Duesburys and Kean period of management, c. 1770-1811. A detailed study of the Derby enterprise in its own right, the present work seeks to extend the history of the later Georgian ceramic and luxury trades. The Duesbury papers provide particular evidence reflecting the nature of industrial change pre-1800, and will thus help fill a lacuna in a range of historical researches which otherwise tend to be dominated by a few large firms. The second half of the eighteenth century was an era of transition. During this period the dominance of luxury and craft production declined, while the industry later associated with mass production began to grow; at the same time the rôle of London as a manufacturing centre was shifting, with the development of specialised provincial centres of production. Ceramic production 'swarmed' around North Staffordshire, yet at this time the area barely supported fine porcelain production. China works had been more scattered country-wide, while the Potteries created a range of practical, yet fashionable and cheaper earthenwares, later adding hard-paste porcelains, and finally at the turn of the century bone china to the repertory.¹ London remained the marketing centre for traditional luxury goods, but meanwhile regional centres were becoming increasingly gentrified.

The work will explore a number of themes to identify such changes and their causes within the Derby porcelain business, and to establish whether they were proprietorially led, or a reaction to some external influence such as shifting fashions, or the effect of the general economic cycle. Comparative material from similar businesses and associated trades will be discussed. The aim of this thesis is therefore to extend the significance of the Derby porcelain enterprise c. 1750-1830 from a micro-study to one with macro-economic implications. The main themes, presented as distinct sections, cover the following topics: the nature of the luxury market and the rôle of fine ceramics; marketing and distribution, and the rôle of the Duesburys' London showroom; fashionable ceramics and the competition and cooperation within the luxury sector; the

¹T.Lockett in his introduction to P.Atterbury and M.Batkin, *The Dictionary of Minton* (1990), records the 1790s as a transitional period, as Wedgwood ceased to dominate the pottery industry following Josiah's death in 1795, and various new ventures emerged, while bone-china was to supersede soft-paste porcelain production.

location of the Derby China Works, and the sourcing of raw materials; and human and financial resources.

The nature of the luxury market and the rôle of fine ceramics, c. 1750-1830

This section investigates the British market for porcelain and fine pottery in general terms. Expensive porcelains had traditionally only been acquired by a tiny élite, who bought items during the London Season, but from the mid-1770s a growing wealthy middle class joined the consumer revolution. This coincided with a shift in fashion from the rococo to neoclassical design, and the declining popularity of ornamental ceramics and imported Chinese porcelains. In Britain early industrialists were promoting neoclassical styles in materials different from those usually associated with luxury, giving the public a far wider choice and price range of fashionable consumer goods. Did these impinge on Derby's market?

Women's purchasing power has in part been held responsible for growing consumption, but is this true of expensive luxury purchases? Why did Duesbury II expect his market to grow three-fold from the later 1780s? Although ceramics had increasingly replaced wood or pewter in 'middling' homes, in the richest households porcelain even replaced silver. Imported porcelains had been adopted in the later seventeenth century alongside tea, coffee and chocolate; the popularity of tea-drinking and its important social rôle was the basis for the development of our home porcelain industry in the 1740s. Nearly forty years later, with the Commutation Act, the porcelain trade was again given a boost.

More complicated is that rôle of fine ceramic tablewares not obviously related to introduced foodstuffs; although mealtimes altered, such soft-paste porcelain tablewares were comparatively impractical and as such principally symbols of status. Eighteenth-century ceramics had a complex hierarchy reflecting Georgian society's increasing desire to demonstrate politeness and refinement. An assessment of the trends in the luxury market, the attitude to status and taste, and the rôles men and women played in it as consumers, will be discussed in relation to sales through the Covent Garden showroom.

Marketing and distribution, and the rôle of the Duesburys' London showroom

The Duesburys did not acquire a London showroom until 1773, although Derby porcelain had been reaching the London markets since the early 1750s. An examination is made in this work of the earlier networks for the distribution of porcelains, through the London dealers and auctions, and provincial outlets. A detailed analysis follows of the function of the Covent Garden showroom and the rôle of its manager, showing the complex relationship with the factory as well as sophisticated marketing techniques. Differentiation is made between the wholesale trade in London and the provinces, and the private clientele. Some analysis of the factory's export trade will be made. How the porcelain was promoted, and patronage and Royal Warrants won and kept, were other important factors in the progress of the business. Could Derby porcelain be acquired more cheaply by the middling market in the form of 'seconds' or damaged wares, second-hand or hired goods?

Fashionable ceramics and competition

The artistry of Derby porcelain is the most researched and published theme; this section aims to explore the practical and commercial aspects of maintaining fashionability and aesthetic quality. An assessment of the Derby factory's competitors will be made, both in the general neoclassical style used by 'alternative' manufacturers such as Wedgwood and Boulton, and the traditional luxury sector; and in the relationship to British porcelain manufacturers at Worcester, Caughley and Chamberlain. The most dramatic influence on the fine porcelain trade was the French trade treaty of 1786, which effectively brought about the dominance of French wares and styles up to c. 1820. The luxury market became influenced not by manufacturers, but by the London dealers and decorating-shops.

The location of the Derby China Works, and the acquisition of raw materials

Why did Derby prove an appropriate location for a successful porcelain business, and how did communications affect its efficiency? What influence was exerted by the existence of the Derby Philosophical Society? Such practical considerations represent

the first of a number of joint sub-themes making up an overall assessment of industrial performance in this section.

The choice, source, quality and use of a wide range of raw materials had a close bearing on the economic efficiency of the business and on the standard and recognition of its products. Both raw materials and fuels, whether local or imported, attracted much of the attention of the management. Apart from requisitioning policies, this section discusses the economy of processing, production planning, and the influence of technology and mechanisation at the Derby works. The assessment of these vital elements in the practical evolution of an efficient factory provides a context for an examination of Duesbury II's experimentation, and of the secrecy that attended new trials and methods. The level of expertise and appropriate scientific knowledge necessary to support such developments and improvements is compared with that of contemporary ceramicists including Wedgwood and Thomas Turner.

Human and financial resources

Analysis in this section focuses on employment practice, noting numbers employed, job types, recruitment, training and apprenticeships, conditions of employment, discipline and security, and external staff in London and Bath. What relationships and comparisons can be established between the Derby-based operation and other works concerning industrial espionage, and the enticing and firing of staff?

A second area for discussion centres on finances and partnerships, with an assessment of capital and revenue funds and other investments, noting insurance valuations, the use of credit, discounts and bills of exchange. What trends can be identified in sales, percentages of unpaid debts, borrowing, investment and so on? Two contemporary formulae concerning the cost of making and selling porcelain c. 1795 are compared: that of Billingsley (who was looking for a backer to set up a works at Pinxton and probably underestimated costs) and of Kean (who wished to minimise his liabilities to Duesbury's heirs and probably underplayed the apparent profitability). Both would suggest that by 1795 Duesbury's manufactory was barely 'in the black'. Kean then attempted to diversify with creamware, and was later tempted to take advantage of auctions. His contribution is discussed in the light of the receiver Strutt's highly detailed comments c. 1815-18 on the earlier Kean account books.

Derby Porcelain, c. 1750-1848, and relevant ceramic literature highlighting the recognition and growth of English fine ceramic study

A bibliographical search confirms that there is an obvious gap in published literature on the history of the Nottingham Road Derby China Works, as represented by any extensive study and interpretation of a range of surviving documents, and their relationship to the porcelain itself. On a simple level, reference to the Lygo letters and daybooks has helped clarify the factory's chronology,² while more detailed study reveals a complex enterprise juggling with artistic perfection for the few and sales largely to the trade. The more commercial aspects of the Derby firm have usually been ignored, but rarified products illustrated and discussed at disproportionate length. Other ceramic firms with far less documentation have been treated as whole commercial enterprises. Adam's work on the insurance policies for the Bow factory and Weatherill's wider Staffordshire research provide excellent examples of commercial ceramic studies, and help form a methodology for the financial reconstruction of the Derby China Works.³ Although the finest Derby porcelain is well represented in the literature, no author has assessed the real cost of this excellence.

In common with most ceramic publications, the vast majority of works on the Derby porcelain factory have been written for the connoisseur, and are dominated by aesthetic opinion of the products rather than academic pieces relying on interpretation of contemporary documentation. Three late Victorian writers on Derby porcelain successfully combined the divergent strands, creating major works which have remained important sourcebooks, and are often referred to in, or even form the basis of, more recent offerings. These are: John Haslem's *Old Derby China Factory*, first published in 1876; Llewellyn Jewitt's two-volume *Ceramic Art of Great Britain* of 1878, 'slightly abridged' in 1883 for a one-volume second edition; and William Bemrose's *Bow, Chelsea and Derby*, printed in 1893.⁴

² The dating of porcelain of the Duesbury II and early Kean periods has generally been pushed forward a couple of years by the more accurate dating of the introduction of patterns as seen in the day-books etc. This is particularly significant for in the mid-1790s many of the most accomplished decorators left the factory; it has become obvious, much to the chagrin of the collector-dealers, that Derby artists were able copyists creating for example Billingsley's roses or Complin's fruit long after these decorators had left the factory. See J. Anderson, *Striving for Perfection: the Charles Norman Collection* (1996).

³ E. Adams, 'The Bow insurances and related matters', *ECC Trans.*, vol. IX, pt1 (1973), pp67-108 and 'Ceramic insurances in the Sun Company archives', *ECC Trans.*, vol. X, pt1 (1976), pp1-38; L. Weatherill *The Growth of the Pottery Industry in England, 1660-1815* (1986).

⁴ See appendix 1 for details of these major works on the Duesburys and the Nottingham Road Works.

Between the wars there was a renewed interest in ceramic research, particularly centred around the London archives and museums. Curators redocumented their collections, helping to establish proper dating and attributions to the early English porcelain factories, including Planché and Duesbury I items.⁵ This resulted in much pre-1770 porcelain previously attributed to Chelsea being reassigned to Derby, and proved unpopular with some collectors who believed their pieces had been somehow demoted.⁶ In Derby, Frederick Williamson, the Curator of the town museum, investigated the 'traditional' kiln sites of the early china works, publishing an article in the *Connoisseur*.⁷ Although the Derby factory thus 'reclaimed' its early history, many still regarded Derby porcelain as inferior. Major Tapp's monographs such as *The Brothers Brewer* and articles in the *Connoisseur* and *Apollo* gave the collecting of later eighteenth-century Derby porcelain respectability. Although a prodigious researcher of archive material, it is obvious Tapp did not access the various Duesbury manuscripts.⁸

Derby's physical isolation helped perpetuate the collector-author style of writing on Derby porcelain, particularly in relation to the Duesbury and Kean periods. F. Brayshaw Gilhespy was one of the few authors who returned to some of the original documents, but his published summaries of the Lygo letters are confusing.⁹ Arthur Lane writing in 1961, believed that many of the documents previously used by Jewitt and Bemrose appeared to have been lost.¹⁰ The manuscripts had in fact been in the 'public domain' in the Derby Town Library and the British Museum since before the Great War. With the collecting boom of the 1960s and 1970s porcelain prices soared, along with the number of books and articles on ceramic appreciation. Although volumes on provincial china works were included, many were concerned with their products' uniqueness, artistic merit and value, rather than assessments of the commercial aspects of a porcelain factory. In 1971 *Derby Porcelain* by F. Barrett and A. Thorpe was published, proving to be a particularly important book in the study of the history of the Nottingham Road

⁵E.g. B.Rackham, *Catalogue of the Herbert Allen Collection of English Porcelain* (1922), and *Catalogue of the Schreiber Collection of English Porcelain* (1928).

⁶ See J.Mallet's forward in G.Bradley, *Derby Porcelain, 1750-98* (1990), p6. An example of this reattribution can be found in W.King, 'Chelsea chronology', *ECC Trans.*, vol 1, pt1 (1933), pp9-11.

⁷F.Williamson, 'The beginnings of Derby Porcelain manufacture in Derby', *Connoisseur*, LXXVII (April, 1927), pp228-9.

⁸G.Pendred, 'Major William Tapp, researcher extraordinary', *DPIS Journal*, vol.1 (1989), pp33-46. Four volumes of his notes survive, unlike his collection which was destroyed by enemy bombing; microfilm of his notes has been lodged at Derby Local Studies Library, and awaits further study.

⁹F.Brayshaw Gilhespy, 'Joseph Lygo's letters to Derby', *ECC Trans*, vol.5 (1955), pp203-16. Republished in his *Derby Porcelain* (1961), pp65-76.

¹⁰A.Lane, *English Porcelain Figures of the Eighteenth Century* (1961), footnote p8.

factory due to its wide availability and illustrations of accessible museum pieces; but their references to original sources had a limiting effect.¹¹

It has only been in the last ten years or so that the factory and warehouse records of the Duesburys have been 'rediscovered'. Lockett commented in a review in 1991 of the publication of *Derby Porcelain 1750-1798* that 'there seems no end to the "making of books" on Derby porcelain. Of all English factories it must surely command the largest literature, even Worcester has a marginally shorter bibliography. Only Wedgwood ... can claim supremacy. Is there room for still one more volume?'¹² His answer was in the affirmative, because the section on the Duesbury manuscripts did 'throw light on the industry ... to all ceramic historians.' However, although the study of the original manuscripts (see bibliography, p.249-50.) has continued, related publication has as yet remained largely in the form of reference extracts by theme, or small 'projects' with limited large-scale analysis.¹³ The potential of the factory documents is beginning to be realised beyond the more usual areas of interest of the collector, and wider academic studies have begun to appear, including undergraduate and postgraduate dissertations.¹⁴

Widening the debate: an assessment of existing studies and sources

Commercialisation: fine ceramics and the consumer revolution

There has been little published research on ceramic marketing. In 1881 Nightingale provided details of early porcelain auctions which are still frequently quoted,¹⁵ and Toppin researched extensively in the 1930s on the pre-1776 London chinamen, but not

¹¹See appendix 1 for further details.

¹²T.Lockett, in book review of *Derby Porcelain, 1750-98*, G. Bradley with J.Anderson and R.Barkla, *DPIS Newsletter* (March, 1991), pp22-3. The fully-illustrated book was a work-up of the original Derby Museum exhibition and catalogue *Wm. Duesbury: Father and Son, Men of Industry* (1987) compiled by J.Anderson. The 1991 book contained business details from the Duesbury Papers published for the first time, and an overview of Planché and the early china works.

¹³E.g.A.Ledger, *Derby Porcelain European Competition, Trade and Influence, 1786- 96. References from Original Documents* (1998), and B.R.Bicknell, *Derby Modellers 1786-96, Extracts from Original Documents* (1995). See bibliography for a selection of Ledger's extensive smaller projects.

¹⁴R.Thompson, *Changing Patterns of Consumption, and their Relationships to Developing Distribution Networks during the Industrial Period: an Appraisal of Derby Porcelain from 1755-1811* (1994), undergraduate dissertation Archaeology Dept., Leicester University; P.Thornton, *Landscape Decoration on Derby Porcelain in the Eighteenth Century* (1995), MA dissertation Art Dept, Manchester University.

¹⁵J.E. Nightingale, *Contributions Towards the History of Early English Porcelain* (1881).

on the exact detail of what they sold.¹⁶ For a decade before her death Valpy searched through contemporary London newspapers for advertisements related to the ceramic industry, compiling extracts up to 1795.¹⁷ Both the function of the later eighteenth-century china dealers and distribution have largely been neglected. The Duesbury manuscripts record the detail of how a later eighteenth-century ceramic firm sold porcelain to private and trade customers, and prevailing attitudes to the etiquette of selling. A far more sophisticated distribution scheme for the disposal of fine porcelain is apparent than has previously been indicated by Alexander, who concluded that the retailing system as a whole worked with 'relative primitiveness' until the mid-nineteenth century.¹⁸ Clearly recorded are shifting sales practice, notably the relative decline of private customers compared to the wholesale trade from c. 1785. Weatherill, who recognised the numerical increase in the ceramic traders, believed 'it is difficult to perceive the details of how they could influence the growth of the industry',¹⁹ yet the London warehouse manager records their power in, for example, resisting the East India Company, and opposition to public and general trade auctions.

The commercialisation of the pottery industry from the seventeenth century to c. 1815 has been well documented. The huge quantity of surviving manuscripts relating to Wedgwood has allowed the creation of the legend of Josiah Wedgwood as the 'Founder of British Ceramics'. Meteyard portrayed him as an heroic aesthete,²⁰ while McKendrick determinedly heralded Wedgwood as an innovator responsible for the commercialisation of the pottery industry,²¹ views later followed by Robinson.²² Wedgwood was indeed unique as a hard-working polymath, and a credit to the ceramic industry, but as Weatherill has already suggested, other potters and ceramic dealers conducted their businesses on similar lines.²³ Because Wedgwood has dominated ceramic histories it has been difficult to judge what was or was not typical of many branches of the industry, but particularly in marketing of fine wares. The present study should complement work on

¹⁶A.J.Toppin, 'The china trade and some London chinamen', *ECC Trans*, vol 1,pt 3 (1935), p37-56.

¹⁷N. Valpy, 'Extracts from eighteenth-century newspapers', *ECC Trans*.vol.11, pt2 (1982), pp122-30; vol.11, pt 3(1983),pp.187-211; vol.12, pt1 (1984),pp58-89; vol 12, pt2 (1985), pp161-188; vol 13, pt1(1987),pp77-95; 'Extracts from the Daily Advertiser', *ECC Trans*, vol.14,pt1(1990), pp106-17; vol 14,pt2 (1991),p228-234.

¹⁸D.Alexander, *Retailing in England during the Industrial Revolution* (1970),pp231-2.

¹⁹L.Weatherill, *ibid*, p323.

²⁰Eliza Meteyard, *Wedgwood*, 2 vols.,(1865-66).

²¹ N. McKendrick, see range of works in bibliography.

²²E.Robinson 'Matthew Boulton and Josiah Wedgwood, apostles of fashion', in R.P.T.Davenport- Hines and J.Liebenau,eds, *Business in the Age of Reason* (1987),pp98-114.

²³L. Weatherill, *The Pottery Trade and North Staffordshire, 1660-1760* (1971), and 'The business of middleman in the English pottery trade before 1780', in Davenport-Hines and.Liebenau, *ibid*, pp51-75.

the ubiquitous Wedgwood; although as producers of fine porcelain the Duesburys were not typical of the ceramic industry as a whole, nevertheless knowledge of their procedures may encourage a reappraisal of the Staffordshire potter's rôle as innovator. Direct comparison with Wedgwood as a ceramicist is possible (insomuch as the Duesburys were porcelain manufacturers, not potters), but because Wedgwood is often quoted as the prime example of an 'Industrial Revolutionary' who modernised a rather local, unprogressive British trade and shifted it to the forefront of European enterprise, the work has a wider context. Many of Wedgwood's commercial 'innovations' were already in the public domain, and used in the capital's luxury trades like porcelain. Conversely, his factory's development of more 'middling' wares was not hampered by the constant need to seek or use the finest ingredients or best workmen. Was Wedgwood's embrace of the 'middling market' more a reflection of his inability to procure the finest resources or clientele, in contrast with Derby's ability to do so?

Although diverse topics ranging from the rising retail and consumption of tea and groceries, fashion and clothing, ceramics, the arts and leisure, even shaving,²⁴ have been studied over the last decade or so, it appears to be acknowledged that few specific examples of marketing and coping with consumer demand are recorded for any type of industrial enterprise pre-1800.²⁵ The selling of Derby porcelain may well have been at the luxury end of the market, serving Royalty and the aristocracy, but some of the trade connections appear less grand. Wedgwood adopted much of his early sales strategy from the fine china producers and retailers, and the 'Veblen' effect of 'copying your betters' may just as easily be true of retailers and their 'customer care' or 'image projection' as in the consumers' desire for products. The Derby China Works were pre-eminent just as McKendrick's 'consumer boom' reached 'revolutionary proportions' post-1775.²⁶ Yet at this time society debated, and was torn between, the divergent rôles of luxury: one the beneficial provider, the other as a corrupting moral force.²⁷

²⁴E.g. contributions to N.McKendrick, J.Brewer, J.H. Plumb, eds, *The Birth of a Consumer Society: The Commercialisation of Eighteenth-century England* (1982); J.Brewer and R.Porter, eds, *Consumption and the World of Goods* (1994); A.Birmingham and J.Brewer, eds, *The Consumption of Culture, 1600-1800: Image, Object, Text* (1995); R.Porter and M.M. Roberts, eds, *Pleasures in the Eighteenth Century* (1996); and also B.Lamire, *Fashion's Favourite: the Cotton Trade and Consumer in Britain, 1660-1800* (1991); H.-C. Mui and L.Mui, *Shops and Shopkeeping in Eighteenth Century England* (1989).

²⁵J.Benson and G.Shaw eds, *The Evolution of Retail Systems c.1800-1914* (1992).

²⁶McKendrick in McKendrick, Brewer and Plumb, *ibid*, p9 and p15.

²⁷R.Jones, *Gender and the Formation of Taste in Eighteenth-Century Britain* (1998). The role of 'luxury' in eighteenth-century consumerism is the subject of ongoing historical research at Warwick University, and forms part of the current 'Nationalising Taste' project at Northumberland University.

A number of consumer studies have considered the British and foreign markets buying the range of available ceramics post-1750. Some have attempted to define the social groups buying these items, recording especially the growth of the 'middling classes' to explain the advancements in the ceramic industry. But little published work can be found on the changing rôle of fine ceramics in the Georgian home.²⁸ More recent work includes Richards's overview of eighteenth-century ceramics in a 'civilised society', and Young.²⁹ Direct artistic inspiration can be attributable in, for example, the publications of Baron d'Hancarville;³⁰ but no broad-scale study covers the various aspects of Georgian life that helped create the variety of ceramic bodies (or alternative compositions), forms or decoration in the later eighteenth century. However, contemporary illustrations show ceramics in use: perhaps as a backdrop to a Hogarth narrative, or prestige teaware in a portrait group, or in an amateur sketch of a family room. Undoubtedly fashion played an important rôle; but what was the source for the fine ceramic industry? Savage records how the influence of the French Court pervaded European 'high' taste into the 1780s, and was often copied unquestioningly.³¹ Yet such 'formal' style contrasts with some views of contemporary diarists and illustrators; daily and seasonal social routine and etiquette were changing in response to a host of improvements, including transport, street lighting, new kitchen ranges and icehouses, and even to 'hobbies' like gardening or shooting. These often subtle innovations actually contributed to the development of a highly fashionable factory like Derby.

The Derby China Works and the Industrial Revolution

The Derby manuscripts also contain details on transportation, technology, experimentation, material sources, daily factory practice and a range of financial matters. Examples from the Wedgwood family's business have once more tended to dominate ceramic and more general economic histories of the early Industrial Revolution. The economic historian Murphy has condemned Wedgwood and Boulton for their 'grandiose

²⁸E.g. B.Hillier, *Pottery and Porcelain, 1700-1914* (1968); R.Emmerson, *British Teapots and Tea Drinking* (1992); A.Somers Cox, 'The non-functional use of ceramics in the English country house during the eighteenth century', in *Fashioning and Functioning of the British Country House*, no25 (1989), pp195-215.

²⁹S.Richards, *Eighteenth Century Ceramics: Products for a Civilised Society* (1999); H.Young, *English Porcelain 1745-95. Its Makers, Design, Marketing and Consumption* (1999).

³⁰E.g T.Clifford, 'Some English vases and their sources, part 1', *ECC Trans.*, vol.10, pt3 (1978); J.H. Handley, 'Robert Hancock and G.P.Pannini', *ECC Trans.*, vol.11, pt2, 1982, pp99-101; Bradley, *ibid* (1990).

³¹G.Savage, *French Decorative Art, 1638-1793* (1969).

projects' that 'stood the normal law of economic growth on its head', and given them some 'portentous significance'.³² Although the eighteenth-century ceramic industry may not have added greatly to British coffers, its concentrated development in the Potteries has created significant statistics.³³ Studies of the economic development of North Staffordshire highlight its relationship to the growth of the early British ceramic industry.³⁴ Although largely beyond the scope of this study, references do show a contrast in the economic infrastructure of the later eighteenth century between the East and the West Midlands as a whole,³⁵ resulting in various degrees from the exploitation of the regions' coalfields, and road and canal building.³⁶

The Derby China Works was both relatively isolated as a ceramics factory, and as a family business: its moderate scale and the Duesburys' provincial social aspirations were far more representative of the myriad of small concerns creating the initial impetus of the Industrial Revolution than the likes of Wedgwood, Boulton, Arkwright or Wilkinson. However, the Duesburys, too, had a disciplined factory system, with clocking-in procedures and enforceable contracts comparable to those of the model factories of Etruria, Soho or Cromford.³⁷ Variation in the attitude to enterprise, and means of investing money, is also apparent from trade to trade, region to region. Honeyman for example, in her exploration of the 'self-made man' c. 1750-1830, focuses on the business enterprise and financial organisation within selected industries (lead, cotton spinning, and lace) so important to the counties of Derby, Leicester and Nottingham; the financing of the Derby China Works might be similarly explained.³⁸ Payne suggests that entrepreneurial studies show a 'paucity in general of new blood' becoming true industrialists.³⁹ While this appears debatable in the case of William Duesbury I, was he nevertheless atypical of the ceramic industry as a whole or, more significantly, of new porcelain firms in the mid-eighteenth century?

³²B.Murphy, *A History of the British Economy, 1740-1970* (1973), pp375-6, p458.

³³L.Weatherill, *ibid* (1986).

³⁴E.g. J.Thomas, *The Rise of the Staffordshire Potteries* (1971); Weatherill, *ibid* (1971), and *ibid* (1986).

³⁵E.Hopkins, 'The trading and service sectors of the Birmingham economy, 1750-1800', in R.P.T.Davenport-Hines and J.Liebenau, *ibid*, pp77-97; M.Berg, 'Small producer capitalism in eighteenth century England', *Business History*, vol 35, no 1 (Jan.1993), pp1-39.

³⁶A.E.Musson *The Growth of British Industry* (1978); M.Palmer and P.Neaverson, *Industry in the Landscape* (1992).

³⁷N.McKendrick, 'Josiah Wedgwood and factory discipline', *The Historical Journal*, IV, I, 1961, pp30-55; S.Pollard *The Genesis of Modern Management: a study in the Industrial Revolution* (1965).

³⁸K.Honeyman, *Origins of Enterprise* (1983).

³⁹P.L.Payne, *British Entrepreneurship in the C19th*, second edition (1988), p21.

The Duesburys helped to reinforce that interrelationship between the wider understanding of science and the Industrial Revolution as discussed at length in Musson and Robinson.⁴⁰ Such themes form important sections in more general works on the economy and the Industrial Revolution in the eighteenth century, and have been used as a means to help explain the early supremacy of British industry and products.⁴¹ Yet again, Wedgwood 'the scientist' often stands out as an important example, as in Chaldecott.⁴² Weatherill has tended to dismiss potters' trials as more 'hit and miss' than scientific,⁴³ but surviving documents of Duesbury II's experimentation and his knowledge of technological publications would suggest an appreciation of scientific principles, and that some at least were being put into practice by the 1790s as a means of improving the porcelain body and reducing costs.

It might be expected that the Derby enterprise would have benefited from its close London connections and 'modernising influences', but this was not necessarily so: there was an independent source of knowledge in the provinces based on philosophical societies, scientific lectures and active applied research. It would also appear that many of the Duesburys' social and business associates, both in Derby and London, were linked to the small parish of Church Broughton, between Derby and Uttoxeter.

⁴⁰A.E.Musson and E.Robinson, eds, *Science and the Industrial Revolution* (1969).

⁴¹P.Mathias,*The First Industrial Nation*, second edition (1983); J.Hoppit and R.E.A.Wrigley, eds,*The Industrial Revolution* (1994).

⁴²J.A.Chaldecott, 'Josiah Wedgwood (1730-95) - Scientist', *The British Journal for the History of Science*, vol VIII(1975), pp1-16.

⁴³ L.Weatherill, *ibid*, 1986, pp376-383.

PART 1. THE NATURE OF THE LUXURY MARKET AND THE RÔLE OF FINE CERAMICS, c. 1750-1830

Chapter 1. The British market for luxury goods: a growth area for Derby Porcelain

This section aims to explore the nature of the luxury market to which eighteenth-century Derby porcelain is assigned. The more general definition of luxury as 'something desirable for comfort or enjoyment, but not indispensable', is applicable to all eighteenth-century ceramics, as cheaper and more robust wooden or metal pieces could have served adequately as 'useful' wares. However from late in the previous century ceramics, particularly porcelain, had become an integral part of polite social behaviour associated with the taking of tea, and few middle- or upper-class families would have regarded oriental porcelain teacups as other than necessities. In the 1740s our own porcelain industry developed particularly to cater for this growing market. However the finest English porcelains, whether Chelsea or Chelsea-Derby, were also costly; highly decorated pieces, valued like silver, assumed significant status. With the later 1760s came the vogue for neoclassical style and increasing consumer choice, as a variety of new-material goods provided a fashionable, often cheaper, substitute for traditional luxury artifacts, including fine pottery, Sheffield plate, ormolu, and papier mâché. Some of these alternative wares were more obviously ornamental than utilitarian.¹ From c. 1770 the Duesburys were competing in a market where a selection of refined ceramics, whether simpler china or fine earthenware, could be bought for a quarter the price, or less, of Derby porcelain variants. If elegant show was the most important aspect of selection then something that looked the part, but was relatively inexpensive, was bought; but the more sophisticated purchasers considered a wider range of qualities including rarity, colour, form, and texture - attributes of craft-shop production less easily achieved with large-scale manufacturing.

When the Derby factory had been first established a small group of aristocracy and gentry was the traditional British consumer of luxury items.² After 1770 it was to this restricted sector, representing 1 or 2 % of the population, that Chelsea-Derby production was specifically marketed; however, within little more than fifteen years

¹M.Berg, 'New commodities, luxuries and their consumers in eighteenth-century England', in M.Berg and H. Clifford, eds, *Consumers and Luxury Consumer Culture in Europe, 1650-1850* (1999), pp62-85.

²G.Mingay, *English Landed Society in the Eighteenth Century* (1963), p26. About 400 families had incomes of £5,000 plus, which allowed participation in the London Season, a further 800 families had land-based incomes of £3,000 or more.

the Derby management had anticipated a three-fold increase in demand. Consumer studies suggest that it was an increasing 'middling' class that created a market and spur for goods that in previous generations had been regarded as luxuries. This is traceable in the new manufacturing industries, but whether the enriched middle classes bought traditional luxury or 'high culture' pieces in any number is debatable. In numerical terms perhaps a further 3,500 individuals had been added to the wealthy élite by 1800; these upper-middle-class families had incomes on a par with at least the higher gentry. Many were professionals, and most had not transformed from 'rags to riches', but were an educated group with connections to established land-owning families.

However the creation of 'middle' Britain was uneven, dependent on local wealth, urbanisation and communications; 'gentrification' had increasing pace, but the more remote parts of England did not witness its benefits until the close of the Napoleonic War, four or five generations later than London. Neither were many of the 'older' generation so easily charmed by changing fashions.³ But by the latter quarter of the eighteenth century ceramic ownership had become a universal phenomenon.⁴ From the later 1780s Duesbury's London warehouse supplied a growing number of provincial traders, but also met private orders from the more remote and less gentrified regions including Cumbria and the Scottish Borders.⁵

Contemporary writers frequently recorded the luxury consumption of the lower classes, aping their betters, and adopting articles of indulgence previously enjoyed by local nobility. Aristocratic style was clearly influential, if adapted to something more practical, throughout the eighteenth century. British luxury living remained that of France well into the following century, with direct imports or imitations of a range of household and personal artifacts. Important to the growth of ornamental consumer goods was the early stress placed on interior decoration and furnishings.⁶ Such vogues were readily adopted here, as the English Grand Tourists returned to the continent after the peace of 1763. To varying degrees 'les Milords Anglais' absorbed fine taste, and purchased goods; this was not in itself a new phenomenon, but the number involved, including less élite classes, was considerable: in the summer of

³ A.Vickery, 'Women and the world of goods; a Lancashire consumer and her possessions', in J.Brewer and R.Porter, eds, *Consumption and the World of Goods* (1993), pp274-304. See appendix 2: Elizabeth Parker bought goods to later modify, or hand-down, rather than be disposed of.

⁴ L.Weatherill, *Consumer Behaviour and Material Culture in Britain 1660-1760* (1988); S.Richards *Eighteenth-Century Ceramics: Products for a Civilised Society* (1999).

⁵ E.g.Mrs.Wallis, Calton Hall, near Penrith, had £2.0s.6d of teaware (DLS Parcel 17x. Aug.2, 1787); while Mr. Biddell from Dumfries paid for his china in advance (DL82 8/68 letter Sept. 26, 1787).

⁶ P.Thornton, *Authentic Decor: the Domestic Interior 1620-1920* (1985), p93. In mid-century Paris twice the sum was spent on the decorations than the shell; English gentlemen spent more evenly.

1785, 40,000 English were reputedly touring the continent.⁷ Unfortunately some tourists returned home slaves to fashion, insisting on the universal supremacy of continental manufacturing. Silas Neville conveyed such prejudice when he opined that Derby's silk mills and 'the fabrica di porcellano' were both 'improper to be attempted in this country'.⁸ Conversely, some became staunch anglophiles, refusing to see any good in foreign art, design or ideas, and rejected such elegance even of English origin.

While the upper echelons of private high society were largely closed and London based, many middle-class men had been welcomed to an aristocrat's country table in the discussion of agricultural improvements, canal-building or elections. They could not but have been impressed by the luxurious estates that were designed as show places of authority and hospitality, and perhaps sought to copy part of what they had seen.⁹ 'Vulgarity and ... new-acquired consequence' was clearly a feature of Georgian life. For some, including Joshua Reynolds, the accoutrements of fine living served to mask a regional accent and rough features.¹⁰ While socially ambitious individuals, like the conspicuous consumer Sir John Stanley (see appendix 2), equated luxury with ennoblement and power.

However, the concept of a consumer boom, resulting from the gentry and middling classes emulating the fashionable aristocratic lifestyle, has generally lost favour in preference to that of 'fitting into the hierarchy of your peers'.¹¹ Certainly Elizabeth Duesbury, who might have used her husband's porcelain, instead asked Lygo for items of Wedgwood, while her husband was sent Nankeen china 'to suit Duesbury's taste and of his friends that have been universally admired on my counter.'¹²

Curiously, the British seem to have been highly selective in what they adopted from the French; here old habits were hard to break. English architecture never matched the 'convenience and elegance' of the French plan. Two separate rooms emerged in richer households, associated with the different genders: the dining room, where,

⁷C.Hibbert, *The Grand Tour* (1987).

⁸B.Cozens Hardy, ed, *The Diary of Silas Neville, 1767-88* (1950), p277

⁹W.E.Minchinton 'Convention, fashion and consumption: aspects of British experience since 1750', in Eighth International Economic History Congress, B4, *Types of Consumption, Traditional and Modern*(1982), pp31-40. He suggests that the greater the wealth of contacts the greater their potential for influence related to emulation.

¹⁰R.Jones, *Gender and the Formation of Taste in Eighteenth-century Britain* (1998), pp198-9

¹¹ See Nicholas Rogers 'Money, land and lineage: the Big Bourgeoisie of Hanoverian London', *Social History*, vol 4 (1979), pp439-54, and for the N.W. see A.Vickery, *The Gentleman's Daughter*(1998), p31; L.and J. Stone, *An Open Elite? England 1540-1880* (1984), for Norhants., Herts., and Northumberland.

¹²Lygo, July 18, 1789; DLS untraced Sept 26, 1789 letter Robert Fogg jnr. to WD.

after a communal meal, the gentlemen carried on drinking and talking politics or business, and the withdrawing room, where the hostess would serve tea to the ladies, later to be joined by the men. In France the dining area was rarely used but for the duration of the meal; the decoration was simple but elegant. In Britain dinner could last over two hours, but more importantly, occupation by the men could extend the room's use by a further three or more hours. The dining room became the focal point for male hospitality and prestigious display.¹³

Neither had polite French table manners been so readily adopted: napery was rare, although we used the 'finger bowl'.¹⁴ The English seemed to have retained the communal use of ale glasses; 'moreover this dirty and revolting habit has become so well established ... as an act of politeness'.¹⁵ These habits were anathema to continental visitors, but deliberately chosen practices, for our textile and glass industries could have easily provided such equipment. Yet for Chartier and Flandrin obsession with cleanliness, along with the adoption of specialised tablewares, were closely linked in French society, revealing a growing desire for individualism and privacy.¹⁶ The eighteenth-century French dispensed with servants by promoting the intimate dining room, along with the development of new forms of furniture such as the dumb waiter and the wine cooler. In England such privacy was less of an issue; the 1778 guinea-per-head tax on male servants provided the rich with another means to flaunt their wealth.

Despite the appearance of French-style recipes in many contemporary English cookbooks, foreign writers emphasised our preference for huge joints of roast and boiled meat, served without sauce. Significantly this was the type of meal most suited to the majority of British domestic kitchens, best utilising the resources of kitchen staff of varied ability, and primitive, open coal fires using spits, griddles and hanging pans. The 'slow charcoal fire', beloved of French recipes, was a separate facility few city kitchens possessed, because charcoal was prohibitively expensive, but more common in the country where wood was more easily available.¹⁷

Nevertheless the British élite confidently adapted some French tablewares to their own uses, most notable being the covered *pot au jus* made at Sèvres to contain the

¹³S.Nenadie, 'Middle-rank consumers and domestic culture in Edinburgh and Glasgow 1720-1840', *Past and Present*, vol.145(1994),pp122-56.

¹⁴Lygo, Dec.8,1788 and July 8,1789. Lord Cremorne ordered Derby porcelain 'finger cups'.

¹⁵De la Rochefoucauld, in R. and E.Forster, *European Society in the Eighteenth Century* (1969).

¹⁶R. Chartier editorial comment, and J.L. Flandrin, 'Distinction Through Taste' in R.Chartier,ed, *A History of Private Life III, Passions of the Renaissance* (1989), pp265-307

¹⁷Rachel Feild, *Irons in the Fire* (1984), pp8-9.

liquor from the lighter French method of cooking meat: this form in Derby porcelain was used to serve ices, custards and jellies. From the 1770s onwards the French china works increasingly manufactured shapes suited to British use. While the influx of cheaper Parisian porcelains in the 1790s appeared to produce gluts in the finer porcelain market, it would have also helped familiarise a wider British public with unusual forms, like the *déjeuner*, that had previously served the luxury sector.¹⁸

The etiquette of eating and drinking genteelly was increasingly bound up with the eighteenth century's notion of politeness and refinement. These were attributes that 'had little value unless they were shared: they had to be put on display to be shown to others'.¹⁹ The metal trades had benefited from such display, taking advantage of consumers' 'traditional attitude of investing in things of known value'.²⁰ However by the latter quarter of the eighteenth century the shift from functional metal tablewares to ceramics was remarkable. In middling homes Wedgwood creamwares had replaced pewter, but in the richest households fine porcelain was even replacing silver. As Dr Johnson astutely remarked in 1777, on visiting the Derby china works:

...the finer pieces are so dear, that perhaps silver vessels of the same capacity may sometimes be bought for the same price, and I am not yet so infected with the contagion of China-fancy, as to like anything at that rate which can so easily be broken.²¹

The writings of a woman from the Queen's household in 1761 indicate that consumers had a strongly perceived notion of the hierarchical rôle of ceramics based on material, use, price and one's own social status:

Our tea and coffee set were of Common India china, our dinner service of earthenware, to which for our rank there was nothing superior, Chelsea porcelain and fine India china being only for the wealthy. Pewter and delft ware could also be had, but were inferior.²²

¹⁸Lady Holland buying a *petit déjeuner* from Paris in 1763 had to describe its contents 'china plate upon which a cup, saucer, milk pot and sugar dish', while by Jan.13,1791 Lygo did not want any Derby *déjeuner* as the 'town is quite full of French ones'.

¹⁹J.Brewer, *Pleasures of the Imagination* (1997),p107.

²⁰H.Clifford, 'A commerce with things: the value of precious metalwork in early modern England', in Berg and Clifford,eds, *ibid*, pp147-168.

²¹Dr.Johnson writing to Mrs.Thrale, quoted in J.V.G.Mallet, 'Johnson and porcelain manufacture', *Journal of the Royal Society of Arts* (Aug,1985), p625.

²²Thus wrote Mrs.Papendiek on setting-up house in England in 1761; she was the wife of the Queen's hairdresser, in the early nineteenth century she became the Queen's 'Necessary Women'. J.Glasheen, *The Secret People of the Palaces* (1998), p133.

But these hierarchies were not fixed; within little more than one generation, Derby, French and Staffordshire wares would have been added to, or replaced, those on the list. In part such shifts can be explained by the increasing technological improvements within the British ceramic industry, and attendant degrees of artistic sophistication; but they are also associated with the concept and manipulation of fashion.²³

Whereas Wedgwood had quipped that fashion was infinitely superior to merit, the majority of his customers feared to 'venture anything out of the common stile 'til authorised by their betters - by Ladies of superior spirit who set the ton'.²⁴ The aristocrat could be *outré*; the middling consumer was content to be smart. Even the Staffordshire potter showed confusion over the use of vases and bough pots, and had asked advice from his private patrons.²⁵ There are no suggestions within the Derby documents that the showroom manager, proprietor or customer failed to understand the precise uses of items of porcelain. Yet the notion of correct form clearly caused anxiety; a New York merchant wrote to his English supplier in 1758 requesting further details on the uses of his newly supplied dining wares.²⁶

Although research of probate inventories have provided evidence for ceramic ownership prior to c.1760, there is a paucity of evidence relating to the purchase, and use by, identifiable groups in English society of particular types of porcelain or finest pottery for the later eighteenth century (see appendix 2). When the Marquis and Marchioness of Rockingham purchased cream coloured tea and table wares from their local Swinton works, were they intending it for their own use, and if so in what context?²⁷ Country estates did provide the venue for larger parties, including post-hunt dinners or picnics, which would have added to the need for a large pantry of cheaper, practical, yet stylish, tablewares. While many such pieces were obviously intended for the kitchen, some dining wares may also have been associated with the servants' hall or nursery. However Lygo's gift of an eight-person teaset to the housekeeper of Sir P. Burrell might suggest even upper servants in the large houses expected the best.²⁸

²³See E.Robinson, 'Matthew Boulton and Josiah Wedgwood, apostles of fashion', in R.P.T. Davenport-Hines and J.Liebenau, eds, *Business in the Age of Reason* (1987), pp98-114; and McKendrick, Brewer and Plumb, eds, *The Birth of a Consumer Society* (1982)

²⁴JW Dec.1,1769,Ferrar,vol 1,p321

²⁵JW , 25 July ,1772, Ferrar, vol 2, p84, and Aug.5,1772, pp85-6.

²⁶T.H. Breen, 'The meaning of things: interpreting the consumer economy in the eighteenth century', in Porter and Brewer, *ibid*, pp249-260.

²⁷ A.Cox and A.Cox, 'Recent excavations at the Swinton Pottery, the Leeds connection', *ECC Trans.*, vol 11, pt1(1981), pp50-69.

²⁸Lygo, July 31,1795, and July 2,1789.

Chapter 2. Fine porcelain and the establishment of international luxury status

From establishment in the 1740s much of our own porcelain industry made useful wares, notably supplying the demand for Chinese-style teawares. A few factories, including Chelsea and Derby, produced more luxurious ornamental wares akin to the continental pieces of Meissen, and the newly created 'Manufacture royale de porcelaine' at Sèvres. But during the 1770s fashionable porcelain had changed considerably, largely due to the decline of rococo styles and increasing vogue for neoclassicism. French porcelain had become *de rigueur*. In theory, the latter could only be imported prior to 1775 by private individuals bringing in china for their own use or as gifts. However, great numbers of clandestine pieces were readily available in London; Christie's auctions of the early 1770s included 'Sève, Chantilly, Tournay, and Saxon' porcelains. The government recognised the illicit trade and in 1775 made legal the commercial import of non-oriental decorated pottery and porcelain. Duties on French porcelain were high and extremely complicated to calculate, making English china comparatively inexpensive, but increasing the prestige of the former.¹ Saxon china had a 33% duty in 1779. Smuggling continued, and soon London dealers had added sales of 'Frankendahl and Nyphenbourg' to their stocks. Although import of Chinese porcelain by the East India Company was at its height at this time, it had a relegated social rôle amongst the *bon ton*.

It is particularly difficult to assess the comparative perception in Britain of fine English-made porcelain, compared with that of France or Saxony. The early English china manufacturers were very aware of such competition; unable to claim fashionable superiority they appealed to the home buyer to support British investors and craftsmen, and curb the drain that such foreign luxuries caused our own economy. Advertisements stressed the continued improvements and made favourable comparisons with foreign china.² In the 1750s Duesbury entitled his works the 'second Dresden'; by 1771 his Chelsea-Derby wares were compared in 'state of perfection equal to that of the French'. Thirteen years later Derby porcelain was 'finished in a style of superior Richness and Elegance from the choicest specimens of the Seve, Dresden, Berlin and Monsieur Manufacturers'.³ The Derby papers record the popularity of French-style porcelain amongst the fashionable élite from the 1780s.

¹ In Oct. 1775 Horace Walpole complained on his return from France, that he had paid 7½ guineas duty 'for a common set of Coffee things that had cost me but five' - a 150% duty on the original cost.

² See various N. Valpy 'Extracts from eighteenth century newspapers', in *ECC Trans*, vol 11, pt 2 (1982); vol 11 pt 3 (1983); vol 12, pt 2 (1985); vol 14, pt 2 (1991).

³ J.E. Nightingale, *Contributions Towards the History of Early English Porcelain* (1881), p15 and 84. Quoted from the pre-amble to Christie's sale catalogues April 17-20, 1771 and May 17, 1784.

Porcelain factories rapidly grew up throughout eighteenth-century Europe, notably under sovereign or noble patronage, where they took on a symbolic rather than commercial function. The rôle of such porcelains as diplomatic gifts was of prime importance. Although no British china works gained similar royal or aristocratic financial support, the giving of fine porcelain was respected and frequently adopted in this country, too. In 1763 the Queen had purchased a Chelsea service to give to her brother in Mechlenburg-Strelitz. Much Derby porcelain was probably bought with such intention, although motives for purchasing are rarely recorded. Marriage, or recent succession to a title, provided a stimulus to a whole range of luxury trades, as households appropriate to newly acquired status were established. In 1791 the royal parents gave their newly titled son, the Duke of Clarence, a 600-guinea Worcester dessert. Miss Whitbread, Mr. Wraxhall, and Lady Edgcumbe all bought Derby porcelain in the spring and summer of 1789, within weeks of their marriages.⁴ The House of Lords was augmented considerably from the 1780s, notably with the creation of British titles for Scots and Irish peers, and the Derby factory benefited from this, along with the increasing vogue for coats of arms on goods, obliging Lygo to look for an up-to-date 'pearage' with dates of title creation and crests.⁵

Unfortunately, little documentation survives for the latter half of the eighteenth century relating to the precise nature of fine ceramic consumption.⁶ However the use and rôle of fine ceramics clearly altered with shifting fashions, affecting the potential character and size of the porcelain market. An appraisal of the dynamics of such change follows, with an assessment of whether the Derby factory, or any other, coped and adapted to these new demands.

The decline in ornamental porcelain

In France, the source of the *dernier cri*, the rôle of fine china shifted during the 1750s as Louis XV invited his subjects to sacrifice plate to help fund the war effort. This had boosted the production of ceramic tablewares, but also stimulated the *fondeurs- ciseleurs* making ornaments in bronze or ormolu. Thereafter the fashionable chimney-piece was more likely to be covered with a clock and metalware candelabra than a garniture of porcelain vases or figures. In England

⁴Lygo, Oct.1,1794 .

⁵ Lygo March 5 and 12,1789; Jan 4,1791; Sept.4,1793; March,17 1794.

⁶H.Young, *English Porcelain, 1745-95. Its Makers Design,Marketing and Consumption* (1999),p179.

during the early 1760s rococo display was relegated from public rooms to private boudoirs or closets.⁷

By the beginning of the following decade British consumers in particular had considerable choice in their adoption of moveable ornament in neoclassical style. The wealthy could buy genuine antiquities, or traditional luxury pieces of *gout grec* in the manner of the French Court, but they could also purchase modern alternative manufactured goods like those of more moderate means. Notable to the English contribution of alternative ornaments were Boulton's ormolu and Blue John vases and obelisks, and Wedgwood's vases and plaques. The banker Robert Child displayed Boulton pieces rather than ceramics at Osterley Park; while the Queen replaced china on the mantelpiece in her bedchamber with Soho-made vases.

Derbyshire spars and alabasters were advertised for sale at Duesbury's London showroom from c. 1774. The supplier, Richard Brown, had his lapidary works next to Duesbury's Derby mill, and produced wares of similar style and quality to Boulton.⁸ One of the few criticisms of Duesbury I's regime was his 'introducing Mr Brown's Spar ornaments in his showrooms', resulting in the decline of his ornamental trade.⁹ The astute Lygo never suggested this link; fluorspars or alabasters are in fact rarely mentioned in the Derby papers, with a few small utilitarian items like egg and ice cups ordered on special commission.¹⁰ Egan also sold 'Brown's Derbyshire Petrifications' from 1792 in Bath; and the Irish élite ordered a limited number of goods.¹¹ The decline in decorative porcelain was largely the result of fashion, and of the generally relegated rôle of ornamental ceramics, particularly after the vigour of 'vase madness' in the early 1770s. At that time a variety of newly introduced Derby vases had fetched high prices; although these were still selling ten to twenty years later, they only cost a quarter of the original price.¹² Throughout the 1770s Duesbury continued to invest considerably in ornamental models.¹³ By 1786 Lygo complained that he 'never remember[ed] so bad a year for the sale of figures',

⁷A. Somers Cox, 'The non-functional use of ceramics in the English country house during the eighteenth century', in *The Fashioning of the British Country House* (1989), pp195-215, and Young, *ibid*, p185. The Petworth inventories of 1749 and 1763 illustrate this shift (see appendix 2).

⁸M. Craven, 'The development of the city of Derby', *DPIS Journal* 4 (2000), pp108-115.

⁹Samuel Keys' recollections in 1837. He was apprenticed c.1784, and indicated this decline happened 'a few years after I went', quoted in J. Twitchett, *Derby Porcelain* (1980), p45.

¹⁰Lygo, June 24, and July 22, 1789; BM.BP.vol 5. May 17, 1794.

¹¹DL82 8/223 Letter from Marcus Beresford, Dublin, Dec.12, 1792

¹²eg 'Altar vase to Bacchus' could be had at auction in 1773 for between £4.12s and £7.10s, by late 1783 it had to be bought-in at 1 guinea. Richly decorated 'Cupid and Dolphin' vases, designed after Saly, fetched a little under £20 in 1773, by the 1790s they were being sold in biscuit; Lord Dover bought one March 9, 1790 for £5.15s.6d., by 1795 they were being sold for 5 gs.

¹³BM.BP.f1387. In 1818 Stephan claimed he alone had produced c.£1,500 worth of models, 1770-78.

and he had a glut of enamelled ones, suggesting that any remaining faulty figures were cleared at the next trade sale.¹⁴

Flowers were not only purged from ceramic decoration, but cut flowers and bulbs, along with their containers, were largely removed from formal neoclassical interiors, too. Wedgwood observed: 'Vases are furniture for a Chimney piece - Bough pots for a hearth, under a Slab or Marble Table: I think they never can be used one instead of the other, & I apprehend one reason why we have not made our *dressing* flowerpots to please has been by adapting them for Chimneypieces where I think they do not place any pots dress'd with flowers'.¹⁵ By the Regency period both large formal arrangements and simple pot plants have become integral to the setting. Nevertheless some significant decorative Derby vases continued to be purchased in the later 1780s, alongside cheaper flower pots and vases, although the latter appear to have been in competition with Dresden pieces.¹⁶ The spring of 1790 witnessed the auction of various imported French ornamental goods that proved particularly popular amongst the nobility, and probably did upset Derby's sales of decorative porcelains.¹⁷ Consequently the factory management appears to have had limited ornamental production, despite Lygo's continued requests for new and well decorated vases and flowerpots, for he 'had not had anything good of the kind to sell this 2 years'.¹⁸ Lygo even borrowed a Wedgwood flowerpot from the dealer Fogg to inspire, or perhaps shame, Duesbury into production.¹⁹

Yet Derby's unique biscuit figures, groups and vases continued to be bought by the fashionable clientele. Lygo arranged groups 'in the dining Room & show[ed] them discutionally [*sic*]';²⁰ while Vulliamy commissioned ambitious Derby biscuit ornaments to mount on marble plinths as 'chimney ornament' or to support his clocks. One of the most expensive single items of Duesbury II porcelain sold was 'a large fountain group in bisc.t', bought by Thomas Johnes of Hafod in 1791 for 12 guineas. The piece had been provided with its own mahogany stand and glass shade,

¹⁴Lygo, Aug.19, and Sept. 24, 1786.

¹⁵JW, 25 July, 1772, in K.E.Farrer, ed, *Correspondence of Josiah Wedgwood* (1903-6), vol 2, p84, and Aug.5, 1772, pp85-6.

¹⁶E.g. Fine vase purchases include: Mr. McCarty with a set of 3 richly decorated vases (one '86' plus side vases) costing £30.11s., Sept 29, 1786; Lord Scarsdale with vases no.67, Feb.1787, costing 13 gs.; Vulliamy bought two sets of 3 vases 'enam'd with compartments with figures and landscapes, blue and gold borders, gold stripes' priced at £30.9s. per set.

¹⁷Lygo, March 13, 1790

¹⁸Lygo, May 2, 1794, but he had previously requested such goods on Feb.4, 1793; July 2, and Nov. 27, 1793.

¹⁹Lygo, Oct.15, 1794.

²⁰Lygo, Jan.25, 1793.

and stood in the hall of Johnes's Gothick mansion until 1807.²¹ The management obviously regarded the decorative sector as extremely prestigious and important to the factory; no other British ceramics works, including Wedgwood, was capable of this quality of form combined with decoration. Vases accounted for about 2½% of Duesbury II's production by sales value, figurative items perhaps 12%. But pieces of this type were expensive to produce, and thus aimed at the luxury end of the market. Only later does Kean complain that by 1796 the ornamental trade was actually draining the factory's resources, and being subsidised by the useful lines. Kean continued to use the ornamental moulds but does not appear to have added to the range.²²

The hierarchy of tea and table wares

The taste for tea and porcelain

The glassy soft-paste porcelains, as made initially at Sèvres, Chelsea or Derby, were 'calculated rather for ornament than use',²³ although tea, coffee and chocolate pots were produced. The permanent exhibition of teawares on a tea-table in the drawing room, dressing and bedrooms had ceased at Petworth House prior to 1763, perhaps as such display had become universal. Fine silver equipage was used by the rich, but the 'warranted' steatite Worcester or the hard-paste oriental or continental porcelains, and creamwares, that withstood sudden heat were better placed to exploit this general market. By the later 1780s the Derby showroom manager indicated that porcelain *dejeuner* trays, containing a tea set for one or two people, were on display in private quarters, protected, like some figures, under glass domes.²⁴

Despite high import duties the smuggling trade had enabled the middle and lower classes to gain a taste for these beverages, adopting tea with special enthusiasm. The real growth in tea consumption appears to have followed the reduction in duty to an *ad valorem* of 12½% with Pitt's Commutation Act of 1784. Officially tea purchases rose between 1785 and 1794 to an average of £16.5 million - four times that of the 30 years preceding the Act, while tea prices fell by almost half. Any loss in governmental revenue was to be made up by a tax on households with seven or more windows: on Pitt's estimation, a ten-window household consuming 7 lbs of tea a year

²¹N.Valpy, *The Bemrose Papers: Documents of the Derby Porcelain Factory in the Dept. of Medieval and Later Antiquities, British Museum, an Appraisal*(1992), p21.

²²BM.BP. f551-2.

²³'*Gentlemen's Magazine*', vol XXXIII (1763),p191, referring to early Chelsea.

²⁴Lygo,Aug.25,1789, '2 glass shades for the use of covering dejunes - charged 16s. 6d.'

would be better off by 15s 4d, despite paying 10s 6d a year extra on window tax. With window tax largely falling within a husbands' or stewards' responsibility, a housekeeping hostess might have noticed 'savings', equal to the cost of a new set-pattern Derby teaset, in buying 13 lbs. of fine Hyson leaf tea at 10s per pound. Grand households may have 'saved' enough to fund an extensive order of new tea equipage or breakfast set; in the 1790s the Earl of Stamford's Dunham Massey household ordered between 85 to 95 pounds of tea a year.²⁵

By the close of the eighteenth century pottery teawares appear to have met with limited success. Wedgwood basalt, once fashionable to show off a hostess's white hand had been banished from the London saleroom; technological problems with his paler dry-body teawares had been overcome, but by 1787 the Derby manager, Lygo, indicated that 'Jasper tea sets [were] very unsaleable'.²⁶ Cheaper oriental porcelains, including mismatching or damaged wares, easily catered for increasing demand from more lowly buyers. By the 1780s British and French hard-paste porcelains were a practical and attractive alternative for the middle classes, and were soon joined by bone china. Further boosted by the cessation of the East India Company's monopoly in 1833, tea consumption rose within six years from 30 million tons to 49 million. By the close of William IV's reign a host of producers of cheaply priced bone china within the Potteries met the demand for 'Sunday best' porcelain.

Teawares and Derby Porcelain

Teawares, along with those for coffee and chocolate, were clearly one of the Derby factory's staple products, accounting for c. 55-60% of the production by value during the late 1780s. The London showroom had sold 32 teaset in the latter half of 1786; by 1791 for the comparable period this had risen to 169. Three-quarters of the teawares sold in 1789 went to the trade buyers. Although Duesbury I some twenty years earlier had briefly used a steatite body which would have produced heat-resistant wares akin to Worcester, he appears to have deliberately ceased its production, in preference for a soft-paste and glaze that had considerable aesthetic appeal. For Derby's wealthy hostesses elegance reigned over practicality, a point highlighted by Lygo's request from London: 'more teaset are frequently needed', particularly with fragile matching teapots.²⁷ Egan however, in more middling Bath towards the close of the century, seems to have sold more teawares 'without tea pot,

²⁵Manchester Public Library. Ms/Br/F640/D6. 'Dunham Housekeeping Book, 1758-1836'.

²⁶DL82 2/73 July 7, 1795. Lygo to Egan in Bath.

²⁷Lygo, May 24, 1787; Nov 10, 1788, remarked 'do not think sets will sell so well without them'.

stand, sugar box and cream ewer'.²⁸ Mr Strutt of Derby bought such a 'reduced' set in London:²⁹ presumably the more sensible upper-middle class had not caught the 'contagion' - they bought china teacups, but still invested in more practical silver or Sheffield plate teapots.

The majority of teawares bought from the Covent Garden showroom were set-patterns, rather than special commissions, but in a variety of new shapes and designs. Many teacups continued to be ordered without handles (although no longer of the small Chinese dish style) into the close of the century.³⁰ In 1790 the 'plain common size' teawares were priced around 12 guineas a set (41 pieces), while a 'beautiful yellow and gold with landscapes in compartments' variant cost 20 guineas.³¹

Although the Derby works priced wares 'per dozen', with the cheaper cups and saucers usually retailing at around the five to six guinea mark, few private customers bought such quantities, but purchased 'polite' sets, even if 'reduced'.

Under the Kean regime 'very saleable new tea china' was introduced, and appears to have been marketed in half or full dozens at five to ten guineas per dozen.³² This subtle difference may reflect the continued shift in sales towards the ceramic trade, with a corresponding decline in direct 'genteel' purchasing, or the recognition that the silver equipage was becoming a more popular choice.

Ceramics both functional and polite: dessert and tablewares

Compared with the study of tea and its wider social context, the rôle of food in Georgian society has been largely neglected in modern consumer histories despite its close association with a wide range of manufactured household goods and genteel behaviour. Among the wealthy, comment on such everyday eating habits is generally confined to the comparative writings of foreign visitors like Faujas de Saint-Fond, de la Rochefoucauld, la Roche, von Archenholz, Prince Anhalt and others, or in similar vein those comparisons of Arthur Young.³³

²⁸BM.BP vol 4, Egan's order Nov.2, 1797

²⁹BM.BP vol 5, Oct.30, 1792 Teaset 'no.80' (blue-and-gold), price £9.7s.6d.

³⁰eg BM.BP vol 4, Egan order Nov.2,1797 'Teaset '411' without handles, 6 guineas'. Although on Feb.21,1789 Lady Curzon had exchanged 12 cups and saucers without handles for those with, paying the extra 10s.6d.

³¹Lygo, May 21,1789 recorded 'new tea prices- no.82' : Hamilton shape handleless at £6.16s.6d/doz., with handles 7 gs., a complete set for £13.2s.6d. or 13 gs., compared to 'plain common size' at 12 gs. a set, or 6 gs./doz.; July 1,1790 re. 'beautiful' 20 gs.teaset

³²BM.BP vol 4, letter added to Egan's order Nov.2,1797.

³³ For translated extracts from such diaries, and Arthur Young, by theme see R.and E.Forster,ibid, and R. Bayne-Powell, *Travellers in the Eighteenth Century* (1951).

The huge variety of different shaped tablewares, made by ceramic, glass and silver manufacturers from the third quarter of the eighteenth century, illustrates the attention to etiquette and presentation demanded of the more wealthy host. Although an array of different sized dishes would have adequately presented the two, not dissimilar, courses laid out before guests in the 'French style', many pieces had very specific uses.³⁴ At the richest tables or festivities, further courses were added: soup and, after the tablecloth had been taken away, dessert or cheese. The survival of a number of 1780s Derby porcelain soup dishes and ice pails, but made in the decorative style of the previous decade, might suggest that these extra courses were being increasingly offered at polite dinners.

Practical, yet elegant, ceramics were more slowly accepted in this rôle, compared to their use in tea, coffee or chocolate drinking. This is an important distinction: when adopted in the later seventeenth century these newly imported beverages were introduced with appropriate china equipage. However basic British foodstuffs, and our preference for the 'roast beef of old England', had hardly changed over the preceding centuries. Wooden and pewter plates continued to be used widely, while amongst the more fashionable wealthy, hard-paste oriental porcelains more obviously served this rôle from the second quarter of the eighteenth century. Mid-century robust English white saltglazed stoneware plates had been found too hard, blunting steel knives, but from the later 1760s, Wedgwood's Queensware, or similar cream-coloured earthenwares, with neoclassical designs, had dominated dining wares even amongst the wealthy. Soft-paste porcelains throughout much of the eighteenth century were highly impractical in this rôle: unpredictable in contact with heat, and poorly suited to aggressive cutting.

However, by the mid-1770s there was a clear shift away from creamware by the fashionable élite: it had become tired, but worst of all, with its ubiquitous nature, 'vulgar'.³⁵ Wedgwood introduced 'Pearl White' in 1779 'as a change rather than an improvement'.³⁶ But by the early 1780s Duesbury's customers were choosing Derby porcelain for a 'table service for 2nd corse'. The Queen had spent £25 on a table service with five dozen plates, decorated with blue Chantilly sprigs, when visiting

³⁴ E.g. Derby table service order for Mr. Wm. Middleton, March 8, 1790, 'enamelled in fine blue and white': 5 doz. table plates, 1.5 doz. soup, 2 oval dishes (18 inches), 14 ditto less than 18 inches, 2 small oval dishes, 4 sauce tureens, cover and stand, 2 large tureens and covers, 2 sallet dishes, 1 pickle stand, 6 asparaguss servers, 6 hartichoke cups, 4 egg cups, 1 butter-tub and stand, 4 oval comports, 4 square comports, 10 custard cups, 1 pair potting pots and covers. Cost £34.12s

³⁵ JW. Dec. 12, 1774, Farrer, *ibid*, vol 2, p210.

³⁶ JW. Aug. 6, 1779, Farrer, *ibid*, vol 2, p503.

the warehouse in 1781; and four years later the King bought a larger, more ornate set for over £47. There appears to have been little initial problem with the Derby utilitarian body, and Duesbury was confidently producing large items of flatware by the spring of 1787. However precious metal tableware was also on the decline amongst the *bon ton*. The Margrave and Margravine of Anspach's Derby table service was combined with silver, which made up the largest tureens and some of the dish covers. Such large sizes proved a technological problem for the Derby factory, and were priced accordingly; in 1789 a customer was willing to pay £20-30 for a set with two large plates.³⁷ Production of the Anspach's service took over two years, with Duesbury recording: 'all the profit I should have looked for is already sunk in the train of inevitable accidents'.³⁸

Unfortunately the increased popularity for Derby as a practical tableware coincided with an accident at the factory resulting in a 'defective composition', and complaints over 'flying pots'. Lygo bought a tin kettle to 'season' (test with hot water) Derby teapots and tureens, but as a matter of practice had earlier cautioned 'the customers or the housekeepers to warm the table china well before the fire ... till the china is perfectly warm thro'.³⁹ Even 'joints of meat are as liable to break dishes from their communicating heat (if defective in composition)'.⁴⁰ Flying pots were by no means unique to Derby.⁴¹ Although at the close of 1790 Duesbury declared his intention to make 'a body that will stand sudden heat better', nearly three years later Lygo was investigating the feasibility and price of tin and Sheffield plate linings for china tureens.⁴²

The dessert service

The dessert service took pride of place in reflecting the owner's wealth and taste. Although Boulton tried to break into this market he found that the French, as leaders of 'new modes of luxury and magnificence' believed 'China only or perhaps in some instances Glass: is thought proper for fruit and confectionary & that nothing of metal

³⁷Lygo July 30, 1789. 20-inch plates/dishes appear to be the largest Derby produced.

³⁸F.Barrett and A.Thorpe, *Derby Porcelain* (1961), p145. WD writing in July 1793.

³⁹Lygo, Sept 2, 1790

⁴⁰Lygo, Dec.17, 1790 in reference to defective composition plates.

⁴¹Elizabeth Shackleton complained of her husband's breakfast pot used for many years 'cracked to pieces with hot water'. A.Vickery, 'Women and the World of Goods: a Lancashire consumer and her Possessions, 1751-81', in J.Brewer and R.Porter, eds, *Consumption and the World of Goods* (1993), p282; Wedgwood had problems with glazed dry-bodied wares..

⁴²DL82 2/54 Dec.29, 1794 'pie dish linings from Abbott & Co.' 'Spode pie dishes' had been sent the week before.

... would be thought conformable to ye present *whim* of Tast'.⁴³ The porcelain dessert was itself costly, combining rich decoration with elaborate centre pieces, but it was also used to display the spoils of a well-run estate: hot-house fruit, iced-desserts or preserves.⁴⁴ Figurative china items had superseded the confectioners' sugar table ornaments, provoking Walpole to claim that 'Women of the first quality came home from Chenevix's [toy and porcelain dealer] laden with dolls and babies, not for their children but for their housekeeper'.⁴⁵ Negri the confectioner had sold china figures to the Duke of Gordon in 1765,⁴⁶ while twenty years later the confectioners Gunter, and Fitzwater of London, and Vickers in York bought ornamental Derby porcelain⁴⁷. Various desserts could also be bought-in.⁴⁸

Derby had continued the Chelsea tradition of making fine dessert services, but after the French trade treaty they appear to have become increasingly popular, with Lygo requesting the factory to send 'some complete desserts for find there is a greater call for them than ever I knew before':⁴⁹ 190 complete and 14 part-services were sold c. 1786-1794, as documented in the surviving London showroom accounts.⁵⁰ Cheap desserts in the range of 12 to 20 guineas generally provided 24 plates, 14 various-shaped comports, and a pair of covered cream bowls with stands. Again within the factory management, most specially ordered desserts were quoted 'per dozen plates', the majority being in the range of 4 to 7 guineas. These desserts, together with fashionable additions of ice pails, ice cups, bottle stands or cheese stands, form the greatest volume of Derby's private special commissions. Additional pieces added considerably to the basic price; thus the Earl of Shaftesbury's standard 24-person dessert of £36.15s. had a pair of ice pails at 8 guineas, with 12 ice-cream cups, and covers on two stands for an extra £5.15s.6d.⁵¹ As a discrete group desserts were the most costly purchases, with many larger complete services sold for between £30 and £100 each.⁵² A number of Derby desserts were provided with extra, commissioned

⁴³ Letter from Thomas Pownall, MP, to Matthew Boulton, 1769, in R. Rowe, *Adam Silver* (1965), p62

⁴⁴ On average an elite consumer spent 3 to 4 times more on a dessert service compared to dinner ware; this ratio is equally true of Catherine the Great, Sir Watkin Williams Wynn, or Sir John Stanley.

⁴⁵ Walpole in *The World*, Feb. 8, 1753, in R. J. Charleston, *English Porcelain, 1745-1850* (1965), p21

⁴⁶ B. Horn, 'Ceramic bills paid by Alexander, 4th Duke of Gordon', *ECC Trans*, vol 15, pt3, 1995, pp435-39.

⁴⁷ Lygo, Dec. 14, 1792. Gunter also bought a dessert service

⁴⁸ At the Gala celebrating the King's return to health 'supper was Martindales, the desert, Gunters', *The World*, April 1, 1789, p3.c2. While Sir John Stanley's London household bought icecream from the confectioner Robinson.

⁴⁹ Lygo, Feb 12, 1788.

⁵⁰ A. Ledger, 'Derby Dinner Services in C18th Bone Porcelain', *NCS Newsletter*, no. 88 (Dec., 1992) pp24-28.

⁵¹ DLS Parcel 17x. Earl of Shaftesbury June 13, 1786; also Sept 9, 1793.

⁵² E.g. dessert purchases: DLS Parcel 17x. The Rt. Hon. Mr Fitzherbert £99.7s, (March 23, 1790), Sir Joseph Banks £47.13s. (Feb 10, 1794). Dessert sets pattern '115' sold for £31.10s, with ice pails at 6 guineas extra, to the Prince of Wales (Feb, 27 and March 7, 1792), Mr Grigg, (Jan. 15, 1794) and Lord

metalwork 'frames' or mounts.⁵³ In late 1797 Kean introduced new, 'very striking' desserts priced at 18 to 30 guineas.

Duesbury II's dessert and tablewares accounted for about 25-30% of sales by value. Significantly, table sets were also being bought in designs to match the dessert; Chelsea had made prestigious combined services in 1763, and Wedgwood had recorded his contact with Catherine's Russian court, having 'just bought you the firs[t] go[od] Order for Double Services'.⁵⁴ But from the later 1780s they had become more general; even American high society had similarly adopted this practice.⁵⁵ The Derby management must have relished the vogue for matching porcelain tablewares because of the potential new orders for five or more dozen plates and dishes priced at the cost of dessert wares. Lord Vernon, who purchased a combined service in late 1794, paid 8s.9d for each of his dinner plates, and 7s.10½d for his dessert plates, although Lygo had earlier noted that most customers were reluctant to pay extra for the inch-and-a-half larger dinner plate.⁵⁶ The largest recorded combined Derby service, costing a little under £245, contained 336 pieces, with 18½ dozen tableplates, in one of the mid-range variants of dessert pattern '65'.⁵⁷ Of the 25 complete dinner services, and 14 part-services documented, the average-sized set was 110 pieces, nearly three times the size of a dessert. Most were simpler designs; however seven armorial table services were commissioned.

Shifting eating patterns and the rise of silver

The gradual shift in eating patterns modified tableware requirements; as the eighteenth century progressed the main meal of the day originally served at noon to two o'clock became later. The gentlefolk of Lancashire dined at 4pm in the late 1770s. By the close of the century, the fashionable dined at 5 pm; by 1810 dinner was at 6pm, becoming later over subsequent decades. With this later eating came a new distinction between appropriate day and night fashions, notably the appearance of evening jewellery intended for display by candlelight.⁵⁸ But a similar desire for rich display was equally true for the dining table, as noted by a Derby customer who

Wentworth (July 17, 1792 and Aug 11, 1794)

⁵³ E.g. supplying dessert frames DLS Parcel 17x. Feb 4, 1790, Oct 28, 1790.

⁵⁴ Chelsea had made the Mecklenberg-Strelitz service and Thomas Williams' copy in 1763. KUL. Wedg. Acc. A. Baxter's orders from the Russian Court, c. 1769-78.

⁵⁵ Lygo, May 31, 1790

⁵⁶ DLS Parcel 17x. Dec. 16, 1794 Lord Vernon's service cost £97.3s.6d; Lygo July 2, 1786.

⁵⁷ *ibid*, June 16, 1794, Hon. W. Windham paid £244.16s.

⁵⁸ E. Robinson, 'Matthew Boulton and Josiah Wedgwood, apostles of fashion', in R.P.T. Davenport-Hines and J. Liebanau, eds, *Business in the Age of Reason* (1987), p107.

liked her dessert 'by daylight but says it loses its beauty by candlelight'.⁵⁹ Under Kean 'striking' patterns with deeper colours, a reduction in the surface area of exposed white porcelain, and greater use of gilding, are more obvious. By the Bloor period the Imari palette and designs are commonly advertised as appropriate to candlelight. Spode's bone china, along with various richly coloured ironstones, supplied a larger middling market with fashionable tablewares.⁶⁰

As the main meal of the day became later, the Derby factory sold an increasing number of breakfast sets, caudle cups, broth basins and so on, as other foodstuffs were being consumed before dinner, other than a very light and private 'tea and toast' breakfast. A greater variation in ceramic finish appears to have occurred as the century closed and as life styles changed, being appropriate to day- or candle-light, formal or informal gatherings, and gender. Wedgwood had created printed-patterned 'dead game' tablewares for his 'country gentlemen [and] sportsmen' in the early 1770s. By the close of the century 'masculine' hand-painted hunting scenes and dogs are depicted on Derby porcelain; by c. 1810-5 game, fish and bird decorated services were being made.⁶¹ Such scenes might suggest that a new generation of wealthy men were confidently buying porcelain, perhaps not the traditional élite with a classical education, but ones who rejected the antique subject matter in favour of their favourite pursuit.

Perhaps not surprisingly this apparent change in emphasis occurred as the aristocracy and wealthy had moved on from porcelain tableware, following the Prince Regent's spectacular display of silver at his grand fête at Carlton House in 1811. Thomas Hope's publication of 1807 had popularised the 'antique' style for display. By 1820 silver was more widely used as a tableware in Britain than anywhere else in Europe; during his reign George IV commissioned nearly £112,000-worth of table silver. France continued to use porcelain in this rôle. Such was the rarity of porcelain on the finest English dinner tables by 1830 that Lady Morgan recorded its use by Baron Rothschild: 'no burnished gold reflected the glowing sunset, no brilliant silver dazzled the eye; porcelain, beyond the price of all precious metals by its beauty and its fragility, every picture, consorted with the general character of sumptuous simplicity which reigned over the table'.⁶²

⁵⁹Lygo, March 5, 1789.

⁶⁰G. Godden, *Staffordshire Porcelain* (1983), p109; R. Copeland 'Closer to the Bone', *NCS Journal*, vol 9 (1992), pp1-24.

⁶¹JW Nov.30-1, 1771, Farrer, *ibid*, vol 2, p54.

⁶²Quoted from Silver Gallery text, British Museum.

Chapter 3. Consumption according to gender, social and product category

*Fine ceramic consumption and gender*¹

Much of the stimulus to the trade in consumer goods has been credited to upper-class and middling women's growing interest in their rôles as fashionable hostesses, mothers or interior decorators.² Posterity has largely credited women as being the consumers of porcelain and fine earthenware throughout the eighteenth century. Satire of the earlier rococo period ridiculed feminine passion for porcelain ownership.³ By 1770 Wedgwood displayed 'various table and dessert services ... to do the needful with the Ladys in the neatest, genteelest & best method'.⁴ However, contemporary household accounts and diaries indicate that women largely bought the mundane and repetitive items for the home, while it was their husbands who bought the more expensive status provisions, dynastic art and furniture, and occasional items, some acquired on impulse. Porcelain consumption sits astride the male-female rôles.

Porcelain teawares had by mid-century acquired the habit of nearly four generations of use; other than clothing, they appear to have been the only high-value status article provincial gentlewomen were allowed to buy: their acquisition involved either sending away to London, or buying while visiting a fashionable resort.

Men were not, however, immune to the appreciation of porcelain; European rulers had whole-heartedly collected china and subsidised its manufacture. By mid-century porcelain had become 'a necessary appanage of lustre and prestige', bought by men to show off their wealth and good taste.⁵ Even under neoclassical influences Robert Adam had incorporated a 'china closet' at Syon House, while in 1784 Horace Walpole showed guests his 'modern and old china'. In contrast to those of their womenfolk male porcelain purchases were costly display vases and dessert services, notably for dining-room show. Despite the development of neoclassicism, and what would appear today as more 'masculine' alternative products, men continued to buy

¹See appendix 2, and relevant inventories of consumption.

²N.McKendrick, 'Home demand and economic growth: a new view of the role of women and children in the Industrial Revolution', in N.McKendrick, ed, *Historical Perspectives: Studies in English Thought and Society in Honour of J.H.Plumb* (1975), pp152-210. He stresses the high numbers of titled ladies in the Wedgwood London accounts, and even higher percentage of women customers in the provinces.

³H.Young, *English Porcelain 1745-95. Its Makers, Design, Marketing and Consumption* (1999), pp189-192

⁴JW, May [31], 1767, K.E.Farrer, ed, *Correspondence of Josiah Wedgwood* (1903-6), vol 1, pp150-1.

⁵In reference to the owner of the Ludwisburg's porcelain factory beliefs on the role of china, quoted in A.Finer and G.Savage, eds, *Selected Letters of Josiah Wedgwood* (1965), p30

status porcelain. Some even 'replaced' silver with china tablewares; in the 1770s the Whatmans of Kent happily added plate to the family collection, but the conspicuous consumer Sir John Stanley bought porcelain tableware, too.

The dynamics of eighteenth-century expenditure on status or luxury goods are complex. At its simplest it was merely a visual manifestation of a family's wealth; used wisely it was also a symbol of moral and aesthetic authority. The aristocratic classes connected cultural consumption and taste to political power. Women, even amongst the élite, were largely excluded from the purchase of status goods within the general realm of 'fine art' because they were believed to lack the intellectual capacity to make aesthetic judgements. Women in contrast were allowed to buy 'agreeable arts' that appealed to the eye: fashion and associated luxury goods.⁶ However as the eighteenth century progressed the middle classes debated their own concepts of taste, where luxury was a corrupting force creating undesirable 'effeminacy' in men and 'boldness' in women.⁷ Masculine cravings for show and extravagance, were to be moderated by feminine influences of virtuous and refined domestication.⁸ But ideology and reality did not necessarily match, and the commercialisation of consumer culture had increasing pace: the definitions of luxury and extravagance were redefined, as consumers, particularly women, were seduced by the notion of fashion.

The adoption of porcelain 'second course' tablewares was clearly a male status decision, but their adoption by wealthy middling males might have been less enthusiastic. Silver plate provided show, combined with financial security, while table porcelain was clearly a fragile luxury. However such purchasing would clearly be encroaching on their wives' duties as hostesses and housekeepers. One male

⁶The division between the 'fine' and 'agreeable' arts is far from clear within the context of expensive household goods outside the traditional gender roles. See H. Clifford, 'A commerce with things: the value of precious metalwork in early modern England', in M. Berg and H. Clifford, eds, *Consumers and Luxury Consumer Culture in Europe, 1650- 1850* (1999), pp147-68. Between 1766-77 goldsmiths Parker and Wakelin supplied 257 male customers, and 43 women. The women bought smaller individual items like teaware, snuff boxes or paste jewellery; but only 3 women bought entire teasetts, or precious jewels. L. Lippincott, *Selling Art in Georgian London: the rise of Arthur Pond* (1983), pp66-9. A quarter of Pond's customers were rich and noble women; of these 82% made one purchase, compared with 62% male, while only 2 spent more than £50, none spent over £100. Boulton and Fothergill's customers, pre-1782, appear to have been similarly male dominated in the ratio 3:1. See also: J. Jones, 'Croquettes and Grisettes: women buying and selling in Ancien Regime Paris', in V. de Grazia, ed, *The Sex of Things* (1996), p36; and D. Kuchta 'The making of the self-made man', *ibid*, pp54-78. Both limit their discourses on eighteenth-century gender roles to the luxury purchasing associated with personal attire, and not household goods..

⁷S. Richards, *Eighteenth-century Ceramics: Products of a Civilised Society* (1999), p96-7.

⁸R. Jones, *Gender and the Formation of Taste in Eighteenth-century Britain* (1998), p207-10

Derby customer Mr Job. Mathews compromised by choosing and approving the crest design on tableware, then bringing in his wife to choose the shapes.⁹

By the 1780s fashionable shopping habits had changed: Wedgwood's 'shoals' of ladies may have disappeared, as society husbands and wives were to be seen in public together. Furthermore women with young children, although giving birth in town (near to their physician), were forgoing the Season, and staying in the country. The Derby warehouse was not visited by large female groups, but by a number of couples, or two generations of the same family. In general, Lygo's courting of women with, for example, home visits, is more restricted, and secondary to the approval of the man of the house. By the mid-1780s Lygo was largely dealing with a hierarchy of servants who managed the porcelain in the larger aristocratic or Royal households, and these were generally men. These servants were clearly influential in approving the porcelain, although their employers had the final say. Duesbury's private bills were mostly paid by a steward or butler; very occasionally a housekeeper was involved.¹⁰

Despite McKendrick's use of the Wedgwood Archives to illustrate the increasing importance of the female consumer, no statistical analysis of the sales records by gender, value of purchases or frequency has been attempted for fine pottery. Something of the male and female divide common to eighteenth-century luxury purchasing is apparent c. 1770 as Wedgwood wooed 'Lords and Dukes' buying expensive vases after the antique, while 'shoals' of ladies visited his warehouse to buy useful wares.¹¹ But as fine pottery became cheaper, did this male-female divide remain through the lower classes, and at what time did the purchase of Wedgwood-style wares in grander establishments become a routine housekeeping task?

Housewives appear to have been reluctant to hand over the responsibility for care of fine ceramics to their servants. Elizabeth Shackleton, on an annual budget of around £300, and Susannah Whatman, whose paper-maker husband had an income of £6,000 a year, were both directly involved in cleaning porcelain.¹² Even in grander households the adoption of vulnerable soft-paste porcelain useful wares appears to

⁹Lygo, Nov.19,1789.

¹⁰ Exceptions to the male servant include mention of Mr Middleton's housekeeper, Nov.1786, and Sir P.Burrell's housekeeper, July 31,1795. Female servants are more closely associated with female clients: Lady Dundass, Feb. and Sept.1795, and Lady Cremorne, Nov 20,1788.

¹¹Men appear to have played a minor economic role in 1767 as Wedgwood compared his custom to 'Capabilty Brown's': 'my life was devoted to the service of the Ladys, as his was to that of the Noblemen & Gentn.', Farrer, *ibid*, vol 1, pp143-4

¹²A.Vickery, *The Gentleman's Daughter*(1998), p149; C.Hardyment,ed, *The Housekeeping Book of Susannah Whatman* (1987).

have had attendant social consequences. Lygo's record of breakages of Derby tableware suggests it was not so much its loss that seems to have caused the private customers' complaints, but the disruption and unpleasantness 'below stairs'.¹³ In 1790 Lygo placated a distraught housekeeper with flown tureens by giving her a guinea. Repair or replacement was an accepted consequence of buying fashionable china and a further demand on household budgets; Duesbury's London showroom regularly provided such a service.¹⁴

Further comparative data is necessary to help clarify the subtle social distinctions between the use of fine or common porcelains, fashionable earthenwares or alternatives of silver or newly manufactured goods, by family background and wealth, gender, and generation. Although female consumption may provide a model of expansion as applied to the mass purchase of goods bought for 'pocket money', typified by Wedgwood's 'genteel' pricing,¹⁵ women's direct involvement is not so convincing within the traditional luxury trade, or in the purchase of high-value goods for the house. Women were largely dependent for money on their menfolk, and it is the latter that generally paid any large bills by bank draft, whether small amounts accumulated on a tradesman's account over a number of years, or a single luxury purchase.

¹³E.g. Lygo, March 12, 1789. Lord Wentworth's servant claimed a Derby ice pail was 'broke with his wiping', while a teapot was damaged with hot water; Sept. 2, 1790. Mr Craythorne's two china tureens apparently flew after twelve months' use.

¹⁴ DL82 and Parcel 17x: e.g. repairs: Nov. 3, 1787 The Queen 'match cover' 15s 6d; Dec. 23, 1789 'Dutchess of Ancaster mending 3 plates 2s.'; Feb 15, 1790 Debit Lady Grantham 'to cleaning a tea set discolor'd with seasoning £1.11s.6d.'. Ice pails, and their covers, in particular suffered in the Prince of Wales' household: 5 were repaired at 1s. 6d. to 2s. each, while 14 ice pails at 6 to 7 guineas per pair were purchased between March 1784-March 1790; one ewer was mended (Royal Archives Geo 26329-31).

¹⁵JW, Dec 1, 1769, Farrer, *ibid*, p258

The gender of Derby Porcelain purchasers

Table1. Custom at the Duesburys' London Showroom, 1783-5, and 1789 #

	Total Custom			Private Custom			
	Number	Female no.	Female %	Number	Private %	Male %	Female %
1783	189	34	18	146	77	76	23
1784	159	23	14	96	60	76	23
1785	158	29	18	106	67	72	27
1789	405	92 (61)*	23(15)*	134	33	54	45

* While female customers were generally private in 1783-5, the number of female dealers had increased considerably by 1789; the figure in brackets represents the female private customers only.

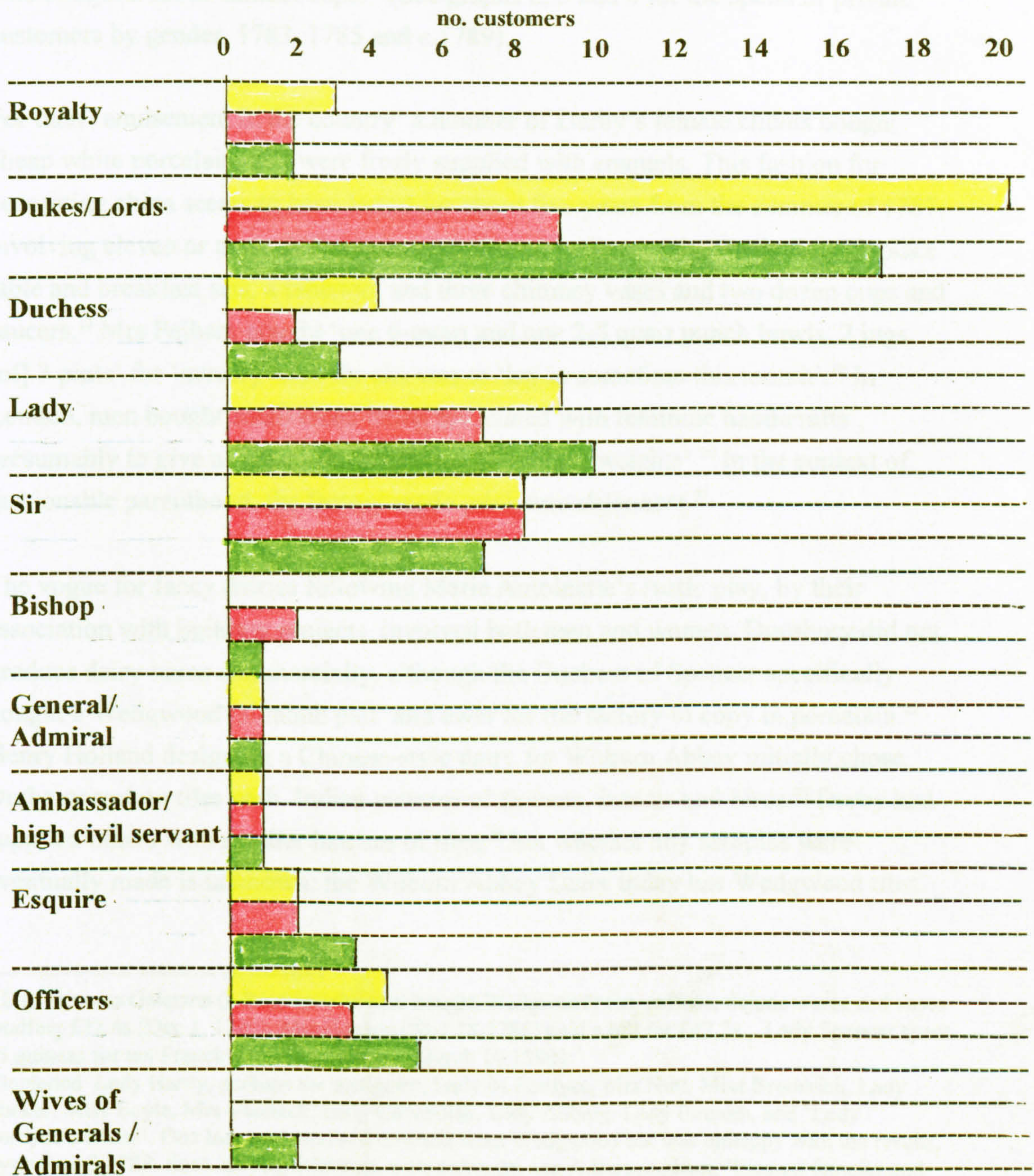
Based on Day-books, 12 months, Feb. 1789 - Jan. 1790, and DL82 7/115. Customer lists are not completely accurate, for Lygo recorded cash sales rather sketchily, sometimes never knowing a purchaser's name, nor did he detail what had been bought. Wedgwood encouraged cash sales, but by their inexpensive nature they were likely to be of relatively small value (like his genteel 1½ guineas), though Lygo's records would suggest £5 to £7 was not an uncommon cash payment, often by women - this would equate with a teaset. Men similarly are recorded under cash sales, but payments in excess of £10 all appear to be credited to men. Some cash payments were also made by dealers.

Private male customers outnumbered women by a ratio of 3 to 1 during the early 1780s (see graph 1 for the make-up of the private customers,1783-5).) However from the mid-1780s, as Duesbury shifted his marketing strategy towards the trade, private female custom grew, almost equalling the male by the close of the decade. Of the total trade, private women customers made up a relatively static 14-18 % of the London clientele, but the number of female traders in Derby porcelain was similarly increasing: by 1789 over 11% of dealer-clients were women.¹⁶

In general, the London warehouse day books c. 1786-96 would confirm that the two sexes were buying porcelain related to their respective public rôles: women as hostesses, mothers and housekeepers; men as purchasers of status items, gifts and of presents on impulse. Women were buying more teawares. As housekeepers, they were certainly buying a greater number of odd items to make up or replace tableware. However, it was rare for a woman to buy high value goods, with some

¹⁶J.Jones, *ibid*, p25-9. In 1780s Paris women *marchande de mode* were credited with particular powers of seduction in selling luxury goods, even overpriced ones, to both male and female customers.

Graph 1 : Warehouse Private Customers by Identifiable Types, 1783-5



Key: 1783
1784
1785



notable exceptions: the Russian Princess Galetzen, Miss Whitbread (who as the newly married Mrs Gordon paid the bill), and, as a leader of fashion, Lady Spencer, who bought a set of cabinet cups.¹⁷ (See graphs 2, 3 and 4 for the spend of private customers by gender, 1783, 1785 and c.1789).

For their 'amusement in the country' a number of Derby's female clients bought cheap white porcelain, and were freely supplied with enamels. This fashion for decorating china seems to have lasted for about five years from the summer of 1787, involving eleven or more different households on various scales: including 12-place table and breakfast sets, a tabletop, and three chimney vases and two dozen cups and saucers.¹⁸ Mrs Pelham bought 'one 6-quart and one 2-3 quart punch bowls, 2 jugs [of] 3 pints' for 'nursery use', for she was to 'lay in sometime this month'.¹⁹ In London, men bought small china items associated with feminine handicrafts', presumably to give as presents: thimbles and 'netting weights'.²⁰ In the context of fashionable parenthood, the factory made miniature *dejeuners*.²¹

The vogue for fancy dairies following Marie Antoinette's rustic play, by their association with building projects, involved both men and women. Duesbury did not produce dairy items commercially, although the Duchess of Spencer specifically bought a Wedgwood 'sillabub pail' and ewer for the factory to copy in porcelain.²² Henry Holland designing a Chinese-style dairy for Woburn Abbey initially chose Derby porcelain tiles with Indian patterns of flowers, insects and birds.²³ Derby had supplied others with smaller batches of tiles,²⁴ but whether any samples were eventually made is unknown: the Woburn Abbey Dairy today has Wedgwood tiles.

¹⁷E.g. Princess Galetzen (a Russian who also bought Wedgwood) tea, coffee, dejeuner wares and vases totalling £22.4s (Dec 1, 1789); Mrs Gordon (Nov 18, 1789) paid a bill for £47.7s.; Lady Spencer spent 15 guineas for ten French-style cabinet cups (March 19, 1790)

¹⁸Included Lady Hardy, perhaps the instigator, Lady M. Fordyce, Mrs Nutt, Miss Broderick, Lady Tucker, Miss Boyle, Mrs Vanneck, Lady Cavendish, Lady Aubrey, Lady Plimoth, and 'Lady Fordyce's friend'. One lady had received enamels from Wedgwood but was unhappy with the results, Lygo Sept. 3, 1788. Such accomplishments were common, see A. Bermingham, 'Elegant females and gentlemen connoisseurs', in A. Bermingham and J. Brewer, eds, *The Consumption of Culture: Image, Object and Text* (1995), pp 495-8.

¹⁹ Lygo, Sept 5, 1784. Mr. C. Pelham paid £56.15s. for goods in 1785.

²⁰DLS Parcel 17x. March 23, 1790 Mr Pleslow bought 3 thimbles, netting weight (presumably for bobbin lace) at 1s. each; Feb. 2, 1790 Mr Sale bought one thimble.

²¹E.g. *ibid*, Dec 24, 1793 Lady Malmesbury, white and gold toy dejeuner 10s.5d.; also April 26, 1790.

²²Lygo, June 11, 1789. Lady Spencer had not approved of the Derby shapes, and had gone straight to Wedgwood's. The pail was allowed to be 1.5 inches shallower and larger in diameter. They were to be decorated with a green ground, gold border, floral garland and cypher 'LJS'. Wedgwood provided dairy furniture to the Bishop of Chester, Countess of Bridgewater, and 'aunts of the King of France'.

²³Lygo, May 21, July 11, 1795. Holland wanted to know the initial cost of 500, with the same to follow.

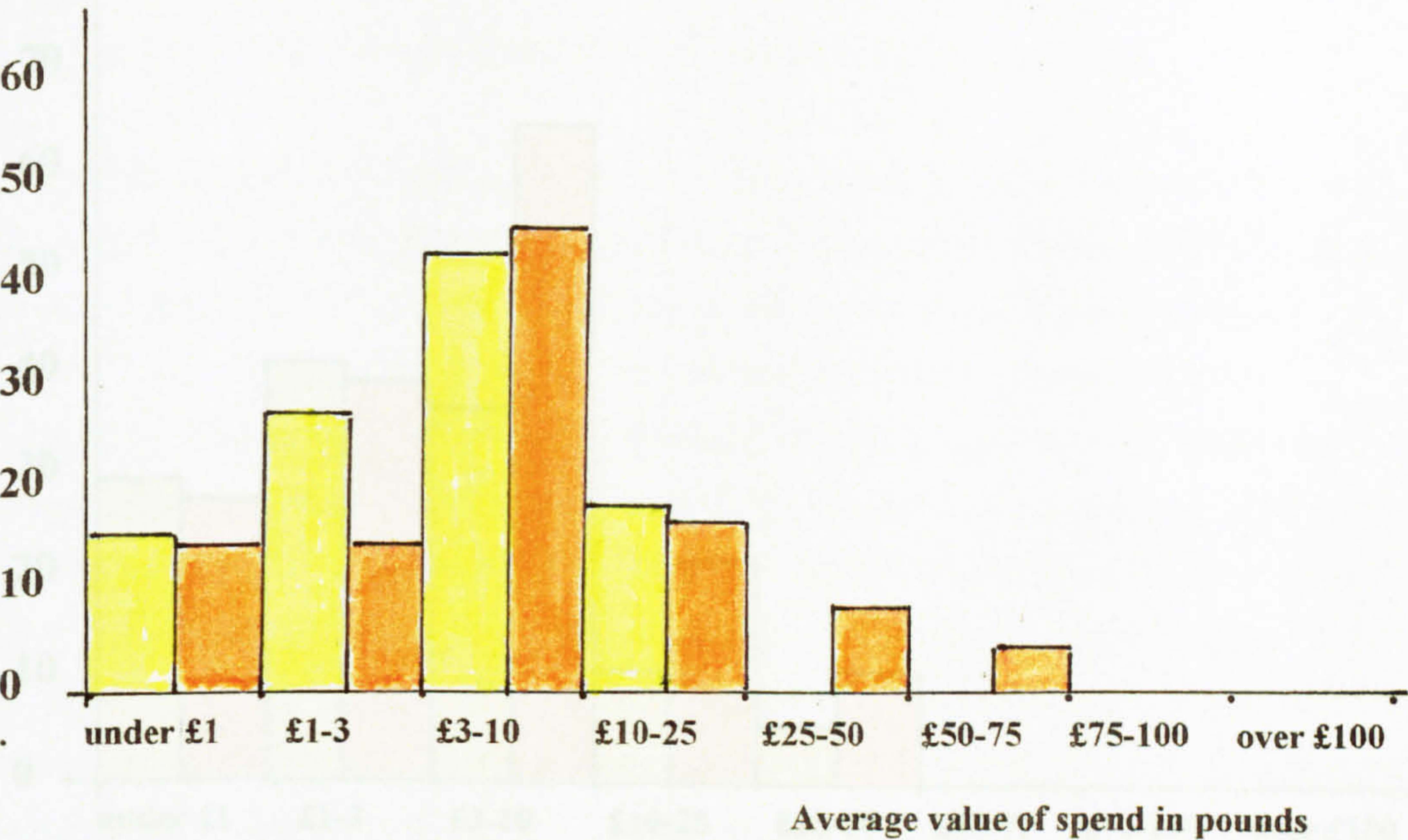
²⁴DLS Parcel 17x. Sept. 26, 1793 'sold Mr Elliott 30 tiles with green vases 15s.'

Graphs 2 and 3 : The spend of private customers by gender, in 1783 and 1785

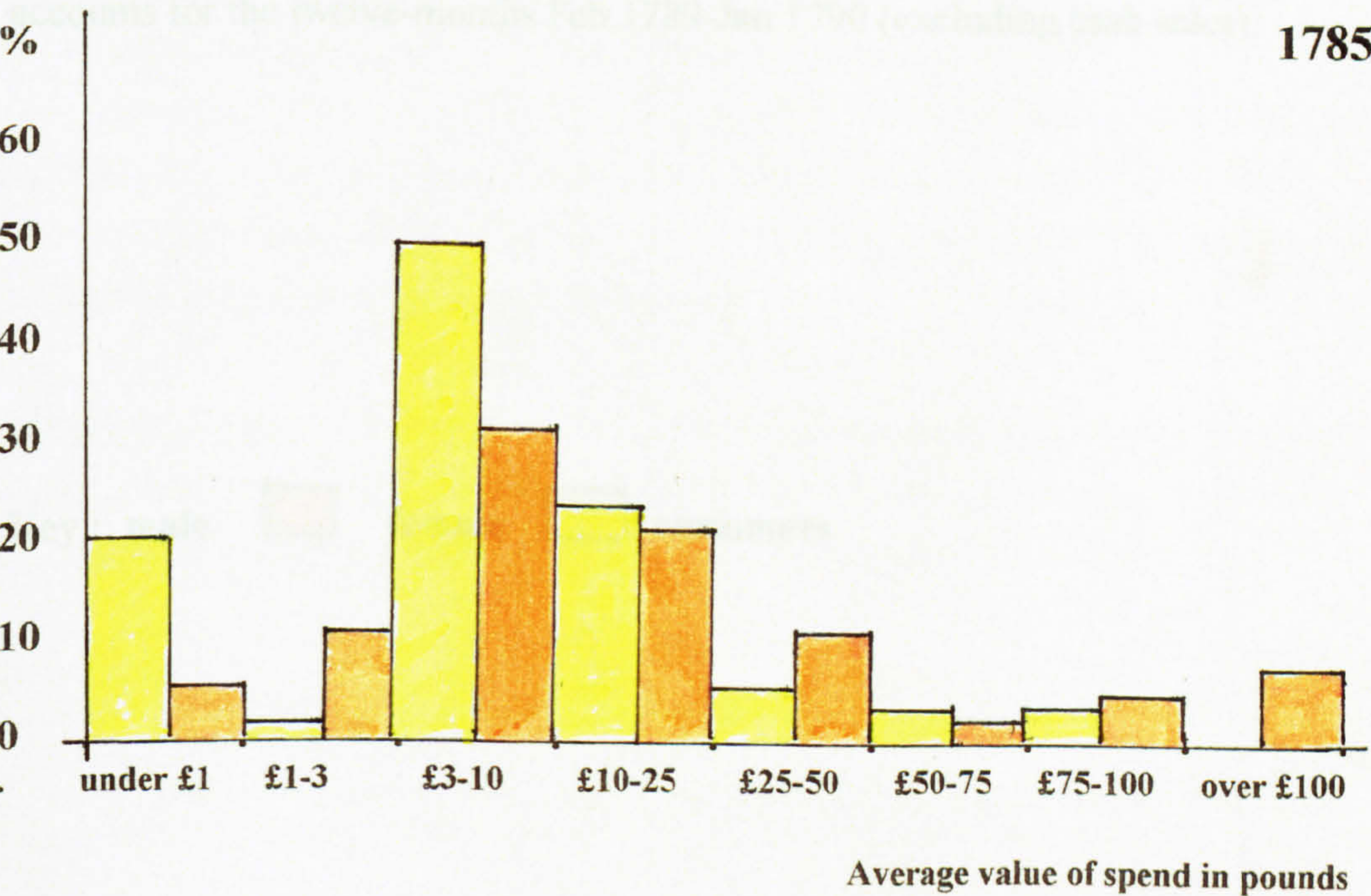
Private
Customers

%

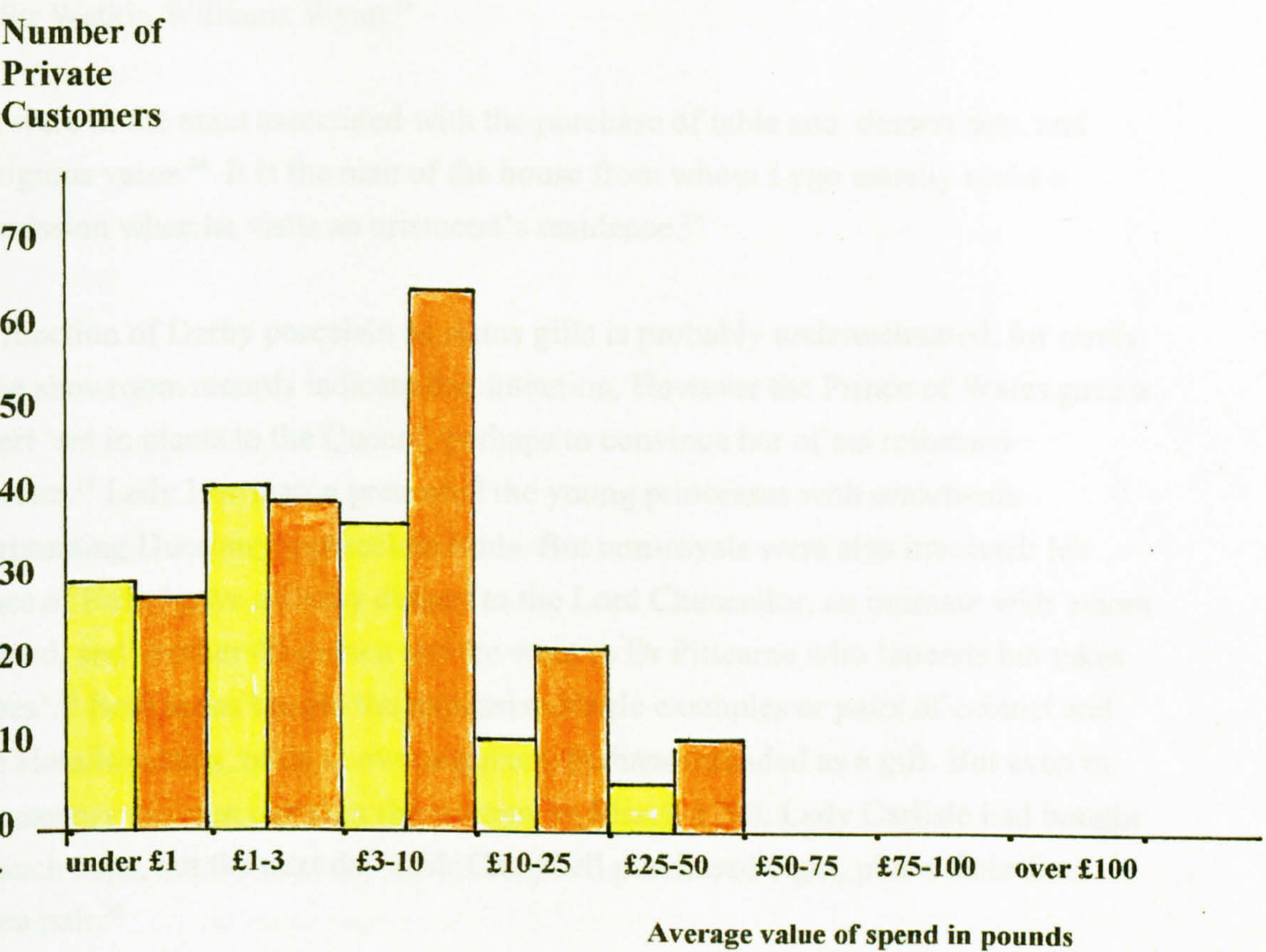
1783



Key: male female customers



Graph 4 : The relative spend of private customers by gender, c.1789



The graph is based on individual private transactions recorded in the day-book accounts for the twelve-months Feb.1789-Jan.1790 (excluding cash sales).

Key : male female customers

The Staffordshire potter had already provided tiles by 1783 to the Duchess of Argyll and Sir Watkin Williams Wynn.²⁵

Men were in the main associated with the purchase of table and dessert sets, and prestigious vases.²⁶ It is the man of the house from whom Lygo usually seeks a commission when he visits an aristocrat's residence.²⁷

The function of Derby porcelain as status gifts is probably underestimated, for rarely do the showroom records indicate this intention. However the Prince of Wales gave a dessert 'set in plants to the Queen', perhaps to convince her of his reformed character.²⁸ Lady Harrington presented the young princesses with ornaments incorporating Duesbury's porcelain birds. But non-royals were also involved: Mr Johnes of Hafod gave a Derby dessert to the Lord Chancellor, an intimate with whom he dined, and another 40-guinea service went to Dr Pittcarne who 'attends but takes no fees'.²⁹ Both sexes bought the expensive single examples or pairs of cabinet and large Hamilton cups, often at over a guinea, perhaps intended as a gift. But even in this category the men outspent the women: in March 1790, Lady Carlisle had bought two such cups, but the next day a Mr Campbell purchased eight, plus a finer five-guinea pair.³⁰

Toilette items were bought by both genders: these included tooth picks, pomatum pots, eye cups; and the Prince of Wales commissioned a crested wash-basin set.³¹ However, Lygo's remarks of 1790 might suggest that utilitarian hand basins, jugs and, particularly, chamber pots were rarely produced by the up-market porcelain factories: neither the Salopian nor Worcester warehouses could provide better examples than Nankeen ones, or match their low prices.³²

Both Duesburys produced from c. 1770 into the 1790s unknown quantities of trinkets and seals, which were a popular line with Wedgwood across the sexes, and could be mounted into jewellery, tea caddies, furniture, sword handles and so on. Very few

²⁵KUL.Wedg.Acc. L78-13459/60

²⁶ E.g. Male acquisition of expensive larger vases: Lord Scarsdale spent 13gs on vases in 1787, while Mr.McCarty of Cork bought 3 vases for £30.11s.in 1786.

²⁷E.g. Male purchasers of dessert services: Hon.Mr Fitzherbert (£99.7s, March 23,1790); Earl of Shaftesbury (£50.18s 6d, June13,1786 and £48.9s.,Dec 30,1790); Lord Marlborough (£126. 9s.6d, Jan 21,1787)

²⁸ Lygo,Dec.2,1794 and May 9,1792.

²⁹Lygo, Dec.11,1788 and May 15,1792

³⁰DLS Parcel 17x. March 30, 1790

³¹ E.g. toilet purchases: Mrs.Leigh pomatum pots (10s. 6d., Feb.9,1790); the Queen two eye cups (4s.,March 2,1787);The Prince four crested soap basins large basin and ewer (£9.6s., March 28,1787)

³²Lygo, Aug.26,1790

Derby trinkets appear to have survived, although mounted they may have been misattributed to Sèvres.³³ Details of private sales are limited; most appear to have been sold wholesale.

A survey of private customers' visits and purchases of Derby Porcelain: March to August 1789

Lygo provided Duesbury with details of the private visitors who called at the London showroom during the latter part of the Season before returning to their country estates.³⁴ Combined with Lygo's letters, and extant daybooks, it has proved possible to determine something of the nature of the porcelain showroom visitor and purchaser, by gender and rank.

The numbers of 'people of fashion' are small because Duesbury and Lygo called on the élite at their homes. The lists exclude traders, but also an unknown number of private visitors, some of whom are recorded in the day-books with small cash payments.³⁵ Presumably Lygo recognised the latter as 'window shoppers' who were never likely to spend more than a few shillings. By early 1789 the warehouse appears to have been allowed to run down as a public venue, with Lord Cremorne commenting in February that year that few of his friends knew of its existence.

The considered purchasing decisions of the late-season private customer were made within a twelve-week period: from the week beginning 30 March 1789, when the showroom received its maximum number of recorded visitors, to late June (see graph 5). On 24 March *The World* recorded 'the influx of people into London for the Levee is prodigious'; three days later there had been a tea at the drawing-room in St James's Palace to celebrate the King's recovery to health.³⁶ The manager noted that by late May 'the nobility [were] so engaged in court balls etc. [that they do] not think

³³The Victoria and Albert Museum and British Museums have buckles, sword mounts et al. Cameo portraits were produced by Derby in the early nineteenth century, e.g. the minister Eccles.

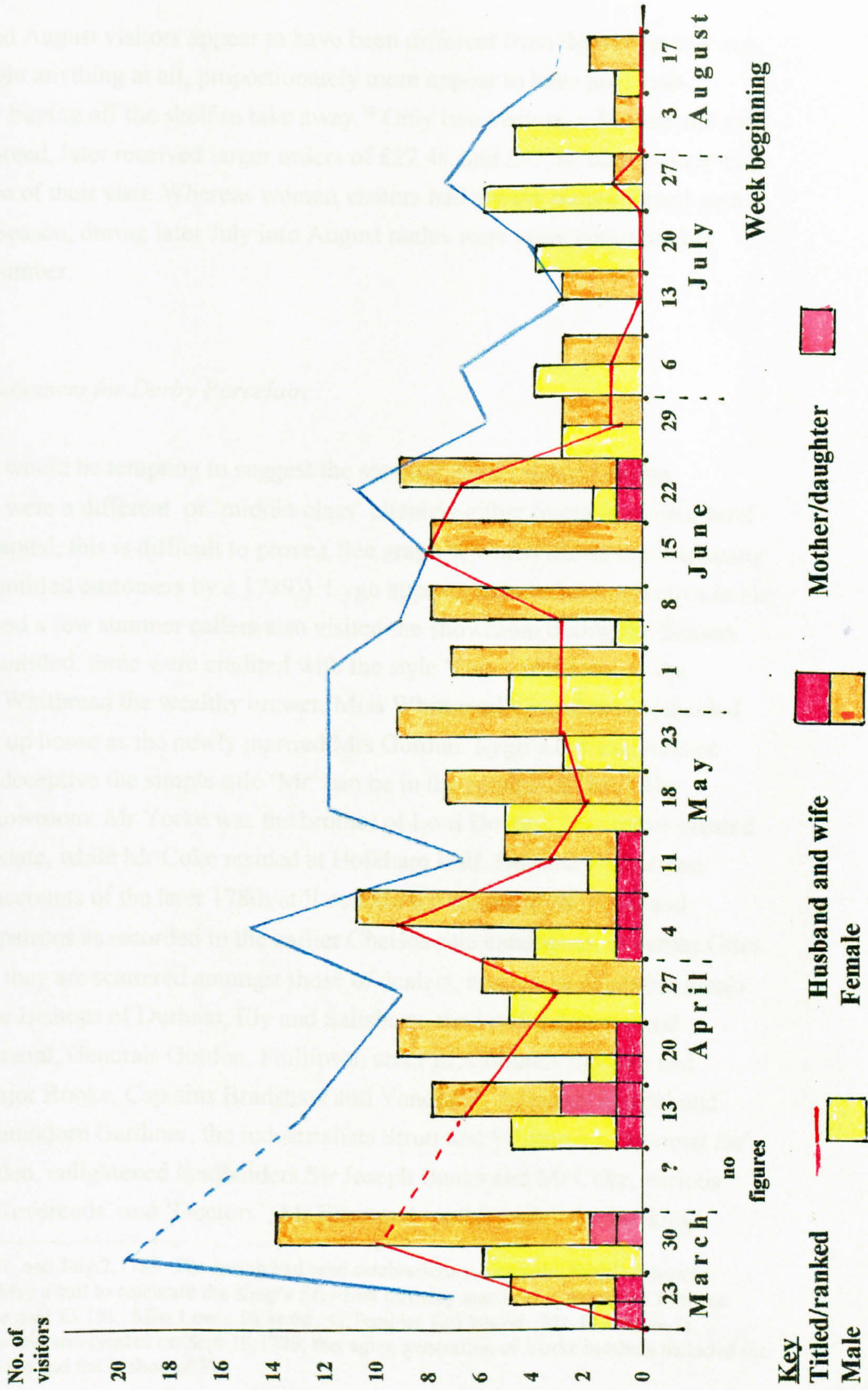
³⁴Lygo, March 12, 1788. 'Will give you a list weekly of all the people of fashion that call here that I can procure their names etc'; DL82 6/86 records the weekly lists for March 23 to August 17, 1789. Lygo did not always list the names of visitors or cash purchasers, sometimes referring to them 'as the friend of..'. It is difficult to trace servants to a particular household. Bentley had similarly provided Wedgwood with such information.

³⁵Cash payers, not recorded in Lygo's 'fashionable visitors' lists, were notably women spending a few shillings, who perhaps accompanied someone of greater merit. On June 22, 1789 'fashionable' clients Lady Skinner and Mrs Abbington visited and spent £1.9s and 6gs respectively, Lady Balantine visited but declined to buy; while Mrs. Nesbit and Mrs Sydenham who had spent 5s. and 2s. were not included in Lygo's list.

³⁶*The World*, March 24, 1789 p2, c2, and March 27, p1 c3 listed all those present, and notable absentees.

Graph 5. Derby Showroom 'Visitors of Fashion' by gender, March - August, 1789

(taken from document DL82 6/86)



of anything else', and so this group of callers dipped. By the second week of July all visitors had declined, and titled ones had ceased (except for the Scottish Duke of Gordon), as Lygo recorded that families were soon to set off for the country.³⁷

The July and August visitors appear to have been different from the earlier *bon ton*: if they bought anything at all, proportionately more appear to have paid cash, presumably buying off the shelf to take away.³⁸ Only two visitors, a Mr Sumner and Miss Whitbread, later received larger orders of £27.4s. and £47.3s. respectively as a consequence of their visit. Whereas women visitors had always outnumbered men during the Season, during later July into August males were more common, but limited in number.

Middling customers for Derby Porcelain

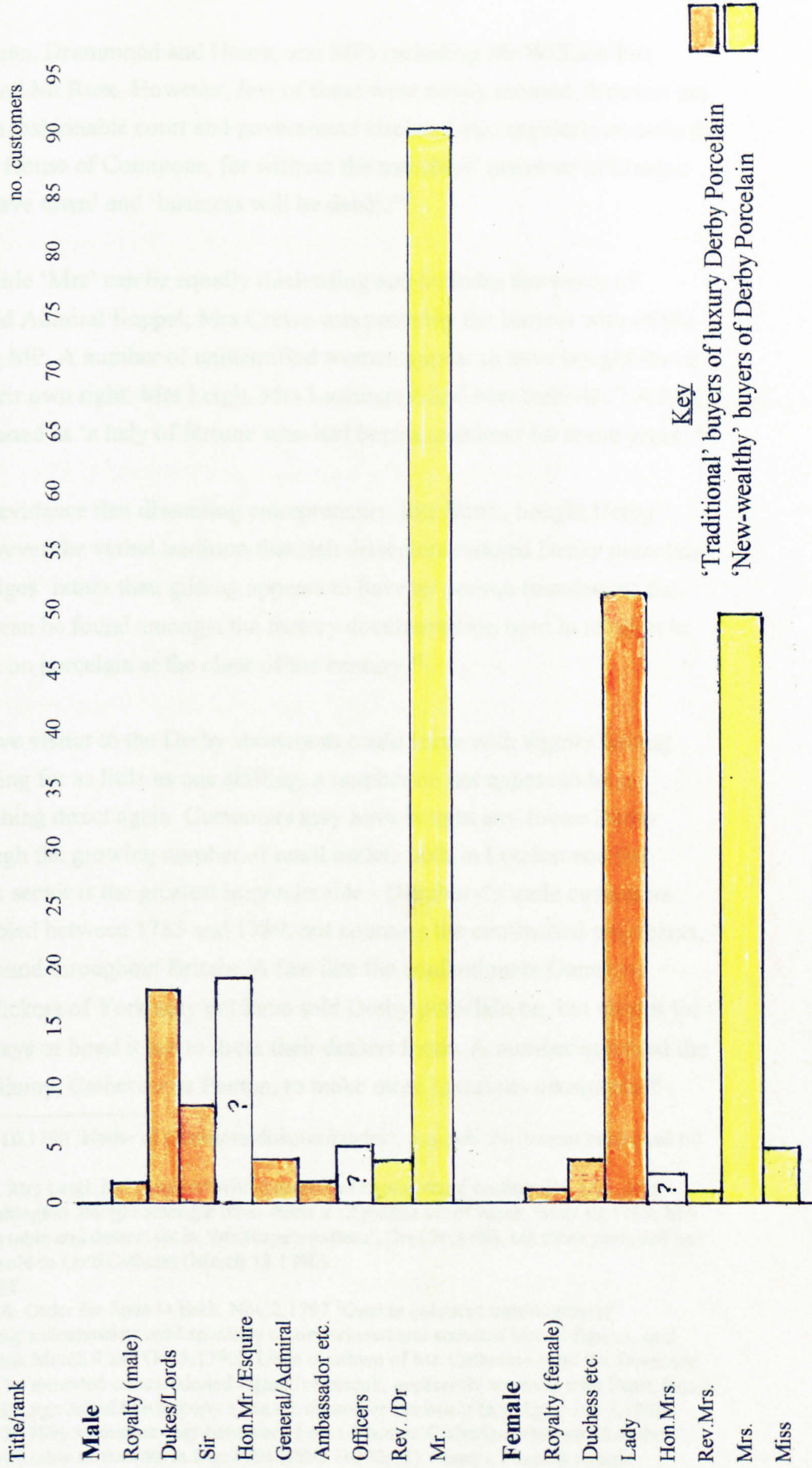
Although it would be tempting to suggest the summer callers to the London showrooms were a different or 'middle-class' clientele either living in or on a brief trip to the capital, this is difficult to prove. (See graph 6, which shows the increasing number of untitled customers by c.1789)). Lygo appears to have been selective in his recording, and a few summer callers also visited the showroom during the Season. Most were untitled: three were credited with the style 'Esq.', while one is the daughter of Whitbread the wealthy brewer. Miss Whitbread's purchases coincided with setting up house as the newly married Mrs Gordon. Lygo's correspondence shows how deceptive the simple title 'Mr' can be in the context of the Derby porcelain showroom: Mr Yorke was the brother of Lord Dover,³⁹ Mr Johnes created the Hafod estate, while Mr Coke resided at Holkham Hall. Duesbury's London showroom accounts of the later 1780s still contain the names of the royal and aristocratic patrons as recorded in the earlier Chelsea sale catalogues, or James Giles ledgers, but they are scattered amongst those of dealers, and a host of professionals including the Bishops of Durham, Ely and Salisbury, the Lord Advocate and Solicitor General, Generals Gordon, Phillipson and Pitt, Colonels Egerton and Orchard, Major Rooke, Captains Bradshaw and Vandeput, Admirals Keppel and Forbes, Commodore Gardiner, the industrialists Strutt and Whitbread, diplomat Sir Frederick Eden, enlightened landholders Sir Joseph Banks and Mr Coke, various provincial 'Reverends' and 'Doctors', Mr. Brummel 'and friends', the banking

³⁷Lygo, May 21, and July 2, 1789. The spring had seen celebrations to mark the King's return to health, in late May a ball to celebrate the King's fifty-first birthday was held at St. James's Palace.

³⁸E.g. Mr. Rose paid £3.18s., Miss Lewis £6.8s.6d., G. Templer £26.16s.6d., Mr. Heathcote 1s.

³⁹Lord Dover's title was created on Sept 16, 1788; this aging generation of Yorke brothers included the Earl of Hardwicke and the Bishop of Ely.

Graph 6 : Warehouse Private Customers by Identifiable Types, c.1789 (based on sales through the day-book accounts Feb.1789-Jan.1790, excluding cash sales)



families of Coutts, Drummond and Hoare, and MPs including Mr William Pitt, Mr. Wraxhall and Mr Rose. However, few of these were newly monied, for most are associated with fashionable court and government circles; Lygo regularly records the sessions of the House of Commons, for without the members' presence in London the 'nobility leave town' and 'business will be dead'.⁴⁰

Similarly, the title 'Mrs' can be equally misleading and includes the wives of General Pitt and Admiral Keppel; Mrs Crewe was probably the hostess wife of the Cheshire Whig MP. A number of unidentified women appear to have bought status porcelain in their own right: Mrs Leigh, Mrs Lushington and Mrs Sullivan.⁴¹ A Mrs Nutt Lygo reported as 'a lady of fortune who had been a customer for some years'.⁴²

There is some evidence that dissenting entrepreneurs, like Strutt, bought Derby porcelain. However the verbal tradition that rich dissenters ordered Derby porcelain with 'brown edges' rather than gilding appears to have no proven foundation; the term 'Quaker' can be found amongst the factory documentation used in relation to ground colours on porcelain at the close of the century.⁴³

While a tentative visitor to the Derby showroom could leave with dignity having bought something for as little as one shilling, a number do not appear to have purchased anything direct again. Customers may have bought any future Derby porcelain through the growing number of retail outlets both in London and the provinces. This sector is the greatest imponderable - Duesbury's trade customers more than doubled between 1785 and 1789, not counting the continental merchants, and could be found throughout Britain. A few like the confectioners Gunter of Piccadilly or Vickers of York may not have sold Derby porcelain on, but used it for their own displays or hired it out to dress their dessert foods. A number mounted the china, like Vulliamy, Catherine or Penton, to make more luxurious ornaments.⁴⁴

⁴⁰E.g. Lygo, June 10, 1790 'House of Commons dissolved today', Aug. 5th 'Parliament prorogued till October'.

⁴¹DLS Parcel 17x. Mrs Leigh had a dessert with customised cheese stand costing £30.11s., May 29, 1789; Mrs. Lushington bought amongst other items a 12 guinea set of vases, May 19, 1789; Mrs Sullivan ordered a table and dessert set in 'Mr. Hope's pattern', Sept. 26, 1786, but three years left her order, which was sold to Lord Cathcart (March 13, 1790).

⁴²Lygo, Sept. 5, 1788

⁴³E.g. BM.BP.vol.4. Order for Egan in Bath, Nov. 2, 1797 'Quaker coloured border/ground'

⁴⁴Vulliamy the King's clockmaker used specially commissioned and standard biscuit figures, and vases (e.g. Day-book March 9 and Oct 5, 1790). Little is known of Mr. Catherine from the Duesbury papers except that he mounted commissioned figurative biscuit, apparently working with Peart, Rossi and Gould; in 1790 Lygo asked him to copy a French dessert at Christie's (e.g. Lygo Jan 3, 1788, Oct. 22, 1788, Feb 12, 1789). Catherine may have been Louis-Flamant Catherine who provided the Prince of Wales with table ornaments in Dec. 1794 (PRO HO73/18). Messrs. Pentons bought enamelled porcelain squares or 'pedestals' to incorporate into girandoles (e.g. Day-book Oct. 4, 1790 or Oct. 16, 1792)

Other dealers acted as commissioning agents themselves, the most conspicuous being the London goldsmiths Ward and Green who supervised the Margrave of Anspach's table service; others, like Egan or Turner, wanted simple monograph pieces. A few of the dealers had specialised requirements: Mrs Clements for example bought *dejeuners* and more up-market tea/coffee wares.⁴⁵ But the majority of trade purchases appear to have been bought off the shelf with a 20-25% discount, or at auction, to be resold most likely to a private buyer.

By the close of the 1787 Season goods had been sent from London to private customers in Dorchester, Dublin, Dumfries, Durham, Edinburgh, Exeter, Manchester, Newcastle-upon-Tyne, Norfolk, Penrith, Tunbridge Wells, Winchester, Yarmouth and Yeovil. At the same time dealers were buying from Bath, Bristol, Dublin, Norwich, Plymouth, and Whitby.⁴⁶ Further unidentifiable destinations for porcelain included those 'delivered from Derby' or shipped to a coastal port like Hull, to be collected.

When Egan was preparing his china and glass shop in Bath at the close of 1792, Lygo lamented the unfinished state of the area with the street being unsuited to coaches, but pointed out the footpath would soon allow 'Ladys to walk'.⁴⁷ Sales of Derby porcelain through the Bath shop were very different from those of the London showroom, containing a high proportion of 'gift' and decorative wares, such as cabinet and drinking cups,⁴⁸ that could be bought by both sexes. Egan confirmed 'I never shall wish a large Quantity but a little and very good'⁴⁹

The greatest limiting factor for the more middling classes buying Derby porcelain in any quantity was cost. The best-selling Derby teawares, particularly to the trade, were the cheaper restrained gold or blue-and-gold patterns. These may have been had for not a dissimilar price to superior Worcester or Salopian, but adequate fashionable alternatives of, for example, New Hall could be bought for a quarter of this price. Although provincial shops may have acquired greater amounts of fine porcelain as the century progressed, allowing for overheads, most shopkeepers would have sold Derby porcelain at a similar price to that charged to the private London customers, a point emphasised by Lygo. However the warehouse records appear to support the

⁴⁵Mrs Clement e.g. Day-book Oct 5, 9, 15, 1790.

⁴⁶Parcel 17x. Day-book, 1787.

⁴⁷Lygo, Nov. 29, 1792.

⁴⁸J. Anderson, *Striving for Perfection: the Charles Norman Collection* (1997)

⁴⁹Egan's set-up in Bath, largely excluded from this work, is worthy of a separate study in consumer retailing. DLS old ref. 873, undated letter Egan to WDII, ?1794. He also recorded 'people and all ranks here are so difficult to get a settlement with'. Bath was losing its elite status. T. Fawcett, 'Eighteenth-century shops and luxury trade', in *Bath History*, (1990), vol 3, p59

notion of 'trading-up' within the provincial lower gentry or middling classes, notably in the context of teawares. Thus Mrs Wallis, from distant Calton Hall near Penrith, had £2.0s.6d of teaware sent to her by the Kendal waggon; while Mr Jones of Frinton Hall near Yarmouth received a £9.7s.6d. breakfast set.⁵⁰ Two Manchester men also ordered porcelain.⁵¹

Cheaper and inferior Derby Porcelain

The exception to these more-or-less fixed prices was the sale of damaged or second quality items. Damaged items, figurative in the main, were regularly sent off to the London auctioneers, Christie or Whitling. Since the early eighteenth century damaged oriental porcelains had been advertised for sale as suitable for display, and this tradition had continued for Derby ornamental pieces. One dealer bought a parcel of eight 'very little imperfect figures' for only 10s.6d, which Lygo opined was worth three times this to private buyers.⁵² The latter would visit the showrooms specifically looking for damaged bargains. Lygo recorded one 'gentleman [Mr Ormsby] that hardly ever wants anything but damaged goods that comes cheap, and have sold him goods of that kind different times but never knew before his name or where he lived - he always took what he purchased with him in the coach'.⁵³ Lady Young bought a variety of different 'much damaged' and non-matching tablewares, perhaps for decorating a boudoir rather than for dining.⁵⁴

Information relating to Derby factory 'seconds, thirds etc.', comparable with the Staffordshire potters', is sparse, yet soft-paste porcelain production was notorious for its failed firings.⁵⁵ The prestigious hard-paste Meissen factory produced a substantial quantity of 'mittelgut' or seconds, particularly of tea and coffee wares, that were simply enamelled and sold to dealers to meet a middle-class demand. Smaller quantities of inferior dinner ware and useful household pieces also entered this

⁵⁰DLS Parcel 17x. Both Aug 2, 1787

⁵¹DLS Parcel 17x. Oct. 12, 1787 Jno. Hobson, Oldham St: 8gs. teaset; DL82 8/211 Letter July 1792 E. Achers, Bank, had sent £20 payment to Derby for 'cups etc.', but the order had gone astray. This is one of the few surviving requests for china via the factory.

⁵²Lygo, Aug. 8, 1792.

⁵³Lygo, Oct. 16, 1788.

⁵⁴DLS Parcel 17x. Jan 27, 1790 'Lady Young sold 12 plates much damaged £1.4s., 5 plates 12s. 6d., 8 different comports £1.3s.6d.'; Feb. 11, 1788 Lady Kinnard spent £7.6d., on 8 odd cups and saucers, a faulty *dejeuner* and 2 odd plates.

⁵⁵J. Thomas, *The Rise of the Staffordshire Potteries* (1971), p126. In 1770, 27 Staffordshire utilitarian potters signed a written agreement pricing and distinguishing six different qualities of ware ranging through bests/firsts, best 2nds, through four 'degrees worser'.

eastern European market.⁵⁶ What happened to Derby's poorer quality useful wares? On one occasion Lygo suggests kiln-damaged wares were finished 'not anything like our own patterns but rather like the Worcester';⁵⁷ another time he referred to two teaset, pattern '190', sent to London 'on damaged ware' as being appropriate to the warehouse, as our 'friends ... will sell them abroad'. These were to be sold at 2½ to 3 guineas per set, less than a quarter of the price of comparable perfect wares. Wedgwood had his Queensware table plates sorted, the best going to the nobility at 5s. per dozen, inferior ones passing on at half this price. Lygo too noted he had been 'looking over the plates sent for Mr. Johnnes find there is many of them very differently painted by the second best hand & some of them done pretty well - amongst the whole sent I hope to be able to pick out 8 dozen that will do'.⁵⁸ Johnnes may have received preferential treatment for he was an important customer who often bought dessert services as gifts, but there was no suggestion that the remaindered plates were to be disposed off cheaply.

As the century closed European consumers of luxury wares may have become more discriminating. A German dealer in 1790 complained to Wedgwood about his difficulty in selling damaged vases to his countrymen, for he 'buys nothing without examining it before, behind and on all sides'.⁵⁹ In the same year the dealer Rittener who had set up shop to sell Sèvres in London remarked on the English 'love of uniformity', for ill-matching sets of cups are 'not being well received in this city'.⁶⁰ Increasing and cheapening ceramic production, and the dumping of inferior goods, may have made the private customer more wary. In 1814, Derby factory stock was differentiated as 'best' and 'seconds'.⁶¹

But references to inferior wares themselves by the London showroom manager are rare, suggesting that they were disposed off without recall to Lygo's skills as a salesman, perhaps sold off in bulk to foreign merchants, or through a provincial network from Derby. There are no specific financial records of such transactions either at Derby or London. Billingsley's calculations to set up a china works at Pinxton in 1795 made no mention of seconds. He had allowed a firing loss of one seventh, but made no differentiation between 'quality and quantity' save for finished decoration and gilding. He proposed to sell off two-thirds of his good wares in the

⁵⁶Richards, *ibid*, p85.

⁵⁷Lygo, July 2, 1786.

⁵⁸Lygo, April 22, 1790.

⁵⁹KUL.Wedg.Acc. W/M1513. Letter from Schilling to WD, Frankfurt Sept. 24, 1790.

⁶⁰T.Preau, 'Competition from Sèvres Porcelain', *DPIS Journal* 4 (2000), p42.

⁶¹BM.BP.f524. April 22, 1814 stock bought by Bloor and Tatem had been classed as 'best' (£6,684) and 'second' (£4,524).

white, and to decorate 20 teasetts a week ‘in the Midling and Lowest stile’.⁶² It is possible that Billingsley hoped to dispose of his lower-class wares within Duesbury’s existing distribution network for inferior goods. In the 1770s some Derby seconds found their way to James Giles’s London decorating shop, and despite obvious firing cracks, were richly gilded. There is no indication from the factory site that less sound wares were systematically destroyed: this would have been wasteful. Even saggars were sold off to Mr Granger, presumably in his rôle as Steward to the Derby Corporation to be used for drainage or road construction.⁶³

Unmarked white, or simply enamelled, Derby could have found some anonymous market without reflecting badly on the works, and its sale would have offset production costs. Turner and Chamberlain may have been an official outlet for ‘seconds’. It is extremely rare to find unmarked Derby porcelain after about 1770; Lygo checked the factory marking, recording on one occasion that ‘the number of the hand the ware is gilt by is very often omitted’.⁶⁴ Illicit white china was reputedly sold at several places including Mr Hunter’s in London for a limited period, while a decorated teaset had sold in Alfreton market for 7 guineas.⁶⁵ However Haslem reported that some of the Duesburys’ seconds were stored at the factory at least a generation after they had been manufactured; Kean and Bloor may both have decorated such old stock to be sold at auction. By 1795 some white wares were being sent to Bath.⁶⁶ While in 1814 Bloor sold ‘5,000 sets of white china in useful and ornamental articles’, these may have been the ‘seconds’ acquired less than a month earlier.⁶⁷ Indifferent or old-fashioned items remaining at the showroom were not obviously reduced but waited to be bought, possibly becoming part of a large, ideally overseas, trade deal.⁶⁸ Another method of disposal within the china trade was the raffle: Derby porcelain was never disposed of in this manner, although Lygo did suggest a Nankeen service might be raffled in Bath.

⁶²C.L.Exley, *The Pinxton China Factory* (1963), p3. Pinxton was sold through Nottingham, Hull and London dealers and auctions, p59-61

⁶³ DL82 7/9 Aug.10,1782 ‘rec.d of Mr Granger for broken saggars in full 6s.’ R.G.Hughes in private correspondence confirmed local pottery waste was used thus.

⁶⁴Lygo, Dec 25,1788.

⁶⁵DL82 8/131 J.Stables to WD May 5,1789. Similar complete teasetts sold in London for £7.17s.6d.

⁶⁶BM BP. vol 4, Sept 9,1795. Egan’s order from Lygo ‘white tea ware etc.will be sent by the wagon’. Egan used an ex-Cockpit Hill decorator, Anthony Amatt, who completed special orders, including crests; material for gilding was sent too.

⁶⁷*Derby Mercury*, May 19,1814, advert for 30-day sale commencing May 23, the extensive stock of other items were decorated. Old factory stock had been bought by Bloor on April 22.

⁶⁸E.g. Lygo, Jan.31, Feb.10, Feb.12, Feb.16,1791. He hoped to get rid of an indifferent table service pattern ‘32’ to an American dealer; Lygo,Oct 1,1789 had sold the ‘old rose coloured’ (cupid) dessert to a good customer for 135 guineas, hoping ‘it would not be returned for another of the same price’.

The London manager would advise the factory that items need not be 'quite so perfect' though sound, or suggest the level of artistic finish required, as related to the final cost of a special commission, but there was never any suggestion that the public could specifically order downmarket goods. Nevertheless Lygo was well aware of rival firms' prices, and might match the prices of a similar Worcester pattern.⁶⁹ On a single occasion a private female customer had asked for a 5% discount for cash, as she claimed she enjoyed from other traders. Lygo reluctantly reduced the bill, stressing to Duesbury that it was bad practice, but that he did not want to affront his client.⁷⁰

A popular source for luxury goods was the remaindered and second hand market; Duesbury bought second-hand consumer goods via Lygo. Ceramics are recorded amongst the London and provincial newspapers' advertisements as sales on retirement, on closure of works, or as bankrupt wholesalers' stock.⁷¹ But sales of private 'genteel household furniture' proved a regular fount of polite china in the capital.⁷² In Derby the contents of a Nun's Green house were to be sold including 'useful and ornamental china, at very low rate, consisting of table plates and dishes, dessert dishes, tea china, chimney ornaments and flower pots'; the following year the furnishings of the painter Joseph Wright were sold.⁷³ Porter states that 'no one wanted antiques' and that the old oak gave way to mahogany Sheraton or provincial Gillow.⁷⁴ In the finest ceramic market this was not true. The aristocracy had long been used to the ethos of collecting and actively bought 'second-hand' Chinese, Meissen, Sèvres, Chelsea and others: earlier eighteenth-century porcelains were acknowledged for their quality and relative good value. The Prince of Wales benefited from the social disorder in France and bought two large ex-Bourbon Sèvres services; while the Egremont inventories for 1837 illustrate the domination of old 'India' vases as room dressings, rather than modern rococo revival pieces. Derby porcelain was bought damaged, but also mended. The neoclassical revival of the

⁶⁹E.g. Lygo, Nov 4, 1790. Lady Skipworth's dessert plates were to be charged as Worcester at 10s. 6d. per plate; a few weeks later Lygo recorded comparable plates were sold by the French factories for only 2s. 6d.

⁷⁰Lygo, March 12, 1789. Mrs. Lowes had bought a dessert pattern '44'.

⁷¹N. Valpy, various 'Extracts from eighteenth-century newspapers', *ECC Trans.*, vols XI-XV, (1982-94).

⁷²eg *The World*, April 7, 1789, advertised 3 such auctions, two from Harley St addresses, one the property of 'a lady', another of 'a gentleman going abroad', and the third at Lisle St, because 'James Alexander McMahon, Esq'. was moving to a Lincoln Fields address. China appears near the top of the lists of sale goods.

⁷³*Derby Mercury*, throughout March 1797, these ceramics were the property of 'C. King', possibly Charles King, Duesbury II's clerk of works. Wright's effects, including art, were advertised March 1 and 17, 1798. Derby Museum holds a Chinese monogrammed teaset reputedly owned by Wright. Wedgwood had given Wright a 10 guinea green shell edged table service in 1789 (KUL Wedg. Acc. E1-677)

⁷⁴R. Porter, *European Society in the Eighteenth Century* (1990), p219

Edwardian era saw the reuse of earlier tablewares, indicating services had been carefully preserved. However, to cater for the English middle market a whole new group of potteries emerged, making cheaper bone china tea- and tablewares; by 1830 they often copied the recent 'antique' in the rococo revival.

Hire or loan of Derby Porcelain

Fashionable clients did not have to go to the expense of buying Derby porcelain, in the town items could be borrowed or hired for occasional use. Hiring china was not a cheap option, but it was obviously suited to very infrequent entertainment in town; most porcelain was stored and used within country houses. Miss Whitbread in 1787 hired teawares to entertain the Royal Family on a visit to her father's brewery, while Sir Thomas Acland, Bart., provided extensive dinners with hired Derby tableware in January of the same year.⁷⁵ Even the Prince of Wales paid three guineas 'for the use of 21 groups of figs. in biscuit, ditto 48 figures' in March 1784, when less than a month previously he had bought 16 figures outright for £8.2s.⁷⁶ The former no doubt were used on 10 March when the Prince gave a ball for 500 to 600 people to celebrate the near completion of the initial alterations of Carlton House. Lygo also operated a loan system to those who were waiting for their order to be completed, whether it was for table or ornamental pieces. On one occasion he had lent Lord Aylesbury four dozen plates from a service intended for the Duke of Marlborough, under the impression the lord was to commission his own dessert service, only to find that four plates were broken: five months later Lygo was still soliciting an order from Aylesbury.⁷⁷ Lady G.H. Cavendish was lent figures and vases while her order was made.⁷⁸ Some clients unofficially borrowed items, returning them many months later as unsuitable, perhaps swapping them for something else, while no money changed hands.

⁷⁵DLS Parcel 17x. June 8, 1787 Mr. Whitbread paid £12.13s.6d for hire; Jan.7, and Jan.24, 1787 Sir Thos. Acland Bart, South Audley St, hired table wares, costing £24. 8s.6d.; Mrs.Smith was lent cups for a soiree when her order failed to materialise (Lygo, June 3, 1789)

⁷⁶Royal Archives, RA GEO/26329 Prince of Wales' invoice from Duesbury Dec.23, 1783 to June 5, 1785.

⁷⁷ Lygo, Jan.17, and May 2, 1787.

⁷⁸ Lygo, July 2, 1789.

Conclusion

The Derby management's anticipation of a three-fold increase in demand in the later 1780s appears to have been a feasible expectation, and the London warehouse records bear witness to the shifting emphasis in sales. Firstly, the relative decline of the ornamental trade (then about 12-15% by value) had been 'replaced' by a 500% increase in the consumption of teawares following the 1784 Commutation Act. The popularity of porcelain over silver during the period 1770-1810 stimulated the desire for fragile teapots and 'tablewares for the second course'. Although 'male status buying' continued, particularly of dessert and tablewares, private female clientele doubled within just a few years. More women had been brought into the trade, suggesting that female custom for fine porcelain in general had increased. Trade custom had grown five-fold, while direct provincial trade had increased: about a quarter of Lygo's trade sales in 1789 had received the 25% discount usually awarded to those with greater expense of carriage. Finally, upper middle-class families (politicians, doctors, clerics, industrialists and so on) bought Derby porcelain in London, but a few more remote or northerly individuals were sent small orders, particularly teawares.

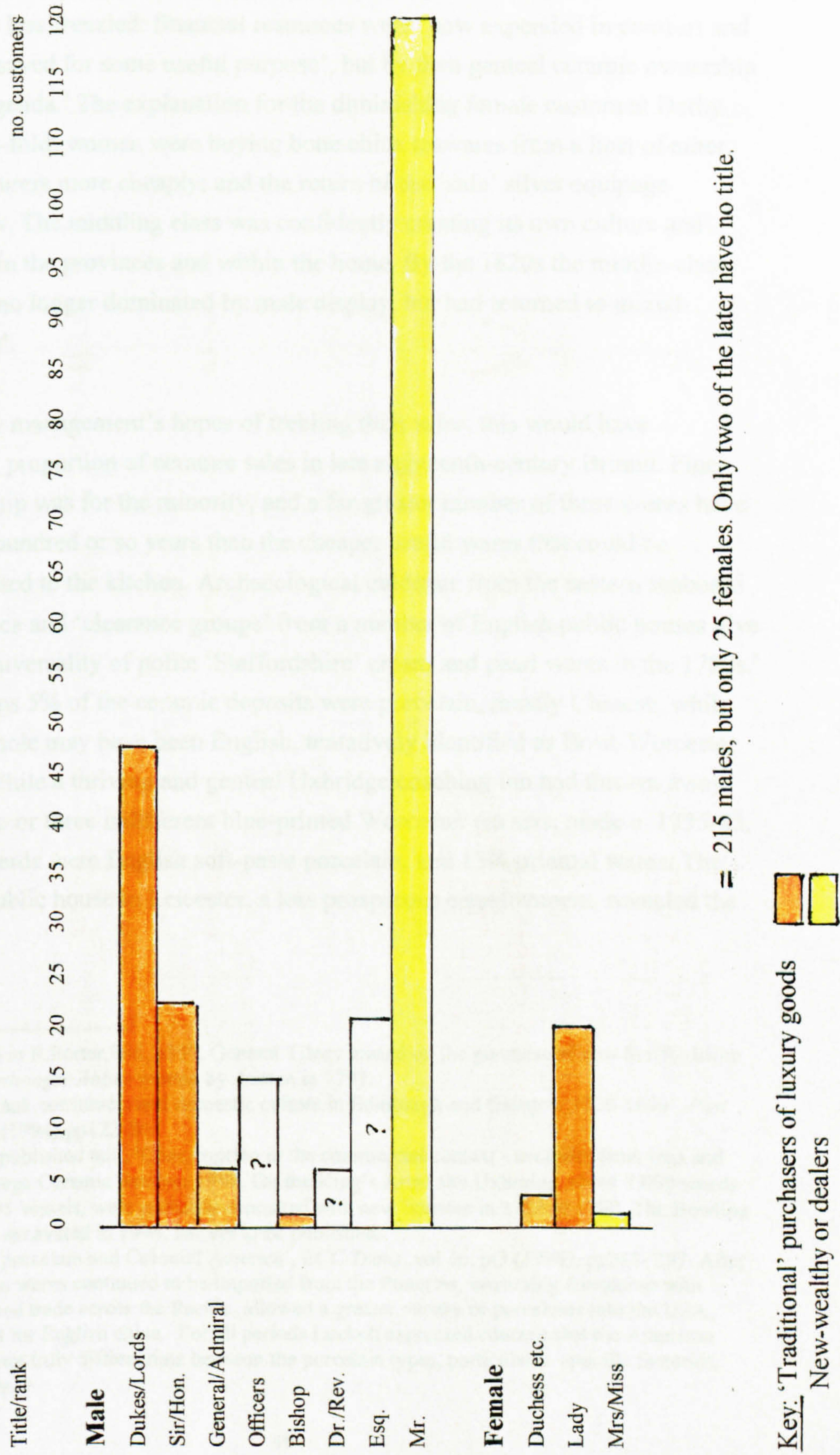
The desire to own fine porcelain tea and table wares had grown dramatically from the mid 1780s. A decade later a contemporary commentator recorded 'the great degree of luxury to which this country has arrived within a few years [was] not only astonishing, but almost dreadful to think of'.¹ Such escalating pressures to adopt social niceties may have accounted for growth in the fine porcelain sector at this time. Weatherill believes the middle market for ceramics had become saturated before 1790, but that the luxury sector developed out of this.² Ceramic consumers appear to be trading upwards from the late 1780s, particularly in relation to teawares. But the adoption of fine porcelain tablewares was less universal in the eighteenth century, with all the attendant connotations of luxury.

Less detailed figures from Kean's enterprise between 1807 and 1811 would suggest that the private women's rôles in Derby porcelain purchase had declined to pre-1785 levels, or less (see graph 7.) If the 'boom' of the late 1780s had been created by the middle classes then, realistically, the period when many had spare cash to spend on luxury porcelains was limited: by the turn of century inflation had reduced their spending power

¹John Trussler, 1796 quoted by R.Porter, *European Society in the Eighteenth Century*(1990), p222.

²L.Weatherill, *The Growth of the Pottery Industry in England, 1660-1815* (1986), pp310-2.

Graph 7. Purchasers of Derby Porcelain, 1807-1811 (based on BM.BP. f314-43. This is not a day-book, but appears to record money owing. Some trade dealers are listed too.



by as much as 30%. Consumption during the Napoleonic period for the middle and lower classes was less frenzied: financial resources were 'now expended in comfort and conveniences, or saved for some useful purpose', but by then genteel ceramic ownership was part of this agenda.³ The explanation for the diminishing female custom at Derby was probably two-fold: women were buying bone china teawares from a host of other English manufacturers more cheaply; and the return of the 'safe' silver equipage provided the show. The middling class was confidently creating its own culture and consumer wants, in the provinces and within the home. By the 1820s the middle-class dining room was no longer dominated by male display, but had returned to mixed-gender family use⁴.

Despite the Derby management's hopes of trebling their sales, this would have represented a tiny proportion of ceramic sales in late eighteenth-century Britain. Fine porcelain ownership was for the minority, and a far greater number of these pieces have survived for two hundred or so years than the cheaper useful wares that could be replaced or relegated to the kitchen. Archaeological evidence from the eastern seaboard of colonial America and 'clearance groups' from a number of English public houses give credence to the universality of polite 'Staffordshire' cream and pearl wares in the 1780s.⁵ In America perhaps 5% of the ceramic deposits were porcelain, mostly Chinese, while only 1% of the whole may have been English, tentatively identified as Bow, Worcester and Liverpool.⁶ While a thriving and genteel Uxbridge coaching inn had thrown away the remains of two or three indifferent blue-printed Worcester tea sets, made c. 1755-83, only 4% of the sherds were English soft-paste porcelain, and 13% oriental wares. The Bowling Green public house in Leicester, a less prosperous establishment, revealed the

³Francis Place quoted in R.Porter, *ibid*, p359. General Tilney mused on the purchase of new Staffordshire breakfast ware in *Northanger Abbey* written by Austen in 1797.

⁴S.Nenadie, 'Middle-rank consumers and domestic culture in Edinburgh and Glasgow, 1720-1840', *Past and Present*, vol.145 (1994), pp122-56.

⁵Jaqueline Pearce, unpublished talk, 'Consumption in the commercial context - ceramics from inns and taverns', Morley College Ceramic Seminar, 1998. On the King's Arms site, Uxbridge, about 3,000 sherds representing about 205 vessels, were probably deposited with new licensee in 1786 or 1789. The Bowling Green Inn, Leicester, excavated in 1996, has yet to be published.

⁶T. Lockett, 'English porcelain and Colonial America', *ECC Trans.*, vol 16, pt3 (1998), pp283- 297. After 1784, though common wares continued to be imported from the Potteries, increasing friendship with France, and unrestricted trade across the Pacific, allowed a greater variety of porcelains into the USA, decreasing the market for English china. For all periods Lockett expressed concern that the American archaeologists could not truly differentiate between the porcelain types, particularly specific factories, from excavated sherds.

use of pearl ware, some Chinese blue-and-white porcelains, but no identifiable English china.

While American archaeological sites of the early nineteenth century would suggest that the rôle of porcelain had increased by three- to five-fold in more up-market households on the east coast, these are numerically dominated by Chinese wares, especially the cheaper blue-and-white, allowing only about 1% to be allocated to the 'other, including soft-paste, probably English' category. Contemporary inventories would indicate that fine European porcelains, including French, may be under-represented in the archaeological record by a factor of five, as the higher-value pieces were conserved beyond use.⁷

Further analysis of the Wedgwood ledgers might provide confirmation of these various trends amongst the upper and more middling classes through the latter quarter of the eighteenth century into the close of the Napoleonic period. Combined with the evidence from the Derby showroom they might aid the better understanding of gender rôles and consumer dynamics early in the Industrial Revolution.

⁷T. Lockett, 'English porcelain for the USA, 1783-1850', *NCS Journal*, vol 14 (1997), pp87-104.

PART 2: EIGHTEENTH-CENTURY MARKETING AND DISTRIBUTION: THE RÔLE OF THE LONDON WAREHOUSE

Chapter 4. The marketing and disposal of fine ceramics in later eighteenth-century England

The single most important change in fine ceramic retailing had been established at the beginning of the eighteenth century with the East India Company's obligation to hold twice-yearly auctions of oriental goods. Here large wholesale lots were bought, often cheaply, by London chinaware dealers who divided them up into retailable sets. Although the vogue for Chinese wares was waning by the 1770s, as neoclassical styles advanced, the rôle of the Company sale remained important in the distribution of fashionable ceramics into the early 1790s. Disposal by auction was the method adopted by the first English porcelain manufacturers, initially by Chelsea. From 1754 the Chelsea management advertised their entire year's production for sale by this method. Despite having established central London warehouses in the early 1750s, Chelsea and Bow used these and other venues as seasonal auction rooms.¹ Little is known about how these early warehouses functioned on a daily basis, although Bow advertised its warehouse 'for the convenience of all their customers, both in Town and Country; where it will continue to be sold in the same Manner as formerly at Bow, with Allowance made to Wholesale Dealers', and claimed ware was 'constantly sold'.² Porcelain was retailed not just by the chinamen, but other fashionable retailers: lace or toy merchants, jewellers, goldsmiths, tea merchants, mantua makers, even ironmongers. Meanwhile the provincial factories of Worcester and Derby held auctions in the capital in the spring of 1754, and both established sales outlets through London china retailers. Worcester opened its own trade warehouse in Aldersgate Street early in 1756.³ Meanwhile Sprimont's poor health curtailed production at Chelsea, resulting in the cancellation of its public sales; however from the spring of 1757 Bow, Derby and Longton Hall had filled this gap, and actively promoted their wares by auction.

Derby's major thrust into the London market was the relationship forged in late 1756 with the china dealer Thomas Williams. Williams, who took every opportunity to publicise his wares, claimed to be one of the oldest and largest china dealers in the

¹E.Adams and D.Redstone, *Bow Porcelain* (1991 edition), p76-80

²ibid,p30,79

³H.Young, *English Porcelain, 1745-95. Its Makers, Design, Manufacture and Consumption* (1999),pp.164-5.

metropolis, with upwards of 100,000 pieces of foreign and English chinaware; he also sold fans and other oriental curiosities. Williams's advertisements as the 'Factor for the Derby Porcelain Company' in the *Public Advertiser* in early 1758 suggest that he was taking orders for Derby china from both private and trade dealers. Items were 'all mark'd at the Factory's lowest prices', while 'every Week great variety of new Goods' would appear. Unfortunately his warehouse was soon to be demolished for road widening, and goods were to be sold off 'exceedingly cheap, rather than risque the moving of them'.⁴ By January 1763 Williams had transferred his business to Pall Mall, when he was advertising Chelsea 'ornamentals'. Jewitt noted that 42 boxes of extremely varied Derby goods were sent to London in 1763, of which he assumed at least £666-worth were sold at a May sale,⁵ possibly involving Williams. The following spring this enterprising dealer had bought 'a magnificent and extensive Chelsea Table and Desert Service' for exhibition, and was 'to oblige the Curious with a Sight of gratis, before it is sent abroad'.⁶ Williams appears to have remained a major customer even after Duesbury had acquired the Chelsea works and his Covent Garden warehouse. Fifty cases of porcelain were dispatched from Derby by sea to London for Mr Williams in 1777, valued at £1900.⁷ This London dealer acted as a wholesaler, and his name was known in the provinces: in 1762 a Bristol retailer advertised wares '...the best of the kind that could be purchased in London, several of which were bought at Williams' large China Shop'.⁸

Many provincial china manufactures however failed to get a foothold in the all-important London trading network: Longton Hall, Liverpool, Lowestoft and a host of others ceased to thrive because of their limited market-place, generally expecting customers to visit their rather remote factories. Little is known of how fine porcelains were sold in the mid-eighteenth-century provinces; unlike functional pottery or small items of textile they were less suited to hawking due to their fragility and high value. A few towns, like Chester, continued with their medieval-style week-long fairs, when private houses or workshops were converted into retail outlets, even ones selling porcelain. 'Middling' china may have found such localised markets. Stables, the Derby clerk of works, writing in 1789, recorded that he had seen Derby porcelain sold in some unlikely venues including a pattern '55' teaset being sold at Alfreton market for seven guineas, while white china had been sold in several places;⁹

⁴J.E.Nightingale, *Contributions Towards the History of Early English Porcelain* (1981), pp.xx-xxi

⁵L.Jewitt, *Ceramic Art of Great Britain* (1877), p336.

⁶Nightingale, *ibid*, pxxv. The service was a version of the Chelsea Mecklenberg-Strelitz tableware commissioned by the Queen as a gift to her brother.

⁷DL82 8/87. Wood to WD. Oct 22, 1777.

⁸*Felix Farley's Journal*, Dec.22, 1762, quoted in L.Weatherill, *The Growth of the Pottery Industry in England, 1660-1815*, (1986), p226

⁹DL82 8/119 Sept 19th, 1788

however the context of these remarks might suggest that he was referring to pilfered factory goods and not to common retailing practice. Derby was an established gentrified centre, and in February 1753 the Bow china factory set up shop in the town, for a number of weeks, to supply both dealers and private customers, as it did similarly in Birmingham and Norwich. The Bow factory had employed 'outriders' who had travelled through the country collecting orders and supplying shopkeepers; in 1758 auctions were held in Dublin, and Nottingham.¹⁰ Bow wares intentionally had a wide upper- and middle-class appeal; in contrast the Derby factory by the closing decades of the century appears to have sold no more than 10-15% of its wares 'in the country'. There are no records of any outrider at the Derby factory under the Duesburys; however early in the following century Kean himself organised distant provincial sales, probably of 'seconds'. One ex-Derby modeller, William Coffee, was briefly employed in this capacity by Sir Nigel Gresley for the nearby china works, although seemingly without experience in this field, while in 1815 James Thomason, an ex-traveller for Davenport, joined the Bloor administration, eventually to become manager.

Despite his Midlands origins, Duesbury had already spent at least two years in the capital in the early 1750s decorating, selling and repairing porcelain, and would have established London contacts for supply and distribution.¹¹ Duesbury's purchase of the ailing Chelsea works in 1770 would have added further to these networks, and with subsequent lease acquisition, would have provided a physical base near the capital and the Port of London. A 1771 insurance policy records the stock and utensils of the Chelsea works to be valued at £500, but a further £800-worth of similar goods were insured in a gentleman's house near the river in Stepney.¹² The various annual Chelsea-Derby sales run by Mr Christie are well recorded by Nightingale for the years 1771-3, and later for 1778-85.¹³

The Duesburys' London warehouse, 1773-1796

The first reference to Duesbury and Co.'s London saleroom is June 1773, when Duesbury wrote he had 'last agreed for a warehouse it was the Castle Tavern in Bedford St Covent Garden ... we are to signe and seal tomorrow'; however, he also

¹⁰Adams and Redstone, *ibid*, p74.

¹¹Mrs.D. MacAlister, ed, *William Duesbury's London Account Book 1751-3* (1931) records connections with established dealers. J.V.G.Mallett, 'Early Derby Porcelain and some Disputed Attributions', *DPIS Journal* 2(1991), p13-14. Mallet suggests Duesbury was mainly a dealer.

¹²See appendix 3 for all references to fire policy valuations.

¹³Nightingale, *ibid*, pp15-92.

states the necessity 'to repair and make the warehouse ready'.¹⁴ The adjacent Bedford Head Beer House had been acquired by November; with other nearby leases added piecemeal up to the mid-1780s. The warehouse was situated a few minutes' walk from Covent Garden and the Strand, on a corner site incorporating properties on Bedford St. and Henrietta St. To the east was the City, and the sweep of important dealers on Ludgate Hill and St. Paul's Churchyard, with the merchants beyond at Wapping; to the west, the Court of St James, Parliament, and the royal houses. Although the rich were already building further west and northwards, the warehouse was obviously well sited up to 1806, being equidistant from the fashionable housing and the City - a position that reflected its dual function as a luxury retail outlet and commercial centre. The immediate neighbourhood contained a mix of fashionable shops, craftsmen and artists and professionals.

A note of 1773 suggests that a room 76 feet long, with fireplace, was to be used for the warehouse. Duesbury 'fitted up a large and elegant Suit of Rooms at No 8 Bedford Street [with a] Great Room' on two floors. A further floor, garret and cellar provided storage and private rooms for his family and staff.

Significantly, Duesbury was also investing in London property, spending at least £2,000 capital on leases in a nine-month period from the summer of 1776. In common with many metropolitan shopkeepers, including the Bow factory, Duesbury rented out accommodation surplus to the china firm's needs. Thus three tenants, Till, Field & Co, and Albrecht, regularly paid rent on part of the Bedford-Henrietta Street property. Their combined rents of £147 per year paid for Duesbury's annual lease for all the premises, with £12 apparent profit. Duesbury acquired the Pedlar's Acre Wharf, abutting the Thames in Lambeth in 1776, which three years later was sub-let with another small paper profit.¹⁵

The relative size and importance of Duesbury's London headquarters can be gleaned from a number of manuscript sources. In 1784 the Bedford Head premises were insured for £500, and an additional property in the Bedford-Henrietta Streets referred to as the 'large house' was being insured for £2,500. At least in 1786, the Henrietta St. house occupied by Mr Field was insured separately from the warehouse proper, with the Hand in Hand Fire Office. Policies for the Derby factory itself dating from 1780 and 1785 would suggest that the warehouse was becoming increasingly more

¹⁴DLS letter WDI to his wife 'Sally', June 25, 1773.

¹⁵In 1779 let to Kinman, then Pingo for £52.10s, by 1790 Sanders paid £60 rent. The Duesburys ownership of the Lambeth property led to the erroneous suggestion by Jewitt that they also run a pottery in the vicinity. See N. Valpy, *The Bemrose Papers* (1992), p26-29

important, as the value of utensils and stock at the works was reduced from £500 to £200, and it remained at this level until at least 1795. The warehouse stock, however, was valued at £3,500 in 1785, when a premium of £8.13s. was paid; increasingly larger premiums were paid over the following three years for the 'Bedford Street stock', presumably reflecting a growth in the value of porcelain at the warehouse.

As well as the rent and insurance payments, Duesbury was obliged to spend in the region of a further £375 each year to run the warehouse.¹⁶ Staff included the 'clerk or warehouseman' who had a considerable range of duties and power. Initially this position was held by William Wood, but he was succeeded in 1777 by Joseph Lygo. Lygo managed the showroom for the following twenty years. In December 1787 he agreed a contract with a salary of £200 per year, doubling his previous sum. The clerk had an assistant of sorts, a position Lygo probably held from 1774, subsequent post-holders being William Barker and Joseph Tatem. This assistant's desired accomplishments, or willingness to learn, included the speaking of French, book-keeping, good character and genteel behaviour.¹⁷ Depending on age and experience, the position paid between 12 and 25 guineas. A porter was also employed intermittently: Lygo found difficulty attracting suitable lads who would remain sober and not complain of the weight of the porcelain crates.¹⁸ Warehouse staff were also provided with limited housekeeping: washing and tea with sugar.

Hidden costs included nearly £59 for various state taxes, including the short-lived shop tax at £15, but also window, commutation and house tax. Another £22.5s. went on local rectors', church, building, watch and water rates. Cleaning and lighting the street cost a further £11.5s. a year. Additional money often totalling £23 or so was spent on 'Christmas boxes': small payments of a shilling to half-a-crown to the postmen, beadle, watchman and various of the dealers' porters, and larger payments as a reward for good custom. Each month 10s. was spent on 'sundries', and further irregular sums on coal and lighting oil. On top of these outgoings would be the major expenses of transport and post.

These large London outgoings must therefore be set off against all the advantages. Duesbury I had created a sound physical base in the capital which provided a whole

¹⁶In the early 1770s Wedgwood had allowed £321 for London warehouse expenses and £537, including £50 rent, for his Chelsea workshop. See N.McKendrick, 'Josiah Wedgwood and cost accounting in the Industrial Revolution', *EHR*, vol.XXIII,pt.1(1970),p60.

¹⁷Lygo, May 19,1795 estimated that nearly £15 a year was needed for dress, including powder tax and hairdressing. One of Wedgwood's London showroom employees was to leave in 1790 complaining the salary 'proves insufficient for attending the company'.KUL.Wedg.Acc. L119-22895

¹⁸Lygo, Feb.12,1789. Jesse complained of the weight of a box to be taken to the waterside containing 25 dessert plates, 13 comports, a pair of covered bowls, a pair of icepails and 4 bottle stands.

range and choice of raw and artistic materials, skilled manpower, and customers totally unavailable in the East Midlands. The site of the warehouse appears to have been well considered, as does the purchase of access to the Thames.

The function of the Duesburys' eighteenth-century Covent Garden warehouse

Duesbury & Co. was regularly advertising the opening of its warehouse in Bedford Street from 1 June 1774.¹⁹ On the same date Wedgwood arranged for the first public view of the Frog Service at his recently acquired Greek Street showrooms, hoping its display would 'bring an immense number of people of fashion ... to complete our notoriety to the whole Island'.²⁰ By the end of June Duesbury had added to the publicity that 'Descriptive Catalogues may be had 1s each'.²¹ The company appealed not only to the 'Nobility Gentry etc.' but also to 'Merchants and Dealers'.

In late March Duesbury and Heath had been granted a Royal Warrant,²² but it was a further two months before the Derby firm were advertising under the title 'Manufacturers to his Majesty' in the *Daily Advertiser*, *Morning Post*, *The Gazetteer* and *New Daily Advertiser*. This season the 'Nobility and Gentry' were invited to view a 'Dessert Service ... the modal of which is nearly finished; which they are going to send to the Court of Peking'.²³ Those desirous of a place had to send for tickets 'as no person can be admitted without'. The proprietors expressed the opinion 'that this new and beautiful Dessert Service will produce of still larger and more extensive commissions'. Also displayed were 'Spares and Crystalizations'.²⁴ Other than such Derby-made marble and fluorspar items, and 'Thomas Shaw's composition chimney pieces', no other non-Duesbury goods appear to have been sold commercially at the showroom.²⁵ However, later when Lygo was negotiating his contract, specific mention was made of his being allowed to continue trade in plated

¹⁹Valpy, *ibid* (1984), p71-2

²⁰JW, Nov.14,1773 Farrer, vol 2, p165.

²¹Possibly that reproduced by Bemrose in 1898, and now in the British Museum. BM.BPO.f1332-40

²²PRO LC3/67/73 March 28, 1775 Derby China Manufacturers by appointment to his Majesty

²³R. Kilburn, 'The export of Derby Porcelain to the East', *DPIS Newsletter* no.43(Dec.1998), p17-20. No Derby wares were officially sent to Peking in the early 1770s, though private gifts were taken. In 1771 the purser of the East Indian 'Earl of Ashburnham' sailing to Madras and China took £20 of china figures, probably Duesbury made. The dessert may have been ordered by the Company to woo an official. Derby porcelain did feature in the Vulliamy clocks sent east (DL82 5/5. Letter Vulliamy to WD, Dec.12,1787 re.biscuit figures for India, while a clock and barometer were sent under Lord Macartney's embassy to Peking in 1792).

²⁴J.Turnbull, '18th Century Advertisements', *NCS Newsletter* CVIII, Nov.1997, p4-5. illustrates the admission ticket for the 1775 Duesbury display.

²⁵See chapter 7.

goods, apparently as agent to Thomas Shaw of Birmingham,²⁶ and for his wife to deal in anything but ceramics. No record of such transactions survives, but Lygo's knowledge of and dealings with various metal workers is conspicuous. Earlier, Duesbury I had himself traded in the 'branch' line, combining porcelain with metalwork, and may have approved such links.

Few documents survive relating to the early years of the Duesbury warehouse. In 1775-6 Wood's main tasks were the paying and collection of bills; he also procured some raw materials for both the Chelsea and Derby factories, and distributed presents of game amongst trading associates. In June 1776 he attended the Queen and the Duchess of Ancaster at the showrooms, and subsequently advertised the royal visit.

Account books relating to the Derby end of the business dating to the early 1780s indicate all the London takings were sent to the works in this period, with weekly remittances of £30 to £60 returned to the warehouse. However by the summer of 1784 bills for hundreds of pounds were sent to the capital to be paid on the London bankers of Boldero and Co. The years 1783-5 witnessed considerable upheaval: the Chelsea factory was being closed, the elder Duesbury had a stroke, the daughter Anne, who had been a Derby bookkeeper left to marry Egan, and the young William assumed considerable responsibilities. The two William Duesburys, father and son, became equal partners in July 1785. Whatever the reason or combination of factors, the thrust of selling and financial rôle of the warehouse do appear to have changed by c. 1786.

The public spring sales

The spring auction had been the most common and much publicised method of interesting the nobility and gentry in acquiring fine earthenware and porcelain in the months prior to these families returning to their country houses. At their height, in the 1770s, such sales had been part of the fashionable season in their own right. However, Duesbury had been obliged to postpone one of his May sales because of the conflict of dates with the 'publick entertainments'.²⁷ This incident may have encouraged Duesbury to seek a permanent central London showroom, for within six weeks the Castle Tavern had been leased. The Christie's spring sale catalogues of

²⁶ Lygo, Dec.10,1787. From Oct.9,1788 Duesbury's letters were to be directed to Lygo c/o Mr. Thomas Shaw, Great Charles Street, New Market, Birmingham. Trade directories suggest Shaw was a merchant, although in 1775 a Thomas Shaw of 16, Temple St. had been a merchant and bucklemaker.

²⁷ Valpy, *ibid* (1984), p70. Appears to be incorrectly dated May 9, and 11, '1758' presumably should read 1773, when Mr Ford and Mr. Duesbury were to defer the sale.

1778-85, annotated with purchasers' names and prices, would suggest that this method of retailing had outlived its usefulness, with items selling cheaply or being bought in. Purchasing of ceramics in general had probably become less novel, and fashionable society had moved on to other entertainments. Lygo, writing towards the end of May 1789, regretted that the nobility were so much engaged in Court balls that they thought of little else. Whereas the Queen had visited the Derby showroom herself on at least two occasions, in 1776 and 1781, most of her orders were being placed through her various servants - a pattern reflected in Lygo's dealings with the majority of the upper aristocracy, and through domiciliary visits.

Furthermore, the power-minded nobility and upper gentry had more interesting distractions in the 1780s, in the wake of the American War and the Regency crisis. In late March 1784 Pitt's parliament had dissolved, and for many the 'season' would have ended prematurely as landed families returned to their constituencies for the tasks of electioneering; although the most glamorous canvassing took place in Fox's Westminster poll, followed by festivities from mid-May. There were no more public sales of Derby porcelain after the spring of 1785, although small quantities of faulty china were regularly disposed of by auction.

The dealers' and trade sales

In October 1785 the dealer William Hewson had written to Duesbury Jnr., on behalf of the newly formed 'China Society', expressing their appreciation of his promise to discontinue the 'Spring Sales to the Nobility'. The Duesburys were 'receiving infinitely greater satisfaction in the idea of Vending our Manufacture through the Medium of the Gentlemen of the China Trade than thro' any other mode whatsoever'. This club of influential London dealers in return indicated their wish to give 'assistance to the Derby Manufactory'.²⁸ The original membership of 26 varied as dealers were expelled or newly joined, but included George Neunburg, Miles Mason, the Hewsons (William senior and junior), Tideswell, Calvert, Elliot, Donovan and Carter. All feature to varying degrees as Lygo's trade customers.

The earliest surviving London sales ledgers only date from June 1786, so there are no comparative trading statistics from the era before the abolition of the public spring sale. Specific trade sales had been in existence earlier, linked to the expected

²⁸BM.BP.Letter WD Jnr to Hewson, Oct 11, 1785, and DLS untraced Hewson to WD Jnr. Oct. 19th, 1785. See K.Staniland, 'Miles Mason and the China Club, 1785-88, part 1'. *NCS Journal*, vol IX (1992), pp25-43.

performance of the East India Company, however Lygo records that by the late 1780s the India House sales were proving increasingly less attractive both to the London and provincial dealers. The Company seemed to have found considerable problems announcing their sale dates, making it in turn difficult for the ceramic trade to plan their own purchasing or selling. By late 1787 the dealers were opposing the East India Company over a change in the previous policy that had allowed them to buy faulty goods on a '2 for 1' price basis, with subsequent accusations of trade ringing. Over the following years oriental goods became less popular: patterns had 'tired' and English import duties increased; meanwhile the reduction of the prohibitive French trade tariff had created a new source of fashionably designed porcelain. In October 1791 less than 500 lots out of the 1800 were sold at India House.

Lygo went to some considerable length to woo Irish dealers. Prior to the later 1780s this group may have been more influential, perhaps buying more fine English ceramics themselves, and proving useful in promoting new tastes back home. In 1770 Wedgwood had welcomed the 'violent madness breaking out' in Ireland following the Duke of Richmond's gift of vases to his brother-in-law, the Duke of Leinster, and had opened a shop in Dublin between 1772 and 1777.²⁹ James Donovan, the city's leading china and glass merchant, was certainly buying from Spode at this time.³⁰ In the three years 1783-5 Donovan had purchased Derby from the London warehouse to the values of £23.13s., £100.16s. and £42.9s. respectively. In autumn 1786 Lygo appealed to Duesbury to offer the Irish dealers 'more than the common discount': because of their great expense in carriage and duty they could never undersell Duesbury's prices. However they bought other cheaper English porcelains, as Lygo recorded,

... they all of them go to the Worcester and Salopian warehouses and buy goods unfinished and then have them gilt, which makes it impossible to do business with them (to do any good). There is still more and more of the goods made laid with the blue only, which I think the manufacturers will one day see their error in doing so.³¹

One Irish dealer, Mr Templeton, having spent four hours with Lygo, still failed to do

²⁹M.Reynolds, 'Wedgwood in Dublin, 1772-77', *Irish Arts Review*, vol 1, no2 (Summer, 1984), p36-39.

³⁰M.Reynolds, 'James Donovan, "The Emperor of China"', *Irish Arts Review*, vol 2, no 3 (Autumn, 1985), pp28-36; Minnie Holdaway, 'Donovan', Morley College Ceramic Circle Seminar, 1997 (unpublished)

³¹Lygo, Sept. 8, 1786. Gilding appears to have been added in London; Donovan may not have opened a Dublin decorating shop till c.1810.

business because 'his price was so low'. Lygo was prepared to arrange trade sales particularly to attract the Irish element; in 1786 when these dealers were in town a hastily organised trade sale with 'sundry lots as catalogue' fetched nearly £300. Goods were acquired by 18 different dealers, mainly the London trade with only two Irishmen, Hunter and Carter, spending some £9.1s. and £7. Neunburg and Whitling were the largest purchasers at nearly £40 each, 13 spending less than £16. The dealers were given four months' credit.

The following year, 1787, was the first when no public spring sale had been held. Lygo's letters from August that year indicate something of the skills and experience that a good showroom manager had to possess. The ornamental figures had been washed and goods ordered by mid-August for a trade sale to coincide with the expected East India one. By the close of the following month Lygo was laying out items for a two-night sale, realising that the season 'will be so far advanced ... to make another sale before Christmas'. By early October the Company had still not declared, and as the town was 'thin of company ... not much retail business' was being done. Parliament was not due to meet until 15 November and Lygo hoped 'we shall then have a deal to do'. The showroom manager suggested that the Derby trade sale should be of more consequence than ever before with a very good assortment of tea services, a few modern desserts and 'in the whole upwards of one hundred good useful lots'. On 27 October the Company declared their sale for 14 December, and Lygo was able to organise his sale campaign. He advised Derby that it should be within five days before the India House sale, for by then the country dealers should have arrived in town - 1 December was chosen. He hoped three or four Irish and Mr Elliot from Bristol would then attend. The porcelain was washed again, and new items ordered from Derby. Duesbury sent six brace of birds to be delivered by Lygo to dealers: Neales, Maidment, Bailey, and Elliot each received a brace and Neunburg two. A cold buffet supper was provided. Goods to the value of £1,072.2s.5d were sold 'as catalogue gross', with 30 dealers acquiring lots. Turner & Abbott spent over £95, with only 15 dealers spending less than £16 each. Four Dublin dealers, Donovan, Carter, Hunter and Collins, spent over £207 between them. All four Irishmen visited the warehouse again in December, spending a further £50.

The following December, 1788, with the market awaiting the importation of French goods, the trade sale fared less well with only £400 raised. Duesbury did not attend the auction, and a further two guineas were paid to Whitling for his services as auctioneer. Significantly there are no records of any other trade sales; the 'China Club' had effectively routed the evening porcelain auction. Thereafter Duesbury's

Covent Garden saleroom settled into a more predictable routine, balancing the ceramic trade requirements with those of the fashionable seasonal client, alongside the provision of various factory materials and staff, and debt collecting. This shift in emphasis occurred as the new trend for French porcelain started to sweep upper-class Britain; the effect is detailed in chapter seven.

Unfortunately, at the time of the fiercest French competition, Derby was having problems of its own including a 'flying' body unsuited to hot food, and poor management back at the factory. Lygo's letters into the 1790s record his increasing difficulties in obtaining requested items from the factory with 'want of goods a great disappointment'. By the spring of 1794 the 'trade been worse here the last fortnight than ever I knew it at this time of year - it is a general complaint'. He also recalled by the summer of 1795 that he 'never recollect[ed] money to come in so slowly at this time of year'.

Promotion, Royal Warrants and patronage

Although the elder Duesbury received his Royal Appointment in March 1775, the factory appears to have been extremely reticent about promoting the royal association. In June 1776 the Queen visited the showroom 'informally', as the companion of the Duchess of Ancaster, ordering tea and table wares.³² The manager Wood was reticent about publicity 'afraid of causing offence', and having sought advice on propriety discreetly announced the royal approbation in three separate London newspapers two days following the visit, and a week later in the *Derby Mercury*. Mr Clay, the manufacturer of paper goods in Henrietta St., who also received the royal party, was far less timid and placed brief advertisements in two newspapers that very day.³³ Duesbury I's association with Clay continued, for in

³²DLS untraced. Derby porcelain accounts for the King and Queen. Under 'The Queen at sundry times', June 22, 1776 is an order for a 49-piece tea set, 6 salad bowls and 3 pickles stands, 6 ice cream and 6 egg cups to the value of £16.17s.6d. 'The above is what was bought by the Queen the first time she was at the Warehouse and at that time was attended by the Dutchess of Ancaster which is now Dutchess Dow.r. and I believe it was from her Grace representing the Warehouse to the Queen that occasioned the first Visit'. The next entry for Nov.15 for two more salad bowls is annotated 'NB These was ordered by the Queen when at the Warehouse'- a second visit or a five-month delay in filling a simple order? On Aug.14, 1781 large orders for table, dessert and breakfast sets costing £104.14s.6d. are annotated 'These goods the Queen bought when at the Warehouse attended by the Princess Royal and Lady Hertford which I believe since dead - Mr. Crompton came to inform us two days before that Her Majesty intended paying another Visit to the Warehouse'. Other Royal orders during 1777-87 were placed by the King's Pages, a 'Gent.n. belonging to the Board of Green Cloth of St .James', but in particular Mr Crompton.

³³Clay had patented a method to produce paper trays etc. in 1772, not from papier mâché, but larger sheets of paper; he became the leading Birmingham japanner. Lygo, Nov.24, 1787 sent a choice of two 16s. teaboards to Duesbury, recording that Clay 'cannot get them half fast enough'.

1782 'The King gave ... [an] order to Mr Ohm that lived with Mr Clay when he waited on his Majesty on Mr Clay's business'.³⁴

The Derby management subscribed to few trade directories; their brief entries rarely crediting themselves as 'manufacturer to the King and the Prince of Wales' - a sharp contrast with both Wedgwood and Turner & Abbott in 1785 directories. Not until 1805, under the aegis 'Duesbury and Kean', does the credit 'King's manufacturer' appear in 'Holden's Triennial' directory; although the shop sign proclaimed the royal connections.³⁵ Unlike his father, Duesbury II rarely resorted to the national press; only two London payments for any form publicity or advertisement are recorded. One relates to the overseer's position in 1795 - even then there is no mention of the Derby china works, for it required a reply care of the dealer, Mr Fogg -³⁶ and the other was an editorial piece placed in *The World* newspaper relating to Derby's celebrations to mark the King's return to health.³⁷ Duesbury's parsimony may well account for the absence of publicity, but he may have genuinely believed that a polite factory with social and artistic superiority over his rivals did not, and should not, need to advertise in the newspaper. Wedgwood before him regularly recorded the necessity of 'genteel' publicity. Duesbury II's attitude to patriotic promotion however differed; money was regularly spent on illuminating the warehouse for the various royal birthdays, but of particular note were the costly factory decorations in the spring of 1789, and subsequent discreet metropolitan press coverage.

Nevertheless the acquisition of royal warrants was obviously important, and Lygo realised that Derby's possession 'put a bar to any other manufacturers getting [an] appointment'. Within days of his father's death Lygo advised the young Duesbury to 'get yourself properly established manufacturer to his majesty'; in January 1788 the warrant fees appear to have been paid into the Chamberlain's Office.³⁸ In the summer of 1789 Lygo persistently tried to obtain the Appointment and orders from both the Duke of York and Duke of Clarence. Clarence, recently retired from the navy, and

³⁴ as above but the King's account, Jan 30, 1782 re. an order for breakfast wares of £14.

³⁵ DLS old ref. 1103. Letter WDI to WDII, Dec. 16, 1783 refers to painting of the shop sign with 'Ploome of feathers'; Lygo, March 12, 1789 refers to its repainting with 'W. Duesbury Derby Porcelain Manufacturer to his Majesty & his Royal Highness the Prince of Wales.'

³⁶ Advertisement for overseer in *The Daily Advertiser*, Sept. 21, 1795, appears to tie in with Lygo's London accounts Aug. 19, 1795 'By the Daily Advertiser 4s. 6d.'

³⁷ DL82 14/39 accounts, March 28-April 4, 1789. 'The proprietors of the World' were paid a guinea 'for a paragraph in their paper'. The write-up of the celebrations at Derby on April 1, appeared in the paper on April 6 (p. 4 c. 1) at the same time as the coverage of the Windsor Gala. Duesbury's illuminations were highly praised, but with no mention of the Covent Garden outlet. For the month previous various groups of potters had taken extensive front page advertisements 'congratulating his Majesty'; Wedgwood's name predominated.

³⁸ Lygo, Nov. 6, 1786. Day-book Jan. 18, 1788 'Paid Mr Eley, £10.12s.6d ..Chamberlain Office Fees', however this cannot be traced as a payment for a Royal Warrent in the PRO.

with a new title, was expected to set up house soon. Lygo thrice visited Mr Louis Weltje, the Prince of Wales's Comptroller, to request that the Prince would have a word with his two brothers about a warrant. Both Dukes responded agreeably, but no formal arrangements were made. Weltje was given a cabinet cup and saucer for his troubles, and responded with the assurance to pay the Prince's porcelain bill. What became of the Dukes' promises is less certain. By early 1790 Wedgwood was able to announce on his printed bill heads 'Potter to the Duke of York and Duke of Clarence'.

Meanwhile a Derby customer, Sir John Day, was trying to find a buyer for a £297 table service that had arrived 'lately from India', mistakenly decorated with the coat of arms of the two Dukes. Day had hoped the Derby showroom would take the service in part exchange for 130 guineas-worth of Duesbury's porcelain, but the management wanted nothing to do with foreign wares.³⁹ Lord Rawdon was enlisted by Lygo 'as a friend in getting the Duke of Clarence's Warrant', receiving a pair of vases for his pains, which he self-deprecatingly gave to the Duke.⁴⁰ By February 1791 the Worcester china works was decorating the 600-guinea 'Hope' service for Clarence; this had not been ordered by the Duke himself, but intended as a present from the King and Queen. Whereas the royal couple were no longer visitors to the Derby showroom, they regularly holidayed in the Severn Valley, particularly following George III's extended illness. Their first-hand knowledge of the porcelain trade in Worcester, rather than Flight's ability to produce fine porcelain, sealed the commission. Nearly a year later Lygo laid out pattern tablewares, previously shown to the Prince, in the dining-room at York House for the separate inspection of the Duke and Duchess.⁴¹

In late 1794 another rush to gain a prestigious royal commission began following the rumour that the Prince was to get married, and the King and Queen might pay off his debts. Lygo enthusiastically suggested that four dozen dessert plates and 20 shaped comports and icepails should be got up with different floral patterns to show the Prince. Lygo was only able to send eight plates, and those 'not in the stile of flower painting which I think the Prince likes', and was hoping that Duesbury would come to town to call on the Prince. By next spring an order was finally placed for a 'complete dessert service of a very expensive pattern', but the Prince's steward had not been told, and had not budgeted for its payment. Lygo was forced to advise Derby that the original order might have to be changed to a less expensive dessert

³⁹Lygo, Sept.28,and.Nov.20,1789

⁴⁰Lygo, Nov.8,1790

⁴¹Lygo, Jan. 13,1792

service; meanwhile £30 more china was ordered by the Prince's clerk with all goods to be sent to Brighton by early June. The Derby accounts show that although the Prince of Wales was indeed an inveterate buyer of porcelain, his ability to pay for goods was less certain; in February 1794 the warehouse received cash for a half-year's interest of £10.5s.6d on the Prince's account, and in September 1795 Lygo attended the commission to sort out the Prince's debts, hoping to get payment if the bill was reduced by 10%. By comparison, Clarence had by 1791 already earned a reputation as 'the only Prince that pays the trades people', while his brother the Duke of York thirty years later effectively bankrupted the Coade's Stone factory with an unpaid bill of £20,000.

The nobility were also treated with some deference. If they did not visit the showroom Lygo would write and then call on them at their London houses taking examples of porcelain patterns to view or leave for consideration. The manager's letters, combined with the accounts, record the etiquette of dealing with the various household servants. Most payments of private customers' bills can be cross-referenced to a money payment to a servant: for example, Lord Winchelsea's steward received 4s. when his lordship's £25-worth of cabinet pieces were paid for in June 1795, while Lord Cathcart's butler was given 10s.6d on a £75 bill in March 1795. Other servants received 'compliments' of Derby china, such as half-pint mugs. Private customers could get a host of unprofitable and time-consuming services from the Derby warehouse, including the hire or loan of porcelain, exchanges of unwanted pieces, gifts of decorating enamels for ladies to use on blank china 'in the country', porcelain wares to be matched or mended, and even teaware cleaned after being 'discoloured with seasoning'. Problematic orders were accepted, perhaps involving the additional manufacture of metal parts, such as castors on a cheese stand, while older stored moulds were brought into use to save customers the expense of creating a new one.

Trade customers were kept sweet with Christmas boxes and presents of foodstuffs. The troublesome two years producing the Margrave of Anspach's service commissioned by the jewellers Green and Ward is well recorded; less so are the many wasted hours Lygo and the factory spent dealing with the royal clockmaker Vulliamy. Both examples are clearly uneconomical connections for Derby that were presumably maintained because of their associated prestige.

Chapter 5. Marketing to the provinces and abroad

The Duesburys' provincial or 'country' trade

The London warehouse sold 85-90% of the factory's production by value, with only a small outlet 'in the country'. On only two occasions, in September 1788 and again in the summer of 1795, is there any mention of extraordinarily good custom in Derby. Many private clients with Derbyshire connections, or who had visited the factory while touring, made their purchases and final payments through the London saleroom - thus, for example, the names of the Devonshires, Strutt, Fitzherbert and Sir Joseph Banks all occur in the capital's day-books. The 1818 receiver's trawl through the 1796-7 Derby accounts would suggest that only about £250-worth of goods were sold at the factory over the two years. Factory valuations after 1785 suggest that the stock was kept too low to allow any sizeable retail or wholesale function in Derby. However even Wedgwood with a far greater volume of cheaper earthenwares appears to have redistributed some 80% of their home goods through London in 1790, making use of the communications radiating out from the capital.¹

The London account books confirm that dealers from throughout the country, including Ireland, were obtaining stock from the warehouse and not from Derby. This appears to be true even when the factory was considerably nearer to a dealer than the metropolitan showroom. Traders supplied through London include Studwell of Norwich, Chapman and Elliot of Bristol, Richard Brown of Whitby, the confectioner Vickers and Messrs Bailey & Clarkson in York, Robert Jones in Liverpool, Miss Tillis in Plymouth and Miss Williams in Bath. Elizabeth Studwell of Norwich proudly advertised in 1783 that '...she had just returned from London etc. with a Fresh assortment of China, Glass and Staffordshire Ware'.²

In 1792 when Duesbury drew up a contract with Egan to set up a china and glass shop in Bath, he particularly forbade Egan establishing any similar future business not only in that city or neighbourhood but also in Manchester. Other than private sales to the Manchester area there is no obvious record of a Derby trade connection with this northern city through London. The factory may have been supplying a dealer direct, such as Ollivant, or had an agency agreement, both of which seem unlikely judging

¹Wedgwood saw c. 80% of its sales through London in 1790, declining to a third by the close of the Napoleonic period. KUL.Wedg. Acc., Ledger I (1790), Ledger E (1811-16).

²*Norfolk Chronicle*, March 22, 1783, quoted in S.Smith, 'Norwich china dealers of the mid-eighteenth century', *ECC Trans*, vol IX, pt 2(1974), p200-1. A year later, on May 8, 1784, Richard Studwell similarly advertised his return with 'Foreign China, Worcester and Salopian Ditto'.

from the geographical distribution previously mentioned, unless it was perhaps an old contact pre-dating the establishment of the London warehouse. Thomas Turner may have been supplied with inferior pieces. Alternatively, one of the factory's London trade customers might have been acting as a wholesaler supplying a Manchester retailer. The ex-Derby clerk and showroom manager, Barker, later became an agent for Bloor in Liverpool.

From autumn 1790 Duesbury was considering selling more stock through Bath, where Wedgwood had opened a shop nearly twenty years earlier. Only one retailer, Miss Williams, sold Derby porcelain, and then not in great amounts. She had taken about £40 of goods per year but found Turner's common goods were more popular. Two years later Egan had opened his shop; his first year's takings of £1500 just met his living expenses - £334-worth of Derby porcelain had been sold, alongside glass and Staffordshire ware. Sales remained poor, although the previously bankrupt Egan optimistically considered opening another shop in Weymouth. In April 1794 Lygo could see that 'trade never been worse'; unfortunately the Bath boom had been hit by the collapse of three local banks. Bath sales of Derby china, which came through the warehouse prior to 1797, suggest the spa town had a clientele and trading pattern varying from London's: connected with gifts, mementos of stay, or 'genteel' drinking of spa water. Cabinet cups sold proportionately well here.³ Egan, however, built up debts owing to the factory, and after the death of Duesbury II was obliged to tighten his belt. Lygo suggested he raised money by raffling a Nankeen table service. From 1797 Kean insisted Egan bought direct from Derby.

The Duesburys' overseas trade

While Staffordshire factories found a thriving export market for their 'middling' and cheaper earthenwares, Derby's potential overseas markets were restricted to the wealthier classes from countries without a commercial porcelain industry of their own - largely Holland, Spain, Portugal and their associated colonies in South America; and also North America and the West Indies. Soon after opening his Covent Garden showroom Duesbury I advertised 'Merchants and Dealers may be supplied on the shortest Notice, and on the most reasonable terms'. Derby's sales catalogue suggests an extension of 'a considerable Branch of Commerce to foreign Nations which we have great Reason to believe from our late Demands'.⁴ Following

³J.Anderson, *Striving for Perfection* (1997)

⁴BM.BP. f1332-40

the French trade treaty with Britain, Duesbury showed particular concern to break into the Spanish market.⁵

As Lygo's contract was being re-negotiated early in 1787, Duesbury II considered replacing him with a Mr Elin; the latter, who remains unidentified, refused the position. But his expertise relevant to overseas trade continued to be used, as Lygo recalled that Elin was 'making inquiries as he knows the Merchants more than I do', and regularly acted as translator of Italian, French and Dutch.⁶ By August a sales catalogue was to be produced specifically for 'merchants with foreign orders'; Lygo successfully persisted that it should include details of prices and heights - the latter indicating that ornamental pieces featured.⁷ The Derby proprietors did not export porcelain directly themselves, nor employed a commercial agent abroad.⁸

Derby sold considerable numbers of figures to foreign merchants, in particular Giacinto Micali of Leghorn, Pierre Daguesant of Cadiz, and John Williams, exporting to Amsterdam. The earliest record of such trade is 1785, when Daguesant spent £27.1s. 6d. Between 1788 and 1792 he bought a further £430-worth of figures and groups, with discounts of 20-25%. These were a mix of high-quality enamelled and biscuit pieces, priced up to two or more guineas per group or set, a number being faulty, plus a few small vases and one simple blue and gilt teaset. Relatively minor alterations were made to suit Daguesant's foreign customers' tastes, including omitting detailed work in preference for 'more Gold on a larger scale', and greater attention to 'well colouring of the Fleishy parts'. In March 1791 he had asked for eight months' credit, and forfeited 5% discount.

Lygo's dealings with Micali more interestingly reveal the various adaptations and specifications required to modify Derby porcelain for the Leghorn market. Micali's Italian friends were surprised he bought china here knowing 'the People of Leghorn considered the English Porcelain very bad Ware and of little Value, from what they have heard', but from what he had seen Micali disagreed.⁹ Specific trial pieces were made for this customer; pedestals for figures were sent to London 'in the Clay', while his pattern vases were watercoloured 'in the manner they will be done when Glazed and finished'. Micali compared Duesbury's quoted prices unfavourably with

⁵A.Ledger, *Derby Porcelain European Competition, Trade and Influence, 1786-96. References from Original Documents* (1998), various appendices.

⁶Lygo specifically mentions Elin's language skills Jan.11- Feb.13 1787; March 19,1791, June 1,1794.

⁷Lygo, Aug.3, 20, Sept.15, 21,1787

⁸Ledger, *ibid*, p26 suggests Duesbury may have tried to interest a Mr.Hope in Amsterdam with such a position. DL82 8/60 refers to an interview with Hope and 'salary no objection.'

⁹Lygo, Jan.19,1787.

‘Dresden and Saxon Manufactories’ at almost double the cost, but by the close of the following year Micali seemed pleased with Duesbury’s services, and hoped ‘this shall encourage the commerce we have in mind to open with you in preference of that we do at present with the best German Manufactoryer’.¹⁰ Micali bought a narrow range of cheaper figures, costing between 10d and 4s.6d, but also acquired more useful wares. On a sale-or-return basis, 15 separate table and teaware patterns, and shaped wares, were provided in April 1787. More commission-basis dessert, soup, coffee, and chocolate wares were provided over two years later; £116 pounds-worth of table and tea wares were subsequently returned and credited to Micali.¹¹

Between August 1786 and April 1792, John Williams of Hammersmith ordered at least 11,400 ‘boy’ figures in two sizes, usually costing 10d and 12d each.¹² The total value of these was £387, minus discount of 25-27½%. Williams had been granted an extra 2½% discount when his bulk order was delayed due to firing problems in October 1790, although Lygo believed this was ‘to be money in his pocket’, his profit in Holland already being ‘every dozen of boys 1s and 12½ % besides’.¹³ Williams had been encouraged to take a few finer biscuit figures and groups in late 1787, and ‘he did not doubt but he could dispose of them but was doubtful wether he should get the full price for them’,¹⁴ but in return for the extra discount was persuaded to take on a sale-or-return basis a varied assortment of figures valued at nearly £140.

Williams alone took nearly 20% of Derby’s total figure production as sold through the London warehouse between 1786-92, while Daguesant sales for 1788-92 accounted for 18%.¹⁵ Other London-based merchants, like Troutt Burgeois or Dubois and Co., appear to have bought ‘off-the-shelf’ Derby figures on a less regular basis, which may have been exported. Dubois had bought over £73-worth of Derby in 1783, and £42-worth the following year. Troutt had bought a little over £20-worth of Derby in both 1783 and 1784, with over £114-worth acquired in 1785, and £48-worth five years later.

¹⁰DL82 8/121. Micali to WD, Nov.21,1788.

¹¹Ledger, *ibid.* Appendix B. Some of the Micali orders are missing from the documents making it difficult to judge how much Micali actually sold, and paid for c. 1786-92.

¹²Lygo, Aug 5, 1786 at this point 10d. and 12d. size, but later reduced by 1d. each size.

¹³Lygo, Oct.25,1790.

¹⁴Lygo, April ?,1787

¹⁵Unpublished ‘Initial Analysis of Derby Figure Sales 1783-5 and 1786-94’ kindly provided by A.P.Ledger (May 1998). A Mr. Williams is recorded in the 1783-5 summary account sheets as having bought £394, £176 and £77 of porcelain per year, this may be John, as ‘W.’ and ‘Thos.’ Williams are listed separately; these sales could be ‘boys’ too.

Perhaps as much as half Derby's figure production was being sold for export from the later 1780s, but this had effectively ceased by the summer of 1792. In part, such marketing may have been an attempt to get rid of the 'very heavy stock of figures in the warehouse [with]... no demand for them here'.¹⁶ Duesbury's concentration on the ornamental export trade would have given him some continued return on his heavy investment in modelling and moulds.

Foreign dealers seemed far less inclined to risk buying useful Derby porcelain despite Lygo's belief 'there is many more shops abroad that deals in the ornamental way & not in the useful'. In the summer of 1786 Lygo was to persuade Williams that if 'some of our teasetts was introduced in that Country but they would sell', but he only appears to have bought six saucers. By early 1791 the Cadiz dealer Daguesant who had 'seen our useful goods more than once but never seemd inclined to purchase any',¹⁷ was to be given a few tea patterns.¹⁸ But no useful orders appear to have resulted; Spain without any real porcelain industry of its own had not followed the French vogue for china tablewares, and had continued to use silver plate.¹⁹ Micali bought under £5-worth of teawares and inkstands along with his original 1786 order for ornaments, but was persuaded to take 'a few things Compleat (as well as patterns) as an adventure on Commission it might be of great Service to you in showing the Manufactory'. Wedgwood had already done this for Micali.²⁰ A wide variety of table plate and caudle patterns, complete dessert and tea sets, and shaped wares, followed. Loss of accounts make it impossible to trace the value or quantity of goods sold through Micali.

Less quantifiable are the private and trade orders destined for overseas. Lygo frequently refers to items for someone 'going abroad' or to a specific country, or items were to be shipped or packed 'for the convoy'.²¹ One of the Duesburys' best trade customers, Mr Neunburg, had some overseas buyers; in 1786 he requested small-size chocolate cups akin to coffee cups for standing in large pewter saucers, 'the fashion of the country they are for'.²² Here lies an essential problem with dealing overseas, other than getting rid of surplus or off-the-shelf stock: each order becomes time-consuming and unique, and was expected to be completed by a particular

¹⁶Lygo, April ?, 1787,

¹⁷Lygo, Jan.3, 1791

¹⁸Lygo, March 19, 1791. Day-book June 24, 1791 records a complete simple blue and gold 7 guinea tea set, and '8 patterns cracked ware, free but valued at £1.8s.4d' (BM.BP. f12582v-3)

¹⁹B.Hillier, *Pottery and Porcelain, 1700-1914* (1968), p84.

²⁰Lygo, Jan, 17, 1787

²¹E.g. Lygo, Aug 2, 5, 1786; July 14, 1792; April 21, July 20, 1795

²²Neunburg had bought Derby porcelain to the value of over £224 in 1783, £243 in 1784, £281 in 1785, and about £120 in Feb. 1789-Jan, 1790; see Lygo, Nov 6, 1786.

sailing. The Derby factory had problems meeting similar home demands, without entering into the luxury market abroad, where they were in more direct competition with porcelain from other nations.

In common with Wedgwood, the Derby management cultivated private relationships that might prove useful in promoting the factory abroad. The Rt Hon. A. Fitzherbert had ordered a dessert service prior to his appointment at the Hague as Envoy Extraordinary in the spring of 1789. He also commissioned 'one of the new shape Cabinet Cups .., enamd with best Views in Dovedale fine yellow ground ... to be beautifully finished' and he would 'take the opportunity of showing it to the Nobility abroad'. While the dessert was being shipped nearly a year later Fitzherbert was home before becoming Ambassador to Spain: the three-guinea cup had become a present. Sir John Hort, who had ordered a dessert following his marriage in mid-1789, commissioned another within months, as he was to leave for Portugal to become 'His Majestys Consul General'. Hort was to 'endeavour to recommend the Manufactory as much as lays in his power'.

Duesbury attempted to sell Derby porcelain in the West Indies in 1787. Lord Dunmore, as newly appointed Governor to the Bahamas, was equipped as a trade mission with a wide variety of tea, table and ornamental ware, and patterns, amounting to some £317-worth of porcelain. Any merchant that bought directly from Dunmore was to be allowed 15% discount, the cost of freight being free. Any subsequent orders through London were to have a 20% discount, with merchants paying carriage on top estimated to be about 5% extra. Part of the attraction of the Bahamas was evidently the possibility of selling to merchant smugglers who took goods back to Spain.²³ Whether any sales or profit ensued from the Bahamian project is uncertain, for unfortunately relatively few warehouse documents survive for large parts of 1788. Lord Dunmore's account was credited with £73.15s. at the close of 1791, but meanwhile he had been recalled home in disgrace.

While there is relatively little evidence that 'useful' Derby wares were bought for export, Lygo intriguingly remarked in the spring of 1792 that two teasetts decorated with a blue border on damaged ware, priced at 2½ to 3 guineas, which were destined for the warehouse, might be suitable for 'friends [to] send abroad'.²⁴ Sending seconds or worse abroad was another means that Wedgwood used for clearing stock with relatively little comeback or lessening of his own reputation, but any statistics of

²³Lygo, Oct.23, Nov.3,1788.

²⁴Lygo, May, 2,1792.

either Duesburys' sales of this nature no longer survive. One American merchant, probably Mr Jacks, was not prepared to take such inferior wares, and commissioned dessert and table wares, as well as buying tea ware and figures.²⁵ Other foreign merchants dealing directly with Lygo included 'Mr. Pierre Jolliat of Hamburgh' who ordered '33 Gross [unspecified] according to the new prices',²⁶ and from Holland Mr Bickelberger and Mr Hope. But such trade caused problems; Lygo had to be sure that any porcelain leaving Britain was to be paid for, and checked merchants' banking and credit arrangements before goods were shipped. In 1787 John Williams, the merchant who sold to Dutch dealers, had told Lygo that 'he had refused taking orders when in Holland last unless they would advance the money before the goods was sent which they did not agree to do';²⁷ seven years later Lygo remembered this advice and was delaying sending coffee wares to a Mr Bickelberger 'for it is better to do business with the Dutch for ready money'.²⁸

The 1792 Privy Council for Trade asked the British porcelain manufacturers only if they had sold goods for export to France, but not other countries. Not surprisingly the manufacturers answered in the negative; however 'The Gentlemen all agreed that their Export to Ireland is much diminished in consequence of the Commercial Treaty with France'. The Irish dealers were buying in France, but this may in part explain Duesbury's willingness to help Egan set up shop in Bath. Many of the lesser Irish nobility, without the means to fund a Season in London, readily came to the spa resort. In 1792 the dealers were asked a more open question about the export of ceramics as a whole; the china trade had 'very much diminished ... The Americans .., who used to take considerable quantities from this country, now import directly from China'. Few English-made porcelains appear to have been exported, and even the re-export of oriental ones was declining. The movement to abolish the East India Company's charter was gaining pace; at the close of 1792 Lygo opined that if this happened there might be a greater foreign demand for fine goods.²⁹ Meanwhile Derby porcelain was being sent to the east, as part of Lord Macartney's trade mission to Peking.³⁰

²⁵Lygo, Jan. 21, Feb 10, 1791 and July 21, 1792

²⁶In the summer 1787; a Mr. Jolliat had bought Derby porcelain in 1783 (£33.17s.) and 1784 (£44.13s.).

²⁷Lygo, April ?, 1787

²⁸Lygo, May 30, and June 25, 1794

²⁹Lygo, Dec. 15, 1792.

³⁰Lygo, July 14, 1792. See also R. Kilburn, 'The export of Derby Porcelain to the East', *DPIS Newsletter*, no 43 (Dec. 1998), p17-20.

Conclusion

The successful marketing and distribution of fine ceramics were clearly based on established practice from the early 1750s, and barely altered during the following thirty years. It was closely linked to the trade patterns centred around the East India Company auctions, and the private Season purchasing of the late Spring. Based on London it benefited from the capital's reputation as the nation's hub of artistic and fashionable style, and used the variety of superior communication networks that radiated from the city and port. Producers of more middling wares like Worcester opened up a warehouse specifically for the trade, while at the luxury end of the market Chelsea's annual production was disposed off at fashionable auctions. Duesbury's acquisition of his Covent Garden showroom in 1773 suggests the establishment of a more permanent attraction to appeal to both groups, almost year-round. Boulton's ormolu had sold poorly at auction in 1771, while the following year Wedgwood shifted ornamental production to the 'middling People'. The market for luxury neoclassical ornament may have reached some form of saturation point; while on a more general level the 1772 depression had resulted in Staffordshire potters slashing their prices by 20%. For five years Chelsea-Derby was not sold at a Spring Sale, until 1778-85. Boulton too held a Christie's auction in 1778. Auction records do not suggest that sale returns were any better, but Duesbury's main motivation may have been to provide funds for his financially ailing partner Heath. Older-style stock may have been disposed off.

Few manufacturers of fine ceramics established a foothold in the metropolitan trade. Duesbury I, with at least a couple of years of experience dealing in London during the 1750s, may have felt more at ease and confident than many of his provincial manufacturing contemporaries. Even Josiah Wedgwood was wary of the capital, and had sent Joseph Pickford 'a Londoner [who] knows all their tricks' to help find a suitable warehouse there in 1768, and installed the urbane Bentley there to act for him. However, a second-generation Wedgwood recorded his hatred of being in his father's London warehouse, having to be sycophantic to customers he regarded as no more than his equal. The potter did receive a number of complaints from private customers about his showroom staff's rude behaviour.¹ This may in part explain Duesbury II's reluctance to visit the showroom, but the etiquette of servicing the titled customer in the later

¹KUL. Wedg.Acc. 96-17660.

eighteenth century was clearly complex; Lygo was entrusted with this rôle, later to be dismissed by Kean .

Lygo's showroom accounts illustrate important changes in the marketing of fine consumer goods from the mid-1780s: auctions ceased, and the emphasis shifted from private to trade customer. Royal and aristocratic patronage continued to be wooed but within their own homes. The number of provincial dealers and private customers dealing directly with Lygo increased. Meanwhile the London chinamen were becoming increasingly powerful: asking the Duesburys to cease the public auction, (which fifteen years earlier had been part of the fashionable Season), curbing the night trade sales, and boycotting the East India Company sales. This was at a time when Weatherill saw 'no fundamental changes in the selling methods' in the ceramic industry as a whole; although she recognised the growing number of London and provincial dealers, 'it is difficult to perceive the details of how they could influence the growth of the industry'². The Duesbury papers record developments that were to anticipate the changing rôles of the fine ceramic factory warehouse and dealer early in the following century.

'For eighteenth-century English Earthenware manufacturers to export all over the world was an essential part of their commercial activity'; this was particularly true from the mid-1780s.³ Wedgwood's direct sales to Europe in 1790 accounted for about 10% of his trade.⁴ Evidence suggests that c. 1775-92 the Duesburys considered exports to be an important and growing market, but it has proven impossible to quantify the proportion or value of the Derby production that was exported; it is unlikely to have reached 10% by value of production even in boom years. Perhaps up to half of the factory's figures were sold abroad from the late 1780s, as Lygo had problems of 'very heavy stocks' in his London warehouse. Fine useful goods fared less well, in direct competition from continental or oriental hard-paste porcelains, and novelty creamwares, but less valuable seconds may have entered overseas trade. Special commissions or adaptations for foreign luxury markets would have been troublesomely small-scale and speculative. Except for a few sale-or-return commission deals, the majority of Derby sent abroad was sold to third-party merchants, rather than agents.

²L.Weatherill, *The Growth of the Pottery Industry in England, 1660-1815* (1986), pp323-3.

³G.Blake-Roberts, 'Patterns of trade in the eighteenth century', *ECC Trans*, vol.14, pt1 (1990), p98.

⁴Weatherill, *ibid* (1986), p352, p356. Figures from Etruria c. 1790 while 'some exports were probably through the London warehouse'.

The Derby factory had a very minor rôle in distribution and sales in the eighteenth century, with about 85-90% of the trade through the London warehouse; but even Wedgwood was sending about 80% of their home sales to the capital to be redistributed nationwide in 1790.

PART 3. FASHIONABLE CERAMICS AND COMPETITION

Chapter 6. Creating fashionable ceramics

With the acquisition of the Chelsea factory Duesbury I deliberately chose to produce luxury porcelain, apparently abandoning the more middling market to which he had at least in part aimed over the previous decade.¹ Exactly why he changed direction is unknown, but it coincided with the increasing vogue for neoclassical design (discussed in the following chapter), and a potential gap in the finer market caused by the declining fortunes of the London and Worcester china works. Lygo, writing about one of the factory's dealer-customers a year after the 1783 depression, might provide a further clue: Mr Fogg was 'going into fine way - to get them far better customer[s], safe people' who paid their bills.²

The artistry and fashionable topicality of Chelsea and Derby under the Duesburys and Kean are the most recorded and thoroughly written about of all aspects of all English porcelain in the last quarter of the eighteenth century, and are beyond the scope of this study; this chapter is concerned with commercial aspects.

Luxury, choice and the neoclassical divergence

With the vogue for neoclassical style came consumer choice particularly amongst the producers of the ornamental wares: were the likes of Duesbury porcelain, Wedgwood earthenware and Boulton metalware combinations competing directly for a luxury market buying in the new classical taste?³ All, regardless of their finished appearance, had similar roots: inspired by publications such as Caylus, copying of original pieces, or those of each other.⁴ However, traditional luxury goods followed French Court design,

¹ In 1762 Duesbury was 'to deal in the Blue & White way'; Rice in his preface to *Derby Porcelain, the Golden Years: 1750-70*. (1983), believes that the early factory's 'creative impulse was at its highest and some of the items it turned out made the rare transition from mere craft to art'.

² Lygo, Nov.11,1784. By Sept.28,1789 Fogg had just been made china man to the Duke of Clarence.

³ H.Young, *The Genius of Wedgwood* (1995), pp78-84; E.Robinson, 'Matthew Boulton and Josiah Wedgwood, apostles of fashion', in RPT Davenport-Hines and J.Liebenau, eds, *Business in the Age of Reason* (1986), pp98-114.

⁴ DL82 7/21. Dec.7,1773 Duesbury had 'paid Mr Hamilton for vases 4gns.' Wedgwood purchased 'an elegant Etruscan shape vase and pedestal' from a Chelsea-Derby auction in 1782, while Lygo sent a Wedgwood catalogue to Derby, April 23,1787.

the *gout grec*, adopted in the 1760s but popularised by Marie Antoinette. In contrast, English connoisseurs, like William Hamilton or Payne Knight, had created a more commercial interest in the *antique*, based on archaeological artifacts. The latter vein suited those who denounced the doctrine of ‘beneficial luxury’, believing it to be the foundation of moral degeneration, and is clearly part of middle-class discourse. But it would be an over-simplification to suggest that Derby porcelain and finest Wedgwood pottery neatly divided between an aristocratic and middling market. Wedgwood and Bentley gave their ‘lowly earthenware’ all the attributes of porcelain: royal patronage, high prices, and artistry.

From 1772, Wedgwood under Hamilton’s guidance banished ‘offensive Gilding’, hoping it would work to his advantage, as ‘our Nobility & Gentry’ might be overpowered by the ‘dazzleing profusion of riches and ornament’ seen on ‘things in Gold, Silver & Steel from Soho, the miraculous magnificence of Mr. Coxes Exhibition, & the Glare of the Derby and other China shews’.⁵ But Duesbury too had introduced his own plain biscuit, following the Sèvres lead and imitating marble, in his spring auction of 1771.⁶ Contemporary accounts would indicate that both styles were equally recognised amongst consumers of fine ornamental ceramics, and that it was the simplicity of unglazed wares, whether china or earthenware, that separated them from decorated and gilded pieces.⁷

Wedgwood found the expectations of his luxury-market customers to be high, and often unprofitable. Late in 1769 he commented ‘I could sooner make £100 worth of any ware in the comm.n. course that is going, than one sett. It is the sort of time loseing with uniques which keeps ingenious Artists who are connected with Great Men of taste, poor & wo.d make us too much in that way’.⁸ Nevertheless the Staffordshire potter accepted

⁵ JW, April 11, 1772, in K.E. Farrer, ed, *Correspondence of Josiah Wedgwood*, vol 2, p68. A year earlier (April 3, 1771) Wedgwood had referred to Boulton’s and Duesbury’s ‘shews [being] hardly motives sufficient to my leaving here’, in A. Finer and G. Savage, eds, *The Selected Letters of Josiah Wedgwood* (1965), p104.

⁶ J.E. Nightingale, *Contributions Towards the History of Early English Porcelain* (1881), pp15-91. These were mainly figurative, Lygo writes of biscuit vases by 1788.

⁷ In 1775 Edmund Burke had advised Richard Champion when seeking to extending his porcelain patent to show vases that were ‘Brown or sort of Pompadour Ground.. like the originals’, while his teawares could be of Dresden-style. Lady Theresa Boringdon arranging her porcelain in a cabinet wrote in 1772 ‘I think I may also place some of Wedgwoods best unglazed Black Ware, for that may bear a Comparison with the French [biscuit]’; T. Avery, ‘Four Georges: the decorative art collections of Mrs David Gubbay and Lady Binning’, *Apollo*, CXLIX, no.466 (April 1999), pp16-19.

⁸ JW, Nov. 19, 1769, quoted in G. Blake-Roberts, ‘To astonish the world with wonders’, *ECC Trans*, vol 16, pt2 (1997), p158.

‘particular orders’ and ‘uniques’, that proved equally problematic to Wedgwood as they did the Duesburys.⁹ In the summer of 1774 Wedgwood recorded how Catherine of Russia’s tableware, two years in production, was ‘not be near the proffit upon this service, that we have upon our commonest painted goods’.¹⁰ Twenty years later Duesbury similarly bemoaned the time and expense of creating the Margrave of Anspach’s service.

At the upper end of the ceramic market a rich connoisseur had a further option - the genuine antiquity. Lord Mount Stuart, heir to Lord Bute, had upset Wedgwood, claiming in ‘his haughty manner ... everything was dear’, and despite his companion’s praise of his vases exceeding ‘the Antient ones in beauty and variety’ he had remarked ‘but we know that they are not Antiques, & that spoils them’.¹¹ D’Hancarville’s commercial interpretation of Hamilton’s extensive collections had incorrectly, if not dishonestly, credited simple earthenware vases with an artistic pedigree never bestowed on them by the ancient world.¹² Furthermore the philosopher Goethe was appalled that Flaxman’s designs were used by Wedgwood to pervert the public taste with antique pottery.¹³ Horace Walpole, a noted ceramic collector, bought Wedgwood, but was not always approving.

Wedgwood has been credited with ‘bringing ceramics out of the women’s rooms and into the state apartments again’, because his wares could be well integrated into the total neoclassical interior.¹⁴ But the concept of coordinated interior designs was not new, Boucher controlling the French Royal Manufactories, had created a homogenous and luxurious rococo style. Early Derby porcelain had fitted into rococo schemes, but by the late 1760s was equally inspired by neoclassical sources, albeit interpreted in the *gout grec*. Duesbury was making ‘altars dedicated to Bacchus’, copying the French etchings of Caylus by 1772, but with ‘fine crimson ground, and superbly decorated with gold’.¹⁵

⁹E.g. in 1772 the Duchess of Montague had sent a vase to Etruria to be matched, two years later it was still there, JW, March 8, 1774, Farrer, *ibid*, vol. 2, p179.

¹⁰JW, July 8, 1774, Farrer, *ibid*, vol 2, p186. Wedgwood knew two years of Bentley’s management had not been costed for the Frog service.

¹¹JW, Sept. 7, 1771. Farrer, vol 2, p40.

¹²M. Vickers, ‘Value and simplicity: eighteenth-century taste and the study of Greek vases’, *Past and Present*, vol 116 (1987), p98-137. See JW, Aug. 24, 1770, Farrer, vol 1, p364 and, JW April 11, 1772, *ibid*, vol 2, p67.

¹³J. Brewer, *Pleasures of the Imagination* (1997), pxxiii.

¹⁴A. Somers Cox, ‘The non-functional use of ceramics in the English country house during the eighteenth century’, in *The Fashioning and Functioning of the British Country House*, Studies in the History of Art no 25 (1989), p208.

¹⁵Taken from Comte de Caylus, ‘Recueil d’antiquites, egyptiennes, etrusques, grecques et romaines,’ VII ,

More 'shapes and decorations imitating the most esteemed Pieces of Antiquity' followed from a variety of sources. Duesbury's ornaments were equally a perfect foil both for the colour schemes and formal interiors of the neoclassical architects. Lord Scarsdale bought gilded vases for his Adam house at Kedleston in 1787.¹⁶

Wedgwood's strength lay in the form of his wares; both Bentley and John Wedgwood, had separately remarked on the clumsy and inelegant shapes of the French porcelain.¹⁷ Although Lygo or his customers often expressed a preference for French form, both held some regard for those from Wedgwood. In 1790 searching the trade for a cream ewer to provide a shape pattern he recorded: 'my liking is a French one at Mr. Foggs ... I know my attempting to go to Wedgwoods will be of no use, and would not admit me to see their patterns'.¹⁸ Fogg later provided a Wedgwood flowerpot to copy, while Lady Spencer purchased her own pottery 'Ewer and Sillibub pail' model specifically to be made into Derby porcelain.¹⁹ Thus, although the dynamic modelling of, for example, a dry-bodied basalt vase was superb, such pieces had a very different visual appeal from the beautiful ground colours and gilding of the Sèvres-style porcelains. Lygo recognised the two factories' different markets, and warned Duesbury that two new pattern wares, with a palmette design border, were 'too much in the Wedgwood style',²⁰ the implication being that the Wedgwood tablewares were recognisably inferior.

The rôle of ornamental ceramics had been relegated mid-century to that of metalware. Whereas Sèvres had made porcelain specifically for mounting from 1767, the general effect was achieved in England by moulding and gilding the china itself. Boulton and Fothergill appear to have at least considered ormolu combinations with Derby and Worcester porcelain.²¹ Both Duesburys however remained closely associated with leading exponents in the luxury sector: the Vulliamys, the King's clock makers, and Mr Catherine. Justin Vulliamy and his son Benjamin were particularly instrumental in

Paris, 1767, pt 4, pl XLIII.

¹⁶ '1 pair of Vauses no 67 Enam'd with figures of Flora and a Muse a view in Kedleston Park of the front and back part, of the House and richly ornamented with fine Chas'd and Burnished Gold Stripes etc', March 1787, 13 guineas.

¹⁷ T. Preaud, 'Competition from Sèvres Porcelain', *DPIS Journal* 4 (2000), p42. On visiting France Bentley approved of the porcelain biscuit in 1776, while Wedgwood junior (John not Samuel as suggested by Preaud) in 1788 had admired the fine body, painting and gilding.

¹⁸ Lygo, Feb. 4, 1790. As early as 1768 Wedgwood had asked Bentley to exclude sham ladies and gentlemen buying one or two new patterns for fear of copying.

¹⁹ Lygo, Oct. 15, 1794 and June 11, 1789.

²⁰ Lygo, Jan 6, 1790 Patterns were dessert '87', and tea '116'.

²¹ R. Reilly, *Josiah Wedgwood* (1992), p83; N. Goodison, *Ormolu: the Work of Matthew Boulton* (1974), p77. Letter from Soho to WD Oct. 17, 1772 requesting vases; Worcester had supplied pieces in 1770.

goaded the Duesburys into improving their biscuit figures.²² They encouraged not only the employment of fine modellers, but also the manufacture of spectacular, large pieces. Duesbury I created a 16-inch-high figure of Andromache for a clock by Justin, in imitation of the French King's clockmaker, Le Paute, and in competition with Boulton and Fothergill.²³ In late 1787 Benjamin had accepted a commission to make 'a very capital clock for the king' with accompanying sitting figures which, because of their size, 18 to 20 inches, were to be in marble. However Lygo reported that the King and Vulliamy would have liked them in biscuit porcelain if Duesbury were able to manufacture them, and that both could be made.²⁴ There is no record as to whether a porcelain variant was produced, but by September 1790 a two-foot-high biscuit group in French style was in the process of being made. The only other British ceramic firm then capable of producing large, quality figures, including models by Bacon, was Mrs Coade's Artificial Stone Manufactory.

At present there is insufficient published evidence to indicate whether Duesbury, Wedgwood and Boulton competed in exactly the same luxury market c.1770, and that the purchase of either one's ornaments meant the other's was declined. Duesbury initially utilised the highly specialist skills of London model and plaster workshops, like the Deares, but increasingly commissioned models or moulds.²⁵ Vulliamy's close involvement during the closing decade of the century particularly added gravitas to Duesbury's sculptural pieces, as Webber or Rossi produced models, and Spangler and Coffee were employed in Derby. By contrast Wedgwood had earlier commented 'thoroughly clever' modellers were unlikely to settle in Staffordshire '150 miles north of the great metropolis' where the artistic trade was centred.²⁶ This may have been part of the attraction of the Chelsea works to Duesbury I, for he successfully employed the likes of Gauron and Stephan there, before the latter worked at Derby. Chelsea supported its own artistic community, and Wedgwood too opened his decorating-shop there.

²²Vulliamy letter to WD, May 1st 1784 recounting a reception where two tables had been laid out with French and Derby desserts with figures - the French were much superior. Private communication with Timothy Clifford.

²³T. Clifford, 'New evidence concerning Vulliamy clocks and Duesbury porcelain', *DPIS Journal*, vol 2, 1991, p40.

²⁴Lygo, Nov 10th, 1787. Bacon was commissioned to supply Vulliamy with marble figures of 'Patience' and 'Diligence', 1787-9.

²⁵The 'sculptural' aspect of the Duesburys' works have been studied and published in detail, see T.Clifford (various) and his extensive bibliographical notes, and B.Bricknell, *Derby Modellers 1786-96: Extracts from Original Documents* (1995).

²⁶H.Young, 'Manufacturing outside the capital: the British porcelain industries, their sales networks and their artists, 1745-95', *Journal of Design History*, vol.12, no 3(1999), p266, quoting from Wedgwood, 1767.

Surprisingly no analysis of Wedgwood's luxury sector private customers has been attempted; contrary to the impression conveyed by McKendrick the élite did not abandon porcelain purchasing. Supporters of Wedgwood in the 1770s, like Sir Joseph Banks, William Eden, Sir Watkin Williams Wynn and Lord Cathcart, are equally documented Derby customers in this and subsequent decades. Although Boulton sold prestigious ornamental pieces to the *bon ton*, the commercial success of such wares at home appears to have been limited.²⁷ Significantly Brown's spars were sold for over twenty years at the Duesburys' Covent Garden showroom, perhaps competing against Boulton rather than Duesbury for custom.

Whereas Wedgwood and Bentley reduced their vase prices by a half in the depression of 1772 for 'middling people' to buy in quantities, Derby allowed prices to drop more slowly: perhaps over over a decade or two, vases could be bought for a quarter or less of the original price. The Etrurian firm is credited with creating a 'skimming policy', initially pricing high to attract the cream of the market.²⁸ Derby's reaction was less urgent, a tool of the luxury trade that allowed a continued income from earlier investment in moulds. But the effect was not dissimilar: by c.1780 Chelsea-Derby vases could be bought for a few pounds, and might have reached a larger down-market.²⁹

Wedgwood's urgency resulted from direct competition. Within weeks of producing a new range, other Staffordshire potters like Palmer, Turner and Adam manufactured a fine quality variation often undercutting Wedgwood's prices by at least 20%; some supplied 'worse' at two-thirds the cost. Although no other English porcelain firm could match Derby's quality, other alternatives that looked the part were available; the Victoria and Albert Museum has a contemporary imported Chinese enamel-on-copper imitation 'Chelsea-Derby' therm.³⁰

²⁷Goodison, *ibid*, pp242-4. Less than half his goods sold at Christie's 1771 sale, similar was true in 1778.

²⁸Weatherill, *ibid*, (1986),pp184-5

²⁹See chapter 2, footnote 12. The 1780 Chelsea-Derby auction produced low prices.

³⁰Victoria and Albert Museum, FE 45-1983.

Fashionable and fine Derby porcelain

Few would argue that Derby porcelain at its best could not rival continental wares with, for example, Boreman's landscapes or the quality of the biscuit figures. But unlike its major European rivals pre-1789, the Derby-based business was a commercial concern, with no patronage or state subsidy. Even during the early years of the French Revolution Sèvres received state support because it attracted foreign exchange. Derby's workforce was chosen or trained for specific tasks, and worked economically. Those decorators most highly prized today, like Boreman, Billingsley, Banford or Complin, noted by collectors respectively for landscapes, flowers, figures and fruit painting were commercial artists capable, as Complin himself explained, of 'variety' and 'variableness'. Boreman was equally able to paint birds, flowers, or marine and shipping scenes, while Complin's landscapes were of 'high character'. Costings of rose borders in the mid-1790s indicate that not only were Billingsley and Withers superior artists, but importantly took only half or less time to decorate a piece than other hands.³¹ Similarly, the gilders' numbers that appear on the more sophisticated wares are known to correspond with the quickest decorators, Soar, Yates or Cooper.

Twentieth-century ceramic writing for collectors has glorified the most accomplished artist-decorator, almost to the exclusion of others, and made a mockery of Duesbury II's attempts to create a commercially viable concern; even the factory has been credited with 'the panoply of an academy of art.'³² The significance of 'minor' late eighteenth-century decorators, apprenticed in the house-style of the leading artists and able to copy their work, was appreciated by Jewitt, but subsequently underestimated.³³

Versatility, speed and consistent quality made Derby a fashionable luxurious yet economic concern. Lygo constantly balanced the quality against the price, allowing for some differentiation in quality for the more influential customers, announcing for example Mr Fitzherbert's 'desire you will do the best in your power in the finishing part, as he orders it for the honour of the Derby Manufactory';³⁴ while Miss Whitbread, a regular client, Lygo recorded 'particularly wants flowers well painted and the ware a very good white'.³⁵ The Prince of Wales's basin and ewer were 'to be finished in a very

³¹DL82 6/14

³²A.Hoyte, 'The diversity of Derby Porcelain 1756-1848, *DPIS Newsletter*, 6 (Sept.1986), pp9-10.

³³Jewitt, *Ceramic Art of Great Britain* (1878),pp110-14.

³⁴Lygo, May 28,1789.

³⁵Lygo, July11,1789.

superb way', but four years later a royal commission was allowed to be 'not so particularly in the execution of the landscapes [for] they might pass', as the King was unlikely to examine the ware.³⁶ Final cost to the customer was important, as displayed by Lord Cremorne's 'wishes it be done in the best way ... if done by some inferior hand (such as did his Lordships French pattern) ... it might be done cheaper'.³⁷ However, orders of large sets created logistical problems, the factory trying to create a consistently high standard of decoration; Lygo sorted out eight dozen plates for Mr. Johnes, separating the 'very indifferently painted by the second best hand and some of them done pretty well'.³⁸

Like Bentley in Wedgwood's partnership, it was largely Lygo's aesthetic judgement that fine-tuned the warehouse pricing. In the spring of 1789, the clerk of works had sent Lygo a copy of the tea price-list, up to pattern '101', to be annotated with the prices, but the London manager had 'not filled all the numbers up because I had not seen all patterns on china & till then cannot give my opinion what I think they will sell for so well'.³⁹ He regularly advised how to improve patterns perhaps 'too naked', but equally damned 'one of the worst patterns ever saw come out of the manufactory'.⁴⁰ Similarly, he indicated a preference for certain shapes.⁴¹

The London manager also had to practise quality control that he rightly pointed out should have been carried out at Derby. Decorated saucers of inappropriate size were sent in 1789, with Lygo charging that the 'person that looks out the ware for painting is very much to blame for doing it in that way for it hurts the sale of the goods when finished at great expense'.⁴² This mismatching continued into 1795.⁴³ Mr. Coffee's modelling was condemned: figure '359' was 'one of the most stupid looking things I ever saw', while the Apollo '379' was 'very vulgar about the bosom for sure never such bubbs was seen

³⁶Lygo, Dec 6.,1786, and June 10,1790.

³⁷Lygo, Dec19,1789

³⁸Lygo, April 22,1790

³⁹Lygo, May 25,1789.

⁴⁰Lygo, April 21,1794, re. pattern '367', Lygo advised 'for no more of them to be done'; the Pattern Book shows an inoffensive coloured foliate border, perhaps Lygo's sample was never committed to the books.

⁴¹Lygo, Oct.3,1789, 'fluted brim plates should be used in general', looking better than the scalloped edge, and similarly May 9, 1794.

⁴²Lygo, Aug,17,1789

⁴³Lygo, Sept.16,1793, a service already two months late included plain-moulded dishes mixed with the ordered fluted plates. Lygo blamed John Duesbury, July 29,1795 re. 'the want of orders being properly executed, but I hope now you have removed that evil grievance'.

& so much exposed'.⁴⁴ He also indicated that a new teapot shape was poorly designed being too heavy and that its handle would burn.⁴⁵

The Derby factory invested considerable resources in acquiring original drawings and paintings, books, prints, other ceramics and even bronzes.⁴⁶ The time alone spent by Lygo visiting print or book shops, looking for specific subjects requested by Duesbury, or reporting on likely publications, was considerable. If possible Lygo arranged to buy on a return-or-exchange basis, or borrowed or copied material to send north: persuading dealers and private individuals to cooperate, and the retrieval of their property from Derby was both time-consuming and nerve-wearing.⁴⁷ A wide variety of fashionable design sources was considered, including the pictures at the Shakespeare Gallery,⁴⁸ auction previews, exhibitions,⁴⁹ Westminster Abbey and the British Museum,⁵⁰ or newly published books and topical prints.⁵¹

The most comprehensive inventory of such sources dates from c. 1790 to 1795, with 336 separate entries.⁵² Most were popular mass-produced acquisitions like Sowerby's and Curtis's botanies, Sharp's Crests, and prints after Van Dyke or Boucher. Items after the antique included 'Sketches on oile'd paper from Sir Wm. Hamilton's vases', 'Recueil

⁴⁴Lygo, June 1, 1794.

⁴⁵Lygo, April 23, 1787

⁴⁶ The factory frequently copied French porcelain e.g. Lygo: July 22, 1789; March 4, 1790; Aug. 26, 1790, Feb. 18, 1795 and Dresden e.g. Lygo: March 14, 1789; Dec. 24, 1792; and borrowed a Wedgwood flower pot, presumably to copy (Lygo, Oct. 15, 1794). Vulliamy sent Duesbury bronze figures (DL82 5/10 Aug. 8, 1789).

⁴⁷E.g. borrowing design sources: Lygo, July 5, 1792 'in this box you will find 19 numbers of a Botanical Magazine, which are lent to me by a gentleman for you to copy the flowers; pray let them be took care of and returned as soon as possible'. These may have still have been at Derby two years later for on May 22, 1794, Lygo wrote 'I should be glad if you would return the Botanical Numbers which I borrowed for you to copy'; Oct. 7, 1795 Duesbury had asked to borrow 'Sowsby's Magazine again' but the gentleman was out of town.

⁴⁸ Lygo, Oct. 28, Nov. 4, Nov. 11, Nov. 18, 1790, re. copying pictures exhibited at Boydell's Shakespeare Gallery; Vulliamy confided that the gallery would not permit sketches of pictures and that they were the 'worst subjects you could think of doing anything from'.

⁴⁹Lygo, April 25, 1795 Brewer 'been to the Exhibition - will explain.. when arrives at Derby'.

⁵⁰Reverse of Lygo letter March 17, 1795 these venues appear in a list including known books used as design sources, 'Thompson's(Season's)'. Lygo, Feb. 10 1795, recorded Spangler was to go to Westminster Abbey to see if there were any monuments suitable.

⁵¹ Lygo, Feb 10, 1795 re. 'a very beautiful book' to be published in a few days with 27 plates of Cupid, based on designs cut in paper by Princess Elizabeth. It was to cost 2gs, though on July 7, 1795 Mr. Fogg was paid £1.16s for 'book of cupids'; DL 82 7/21 Memo book 1773-4, print of 'Tome and his father'; 7/119 Sept 1774 bill of engraving for Stephan.

⁵²BM.BP. f 43-88, 'Inventory of prints, drawings &c. 1791'; also BM.BP. f 114-7 ; f 122-5., 'inventory of books sent to Mr. Sampson in five boxes from Derby, 5th May, 1818'; DLS untraced loose sheet akin to 'inventory', with print publication dates for 1794.

des sculptures antiques Grecques et Romaines'(1754), 'Antiquities of Herculaneum', 'Groses Antiques' and related material including Tassie's catalogue and 'Ornaments of the Vatican'. A large number of contemporary sources was acquired, for example, after Reynolds and Kauffman and items by Polydorus, Cipriani, Bouchardon, Baptiste, Bartolozzi and Ryland. Three engravings after Joseph Wright, the 'Orrery', the 'Gladiator' and the 'Air Pump', had also been in Duesbury II's possession. The botanical, figurative and historical subjects generally appear to dominate the acquisitions into the 1790s. Duesbury's requests to obtain landscape prints, like Middiman's 'Views of Great Britain',⁵³ Hazle's 'Tour of the Isle of Wight' and William Gilpin's 'Northern Tour',⁵⁴ tend to be the slightly earlier in date. The first group of plates listed in the '1791-5 inventory' are 'Views in Ireland' by Milton, and these are succeeded by figurative and classical prints, culminating in sea views. By the mid-1790s various animal subjects had been added to the pool of design sources.⁵⁵

Extra details recorded in the inventories are significant, and include the date of publication, whether the illustrations are coloured or black (and white), their shape (square, oval, round etc.) and their two dimensions, measured to one-eighth-inch. Such cataloguing would aid identification, and also allow some assessment of how the artwork could be used, by colour, size and shape. The modellers needed good-quality prints, to produce credible likenesses of real people - like the hero Lord Howe. When Lygo described Howe's actual appearance in 1794 as a 'strong bony man, 6 foot high ... little flesh', it was because he was unhappy about the accuracy of the current engraving.⁵⁶ Item '306' of the inventory is listed as '72 plate book' and is described as 'selected by Spangler', the modeller. Prints of classical themes similarly would have been used to give a porcelain model some sense of historical detail, but it was the skills of the fine modeller and repairer that gave three-dimensional quality and movement to a flat paper design.

The painters frequently had a different problem using prints: altering the scale. For example, the Boucher prints of two Muses were 11 x 14 inches, and the 'Views of Ireland' were 5 x 7½ inches. However, a porcelain panel is seldom more than 2 x 3 inches, so an artist had both to reduce the picture and probably recompose it to fit into an

⁵³ DLS Parcel 17x. Day-book June 10, 1786. Two numbers purchased for 8s.

⁵⁴ Lygo, Sept 8, 1790 mentions both publications.

⁵⁵ DLS Parcel 17X. Day-book Aug. 15, 1793. Messrs. Robinson and Co. paid 9s. for 'Book of Quadrupeds' sent to Derby; Lygo, Feb. 18, 1795 mentions book of 'Birds and Insects of Great Britain'.

⁵⁶ Lygo, July 8, 1794.

oval, round or rectangular panel. This was itself a considerable skill. Duesbury may well have attempted to solve the problems of these oversized prints, for late in 1793 Lygo had been instructed to investigate a pantograph.⁵⁷ Furthermore the prints themselves would have their own characteristics resulting from the printing technique employed, such as hand-coloured engraving, or mezzotint. Some of this quality of original tone, colour and texture may have been copied onto the porcelain, or deliberately tidied up into the house style.⁵⁸

Further artistic choice that affected the final cost of decoration was the subjects' background finish. Brewer was paid one-twelfth more for a stippled ground rather than a plain one with a figure in a square panel; two or more figures, and views and flowers, were paid for by a different formula. For single figures with plainer backgrounds, artists were paid perhaps only one quarter of the amount for the more complex and figurative scenes, as shown in Askew's bill for completed work dated July 1794.⁵⁹ It records cans decorated with one day's work, at 5s.3d, depicting the heads of the Duke of York and the King of France, while one with 'the maid of Corinth' took four days to complete at £1.1s. The less worked-up backgrounds appear strikingly unsatisfactory, having an unfinished appearance with subjects floating. But the customer would have the 'show' of Derby porcelain at a more moderate price than the finest cabinet quality.

Topographical Derby Porcelain, c. 1785-1800

As a group the eighteenth-century topographical porcelain of the Duesbury II and early Kean periods appears unique, and was a style copied by Sèvres early in the following century.⁶⁰ Wedgwood had produced the Frog Service for Catherine of Russia in the early 1770s, depicting over twelve hundred British scenes, but that was clearly unprofitable. Costs were reduced by using a single-fired mulberry enamel for the landscapes, which also aided visual consistency. English porcelain landscape decoration had remained in the formal continental style, the leading exponent being Chelsea, where the framework

⁵⁷ Lygo, Dec.10,1793.

⁵⁸ J.Anderson, *Striving for Perfection : the Charles Norman Collection* (1997). Further discusses this point using a Banford attributed can pattern '242', with a 'photographic quality' perhaps the result of copying from a source annotated in the Pattern Books: 'Lady's. Paper flower. Jars' .

⁵⁹ Jewitt,ibid,1878, p99.

⁶⁰ T.Preaud, ibid, p46.

of the landscapes had to be enamelled in brown or puce, before a low-fired green was added.

In about 1785, at the height of the vogue for amateur sketching, Derby introduced a more naturalistic watercolour style to ceramic landscape art. In the spring of 1785 Joseph Wright held an exhibition of his pictures, including landscapes, in Derby.⁶¹ William Gilpin's influential work on the *picturesque* was published in 1786, recounting his trip fourteen years earlier to 'magnificent' Dovedale. However when visiting the Derby factory in 1772, Gilpin had written:

The object of the China-works there is merely ornament: which is particularly unhappy as they were at the time we saw them, under no legislation of taste. A very free hand we found employed in painting vases: and the first colours were laid in with spirit: but in the finishing, they were richly daubed, that all freedom was lost in finery. - It may now be otherwise.⁶²

William Gilpin had preferred the effect of Wedgwood's decoration 'produced by chaste colours on a dark ground; than by [Derby's] gaudy colours on a light one'.⁶³ Whether Gilpin's remarks had any direct effect is unknown; Duesbury II acknowledged Gilpin's popularity and is known to have produced a teaset 'enamelled in compartments with landscapes in Gilpin's style'.⁶⁴ On a personal level Duesbury II lamented his own inability to draw and was to ask 'the Philos.[ophical Society members]' to look him out a Camera Obscura under £100 to take sketches.⁶⁵

Duesbury II was experimenting with a number of different green pigments, which Phillips in London made up for him. These were based on lead samples, perhaps from

⁶¹In Wright's 1785 exhibition of 25 paintings, over half were landscapes, 3 were named Derbyshire views. The exhibition went onto London. Thornton, *Landscape Decoration on Derby Porcelain in the Eighteenth Century* (1995), p26

⁶²Quoted in Twitchett, *Derby Porcelain* (1980), p52. Wrongly said to be Sawrey Gilpin (the brother of William), c1786

⁶³W. Gilpin, 'Observations, relative chiefly to Picturesque Beauty, made in the year 1772 on several parts of England: particularly the Mountains and Lakes of Cumberland and Wetmorland', vol 2, 1792, p240.

⁶⁴DLS Parcel 17x. Oct.5, 1792. Gilpin's sketches had been used. See Pendred, 'The Rev. William Gilpin and the Derby China Factory', *DPIS Newsletter*, no 18 (May, 1990). Lygo had tried to obtain Gilpin's *Northern Tour* Sept.8, 1790, while Duesbury borrowed Gilpin's *Forest Scenery* from his book club in April 1795.

⁶⁵DL82 8/27

his own Derbyshire mine. Although the 'Pattern Books' show the development of such colours for solid grounds, it is possible that with less need for consistency in small painted panels the Derby artists had by the mid- to later 1780s a full range of greens that could be fired at a high temperature.⁶⁶ These technological changes occurred as Zachariah Boreman moved to Derby after the close of the Chelsea works. Boreman soon developed a style akin to true watercolour technique with washes of colour. Only after firing was a little working-up of foreground or detailing required. The effect worked well on Derby porcelain as the fired enamels sunk into the soft-glazes.

Boreman sketched *en plein air* creating simple watercolours, with little concern for composition of the picturesque, but with highly detailed topographical titles recorded on the reverse.⁶⁷ He reworked these, and similar ones, on his return to Derby, into a usable shape and size for himself, and others, to copy.⁶⁸ But even Boreman's watercolours were at the time considered too strongly coloured to give an idea of how finished enamels would fire, as shown by a request for a 'sketch for a vause in watercolours on paper not in soft colour but in [?]pasty colours in order to judge as in enamel'.⁶⁹ Boreman also had to use skills on unfired porcelain to show the final effect for a trade client, Mr Micali, in 1787:

to send him one of each of the vauses you intend making for him, I now understand he wants these vauses made proper sizes to stand on the two sized pedestals which are to be made for him, and he likewise wishes when you send the pattern vauses you would ornament them in watercolours in the manner they will be done when glazed and finished, and the price along with them.⁷⁰

Boreman's offerings on porcelain may well have been too genteel for Gilpin, with fashionably dressed visitors inhabiting wild landscapes; but in reality many of the topographical views on Derby porcelain were of estates modified along picturesque lines

⁶⁶E.g. Derby cup patterns with green borders: '12', '41', '42' and '203' and green ground: '207', '244', '245'

⁶⁷J. Anderson, 'Ten watercolours by the Derby Artist Zachariah Boreman, *NACF Review* (1986). These are housed in the Derby City Museum, DMAG.acc.no.345-1985.

⁶⁸See A. Bambery and A. Ledger, 'Watercolours by Zachariah Boreman', *DPIS Journal* 3 (1996), pp 70-96, and A. Ledger 'Further watercolour sources of landscape painting on Derby Dessert Services', *DPIS Journal* 4 (2000), p8-26. The latter opens up the discussion to include later landscape artists Hill, Robertson, and the Brewers. A. Bambery 'George Robertson', *DPIS Journal* 4 (2000), pp 49-60.

⁶⁹DLS Untraced. This description is on the reverse of the letter.

⁷⁰Lygo, Jan.12,1787.

by the same landlord that commissioned the porcelain examples. Few scenes depict the harsh reality of rural life: the poverty caused by enclosure, or industrialisation within the Derbyshire valleys.⁷¹ Boreman was unique amongst Duesbury's decorators, being the only one from whom Lygo specifically requested work.⁷²

Duesbury also purchased or borrowed works apart from these local sketches. For example in 1788 Lygo asked Duesbury 'to take care of Mr Johnes drawings for the present' (presumably relating to the Hafod estate),⁷³ while two years later Lord Lonsdale requested '24 more plates with views of Cumberland taken from his own sketches'.⁷⁴ Amongst the '1791 inventory of prints' are listed '2 sketches on his own paper from the Marquiss of Buckingham' and 'Views at Scofton [and] in the Garden at Weston'.⁷⁵ In May 1789 Mr Day eventually sold Lygo 'two sketches of landscapes in a slight way', which he thought 'very extravagant', having taken 'no more than five hours a doing', for £1.11s.6d.⁷⁶ Other drawings were purchased from the artist Mr Bone, who was paid 18s. in 1790,⁷⁷ while Mr Glover received three guineas for three landscapes five years later.⁷⁸

The proprietors' investment in such original sketches was considerable. Although it may be debated whether Boreman originally drew local sketches for his own use, factory records would indicate that by 1798 Brewer was paid specifically for such work, and others followed.⁷⁹ In 1815 the accountant sorting out the Duesbury estate had queried payments to the 'Brewers & Robinson & other Painters in the Manufactory ... for ... Drawings for the Use of the Manufactory which Mr. Kean has either sold or has in his possession - he must render an account of them'.⁸⁰ Three years later, well over 300

⁷¹Industrial scenes are known on Derby porcelain, like the 'Cotton Mills at Matlock Bath' but they are rare, see C.and F.Wharf, 'A Mug for the porter', *DPIS Newsletter*, no 32 (Sept.1994), pp27-33 ; R.French, 'Industry without Art...', *DPIS Newsletter*, no 36 (Jan.1996), pp21-23. None have been traced to specific commissions for sets decorated with industrial topics but occur in general topographical services such as that at Chatworth. See Ledger, *ibid*, 2000, p16.

⁷²E.g. Lygo, Feb.4,1793 advised that Boreman be allowed to 'do some ornamental things such as vases or flower pots'; July 28,1790 Boreman was to do 4 vases to replace some sold. While a London decorator's work was compared to Boreman's flower painting, Nov.11,1790

⁷³ Lygo, Jan.3,1788.

⁷⁴ Lygo, Feb.12,1790.

⁷⁵ BM.BP. f43-88., no 238, 239-241 in list.

⁷⁶ Lygo, May 14, May19,1789.

⁷⁷ DLS Parcel 17X .Day-book. Mr. Bone paid 18s. on Feb.8,1790.

⁷⁸ BM.BP. vol. 4. Day-book. Mr. Glover was paid £3.3s for 3 landscapes. March 9,1795.

⁷⁹DL82 6/39 price list, 8/214 1798 account.

⁸⁰BM.BP. f2014r, 'Memorandum 'Dec.28,1815 on looking over the Accts. in the cause of Duesbury and others v. Kean', f2011-2058.

drawings, along with books and engravings, had been handed over, and 'Mr. Blore ... should like the opportunity of purchasing them as they are things that are adapted to the use of a manufactory of the nature of his own'.⁸¹

Under Duesbury II the rôle of the artist had become increasingly important. In 1795 when searching for an overlooker Lygo's most likely contenders were practising painters, with no experience of ceramic decorating: Mullins, a figure painter and portrait copyist, Bishop 'imployed in painting natural flowers in oil for the purpose of engraving afterwards'⁸² and Brewer, a drawing master. Duesbury appears to have wanted employees who could generate suitable art work in their own right, but also copy works. John Brewer was paid 'For any landscape copied in the style of Mr. Glover's and signed by Mr. Brewer, to be finished equally well as the above and the same price and proportions of prices'.⁸³ Three Glover landscapes had been purchased a month prior to Brewer applying for a position at Derby.⁸⁴ The translation of fashionable art, whether in the form of print, book or original painting, to a small, copiable scale, to be of use to skilled craft enamellers, was Duesbury's primary concern and motivation in employing a 'paper' artist, and may also explain why Kean, a miniaturist, was chosen as a partner to Duesbury in 1795.

Haslem would like us to believe the eighteenth-century Derby decorators 'were not mere copyists, but were influenced by a true artistic spirit, and went to nature for their models'.⁸⁵ Twitchett goes further and suggests the 'Derby artists were not mere skilled hands painting to a formula laid down by the management, but artists of independent status capable of producing first rate work in whatever medium they chose'.⁸⁶ Written evidence c. 1785-1810 indicates that the Derby china painters were not fine artists comparable with Wright or Reynolds, but they were highly skilled craftsmen capable of producing quality work quickly and suited to the price Duesbury's (and later Kean's) wealthy clientele was willing to pay. Wedgwood had found the provision and maintenance of a high quality decorating department costly and troublesome, and only

⁸¹BM.BP f122-5, letter by Jessop, 1818 re. various 'books, prints, drawings etc out of the room in the old factory.'; f531-2 recorded '315 drawings of different subjects'; f114-7, f118-119 are various 1818 valuations indicating 'most engravings on single sheets are in a very mutilated state'. Nevertheless 303 drawings/prints were valued at nearly £80, books and engravings for not a dissimilar amount.

⁸²Lygo, Oct.7,1795

⁸³ DL82 6/2.

⁸⁴J.Anderson, *ibid.* Glover is regarded as a rather 'pedestrian and prolific' artist who pioneered the split-brush technique, this style was popular and copied by amateur and professional artists.

⁸⁵J.Haslem, *The Old Derby China Works*(1876),pV.

⁸⁶J.Murdoch and J.Twitchett, *Painters and the Derby China Works* (1987), p9

viable in London; the Derby establishment was unique. It is not surprising that Derby-trained artists were later eagerly sought-after when modern factory production-line techniques, popularised in Staffordshire from the early 1770s, had effectively swept away the artist-craftsman from the rest of the British ceramic industry.

The status of the professional artist in later eighteenth-century Britain allowed the Duesburys and Wedgwood access to talent increasingly denied Kean and Bloor. In mid-Georgian London the artist lived in a competitive environment employed as the public, the 'uncontested arbiter of taste', saw fit.⁸⁷ In 1783 'town [had been] overrun with painters', which may explain Boreman's willingness to go to Derby; similarly in 1795 Brewer happily travelled north for a guaranteed wage.⁸⁸ Wright and Stubbs had been in close association with the applied arts, with their commissions from Wedgwood, as had Flaxman, but by the close of Kean's proprietorship the perceived social status of artists who worked as decorators appears to have changed, and they had become demoted to journeymen. Meanwhile watercolourists were achieving some professional recognition in their own right, and were no longer forced to compete or exhibit with the massive heroic oil-paintings. A number of the Derby decorators set themselves up as artists to varying degrees, teaching the genteel to draw, paint flowers or water-colour. John Brewer, perhaps still in employment at the china works, advertised himself as a drawing master in the local paper between 1808 and 1815, followed by his brother Robert, 'a pupil of Paul Sandby', in 1817. George Robertson, John Keys and Moses Webster in the 1820s and 1830s became similarly occupied. Other decorators including Stanesby, Cordon and later Haslem left Derby for London and continued working on porcelain, but with grander ambitions as fashionable portrait painters or exhibitors at the Royal Academy.

While Lygo's hours of effort seeking out small pieces of yellow enamel, or tracing a particular print, seem to be unnecessarily time-consuming, they are symptomatic of Duesbury's supremacy in the ceramic industry. In the luxury sector consumers wanted choice, but rarity; today's fashion, not last season's. Blank white porcelain ware could be decorated with infinite variety, creating few gluts or poor sellers, while enamel decoration was said to 'increase [profits] Double in Proportion to the expenses

⁸⁷The gallery owner Boydell explained to Joseph Wright that his differential fees reflected the public opinion's of an artist's worth. J.Brewer, 'The most polite age and the most vicious: attitudes towards culture as a commodity 1660-1800', in A.Bermingham and J.Brewer, eds, *The Consumption of Culture, 1660-1800: Image, Object, Text* (1995), p341.

⁸⁸J.Brewer, *ibid* (1997), p316.

extraordinary'.⁸⁹ This 'flexible specialisation' was something copied by Wedgwood with cream and pearl ware, and a principle seen in the smaller metalworking shops of Birmingham and Sheffield.⁹⁰ In general this uniformity and standardisation of production is usually associated with technological innovation.⁹¹ Early neoclassical ceramic designs, like the rococo ones before them, were frequently based on a strong moulded form. To a certain extent ribbing or fluting on, for example, cups, provided strength to thin potting, and the Chelsea-Derby regime appeared to have produced a huge range of moulded cups, whose applied decoration rarely matched. As the neoclassical influence matured into the 1780s, simpler designs emerged, perhaps made possible at Derby by a stronger china body. Surviving porcelain would suggest that under Duesbury II shapes were more standardised, with variety produced by finish, or minor alterations by changing a knop or handle shape. The same was equally true of Wedgwood's light-bodied wares, but not of his ambitiously moulded or body-coloured wares. Whereas Lygo could ask for no more yellow-ground teawares without disrupting more than a few days production at Derby, when Bentley similarly declared his fill of black basalt teapots, Wedgwood rejoined that Etruria could not 'leave off ... such staple articles abruptly', and future production was consigned to Dublin, Bath and Liverpool.

⁸⁹C.L.Exley, *The Pinxton China Factory* (1963), p3. Billingsley writing to Coke in August, 1795. Charges from the Duesbury Accounts, 1751-3, and Worcester price list of 1760 confirm this general added value of decorating.

⁹⁰M.Berg, *ibid* (1993), p137.

⁹¹D.S.Landes, 'Technological change and industrial development in Western Europe, 1750-1914', in J.Hoppit and E.A.Wrigley, eds, *The Industrial Revolution* (1994), pp108-143.

Chapter 7. Cooperation and competition: the eighteenth-century rivals to Derby

For a period of about twenty years, after the decline of Bow and Chelsea in the later 1760s, the Duesburys effectively had no British rivals in the fashionable London porcelain market. By the later 1780s Salopian, with Chamberlain's assistance, and Flight of Worcester were the Derby factory's nearest rivals, although as stressed by Lygo, making far more common goods. The greatest single threat to producers of luxury, and more middling porcelain, lay with the continental imports made possible by less restrictive trade duties, initially with France from 1787, and a similar 12% *ad valorem* duty proposed with Saxony in 1792.

Whether fine pottery realistically encroached on porcelain's existing market is debatable. In 1792 members of the Privy Council for Trade believed English 'finer sorts of pottery' had substituted 'common sorts' of porcelain; however their opinion was contrary to expert trade evidence, that indicated the British porcelain market had in fact been hit by competition from French imports.

The influence of the French porcelains, c. 1787-1796

During 1786, and into the following year, the British and French governments were negotiating the 'Treaty of Commerce and Navigation' that was to bilaterally agree to reduce the *ad valorem* duty on porcelain and pottery imports from 80s. to 12s.¹ Continental porcelains had long been esteemed and imitated by English china and pottery manufactories, but they had in theory not been commercially available in Britain before. When evidence was being gathered by the Privy Council for Trade to assess the potential effects of the treaty, only Josiah Wedgwood, 'in the name of Potters, & of the proprietors of Mr. Champion's Patent' was examined, 'Mr. Wedgwood [having] left Notice with the Worcester, Leicester and Derby Manufacturers'.² Wedgwood's comments were obviously to his advantage and intended to open up new overseas trade for pottery. The treaty negotiator, Frederick Eden, recognised Wedgwood's evidence as 'absurd', nevertheless the porcelain manufacturers were not called.³ Duesbury tried to muster support to oppose the treaty, sending letters to Thomas Turner, the Shropshire porcelain manufacturer, the

¹G. Godden, *Godden's Guide to European Porcelain* (1993), pp11-27, pp123-5, pp167-193; A. Ledger, *Derby Porcelain : European Competition, Trade and Influence, 1786-96. References from the Original Documents* (1998).

²PRO BT6. Minutes of Privy Council for Trade, Feb 24, March 10, and May 20, 1786

³PRO 30/8/110-1. Eden letter to Pitt, June 22, 1786.

Lords George Cavendish and G.H. Cavendish, and Coke of Holkham Hall.⁴ Nothing was sent to Flight at Worcester, for 'he does not seem inclined to do anything in the business and does not think there is a possibility of you succeeding'. Making more utilitarian goods not made in France, Flight may have believed there was some benefit in accessing the French middle market.⁵ Even prior to any large-scale importation, the Derby showroom manager believed it would 'hurt the fine goods trade' in England, yet be of little benefit to our manufacturers of 'common' porcelain. The china dealer, Mr Neunburg, had astutely concluded there was little demand in France for cheaper china, for there were 'but two Sorts of people in France, one are rich & the other poor', who would respectively use their own fine china, or Staffordshire and their own common manufactories.⁶

In the spring of 1787, Lygo thought sales to the nobility were slow because they were expecting the French porcelains to appear, and by autumn 1788 even the wholesale trade was 'so very dead' with no one buying 'with any spirit'. Two British speculators settled in France, buying their own porcelain works, such was the potential market for French export porcelain. In 1789 John Bevistock bought the 'Manufacture du duc d'Orleans', while later Christopher Potter similarly went on to acquire the Parisian 'Manufacture du Prince de Galle'.⁷ The Parisian *marchand-mercier*, Dominique Daguerre, who had already supplied furniture to the British nobility, negotiated with Sèvres in the establishment of a London agency, importing wares from 1788 to 1792; he also acted as Wedgwood's sole representative in Paris. Enoch Rittener similarly opened an outlet for Sèvres on a commission basis in Albermarle Street, a matter of months before the Revolution.

Daguerre's venture was ill-timed: initially missing the Season, he had to resort to selling by auction. In June 1789 Christie's had a three-day sale of Sèvres, when Lygo reported 'the goods was sold very cheap indeed', with a dessert that would have cost 70 guineas from Derby only fetching 48 guineas.⁸ Daguerre had received a little over £2,750 of Sèvres in 1788, of which only £335 had been sold prior to the auction; the low sale prices created a loss of over a third.⁹ Lygo reported on other sales where French china could be bought 'for nearly half the price it cost in the country', and expressed the hope that such low prices would put off the importers.

⁴ DL82 8/106 George Cavendish's reply Feb.12,1787; he failed to delay the decision in Parliament. The Treaty came into force in May,1787.

⁵ Lygo, Jan.2,1787.

⁶ Lygo, Jan ,11,1787. Furthermore 'India China' was imported into France on more favourable terms.

⁷ Lygo, April 1792. Potter went on to purchase the Chantilly works, and established two other factories, hoping to produce Staffordshire-style pottery; in 1805 he became bankrupt.

⁸ Lygo, June 7, and July 22,1789.

⁹ T. Preaud, 'Competition from Sevres Porcelain', *DPIS Journal* 4 (2000), pp38-48.

If Duesbury had felt complacent and unsurpassed in his rôle as porcelain manufacturer to the nobility then the fear of French competition appears to have made him proactive. The showroom was revamped. In February 1789 the warehouse manager had experienced a 'greater call for desserts than ever knew before', and by the autumn even the dealers had provided a 'pretty good week for trade'.

However by March 1790 another 'assemblage of articles established with infinite taste, and uncommon Elegance' was for sale, including ormolu, clocks and china, which caused the Derby showroom manager to write in trepidation, for he had 'never ... seen so many of the nobility together on a similar occasion'.¹⁰ Prices at this sale proved high as the fashionable aristocracy competed for pieces. Cabinet cans fetched £4 to £6 each, while the Prince of Wales, in one of his more reckless periods, purchased a 105-guinea dessert service. Lygo feared that such French china auctions would 'hurt our Spring trade very much among the nobility', for 'people were mad after it'. Between 1789 and 1799 Christie's and Phillips had 21 sales of various French and continental porcelains including Berlin and Dresden.

Initially the passion for French styles may well have worked to Duesbury's advantage, Derby being the only home factory that could produce gilding and quality artist-decorated wares in the finest Sèvres manner. In the summer of 1788 Daguerre had remarked of his shop visitors: 'the words *c'est trop cher* seem to be exceedingly common in the country', furthermore 'nobody even wants to bother to look' at some of the old-fashioned Sèvres tablewares.¹¹ By the 1790s the flow of French imports increased, as Sèvres and the Parisian factories struggled to remain open, for the Revolution had resulted in almost a total disappearance of the French porcelain works' traditional wealthy clientele. Some factories like Nicolet and Greder closed, while even efficient ones like Guerard and Dihl were forced to cut their staff of 130 by half. However the abolition of the system of 'privilege' in particular allowed the quantity and quality of the Parisian-made porcelains to increase.¹² New export markets were found, notably in Britain, and the manufacturers adapted their wares to suit, introducing for example more cups and bread and butter plates to their teaset in English style. Sèvres had produced a number of English forms, like the slop bowl or 'jatte anglaise' since the mid-1760s, but, post-treaty, new shapes included the muffin dish or 'beurrier anglaise', and 'pot à lait anglais'. The colour 'bleu anglais' was first

¹⁰Lygo, March 13, April 22, 1790.

¹¹Preaud, *ibid*, p42 and 44.

¹²R. de Plinval de Guillebon, *Paris Porcelain, 1770-1850* (1972).

fired in July 1789.¹³ Many hard-paste French porcelains were considerably less expensive than the English soft-paste equivalents. Dessert plates, pattern '78' at Derby, with cornflower sprays, could be had for 2s.6d.; dessert dishes, 6s. with an extra 10% trade discount. Derby set patterns were nearly two-and-a-half times these prices.¹⁴ White French china was also being bought by London chinamen for decorating.¹⁵

Lygo frequently remarked on the 'amazing' quantity of imports, and into the 1790s that a number of previously popular Derby lines no longer sold because of the glut of French ones; this appears to have included *dejeuners*, yellow ground wares and biscuit figures. However unlike the Worcester firm the Duesbury warehouse never resorted to the commercial sale of French porcelain, although there is a suggestion that Duesbury may have considered it.¹⁶ Instead they copied the shapes and decoration, borrowing items from trade and private customers, or drawing designs or making small purchases of them at the sales.¹⁷

Lygo's annual London accounts do record a slight increase in the value of trade in 1789 and 1790, but a decline in 1791 representing about a 12.5% drop in sales, which started to pick up again in 1793 as war began. Derby's trade rates appear to have become more competitive by this time, with the usual 20% discount extended to six months' credit, and an extra 5% discount for ready money, or 5% added for two further months' credit.

In the spring of 1792 the Privy Council for Trade was amassing evidence related to the 'mutual Diminution of the Duties on English pottery imported into Saxony & on the porcelain imported into England'. Wedgwood's brief evidence suggested all British ceramic producers would find the proposals 'advantageous', but in the following weeks the porcelain manufacturers Worcester (Flight), Salopian and Derby were asked to attend, along with the London wholesale dealers Williams, Hewson, Mason and Hillock. They were specifically asked about the effects of the French trade treaty, now in its fifth working year. Flight had sold 'of the common sort a great deal less', while 'of the fine sort ... the demand is greater than we can supply'. Lygo, on Duesbury's behalf, reported 'our manufacture has not diminished but is

¹³Preaud, *ibid*, p48, footnote 56.

¹⁴Lygo, Nov.25,1790.

¹⁵Lygo mentions such decorators e.g. Nov.11,1790 and March 19,1791 Barrystock (sic) or Bavistock; Feb. 20, 1795 'Retinur' [? Rittiner]

¹⁶Lygo, Dec.2,1790.

¹⁷E.g. copying French designs: Lygo, Sept.3,1788; July 22,1789; March 11,1790; Aug. 26,1790 ; Feb.18,1795.

much the same: but had it not been for the Commercial Treaty with France there is no doubt but we should have had a demand for thrice the quantity'. Of the dealers only Williams, who was the better of the Derby customers, was sympathetic to the plight of the English porcelain makers and recognised the 'sale of English china has certainly very much decreased in every Branch of the British Manufacture, the sale of China porcelain has also decreased since the import of china from France was permitted'. However Hewson, who bought little Derby but traded with Wedgwood, 'thought the extensive sale of English pottery pressed more on the English China than the Importation of Foreign China from abroad'. As a group the dealers obviously had a different agenda from the manufacturers.

The Privy Council of Trade's summary was viewed 'in a commercial light', and effectively dismissed the china producers' evidence, judging it

more probable that any Diminution which may have happened in the sale of the Articles manufactured by them for the consumption of this country, is owing to the more general use of the finer sorts of pottery, especially as the prevalent diminution of the sale of the said porcelain is alleged to have been rather in the common sorts, as a substitute for which the finer sort of pottery are more likely to have been brought into use than porcelain imported from France or other Foreign Countries.

The supporting statistics, in part provided by Wedgwood, were suspect. Wedgwood claimed 'his Potteries employed 12-14,000 (exclusive of wives and families)', with another 3,000 throughout the rest of the country. This figure was compared with the 530 total from the three porcelain factories. Smaller, less prestigious china works, like Lowestoft, Liverpool or New Hall¹⁸ were not therefore included. Weatherill's revised figures suggest employment in the ceramic industry as a whole totalled a little more than half this figure in 1790, and did not reach 17,500 until 1820, with the emergence of the large-scale potteries.¹⁹ Furthermore the Council compared the pottery export figures, amounting to nearly 17.5 million pieces per year between 1788 and 1790, with declared French porcelain imports, apparently of a value of little over £2,500 annually over the same period. Yet Daguerre alone had acquired porcelain from Sèvres in 1788 to more than this value, and each year Flight imported a similar

¹⁸New Hall may have been hit by the French imports, for on Nov. 1, 1790 Duvivier had written to Duesbury seeking work, his engagement at New Hall expired as the 'proprietors do not intend to do much more in the fine line of painting'.

¹⁹L. Weatherill, *The Growth of the Pottery Industry in England 1660-1815* (1986). Revised figure version of 1981 Ph.D thesis. Diagram 1.1. from data A1-7.

worth. Neither had the Council allowed for any growth in the British porcelain market following the decision of the East India Company in 1791 to cease the bulk imports of Chinese porcelain, nor had it recognised the potential stimulus to home production that the 1796 expiry of the New Hall patent was likely to produce.

Although the porcelain manufacturers admitted they sold little directly abroad, both Worcester and Derby believed that their 'patterns' and 'forms' had been acquired by the French and 'adapted for the use of this country'. This was confirmed by Williams. The influence of late eighteenth-century English porcelain on contemporary French wares has rarely been recorded, but the Sèvres archivist Tamara Preaud has noted parallel developments in sources of inspiration, and the Derby factory's own interpretations of Sèvres treatments, as for example large 'pearl' borders. She believes that Alexander Brongniart, appointed Director at Sèvres in 1800, introduced the topographical landscape porcelain services, inspired by porcelain he had seen on a visit to England ten years earlier. In the early 1790s, this would have been Derby made and decorated.²⁰

Lygo, realising the potentially devastating consequences that the Saxon treaty might have on the Derby business, continued to seek legal advice and canvassed influential clients on Duesbury's behalf, while the firm's competitors, Flight and Turner, both appear to have been resigned to it.²¹ However, Duesbury was saved from Meissen's competition since the treaty was curtailed, for landlocked Saxony could not guarantee passage or dues across neighbouring states. This turned into an escalating problem as France became increasingly hostile, and war broke out; Wedgwood's own continental trade was then severely hampered.

Despite the declaration of war with France early in 1793, the fashion for French designs remained, and French wares continued to get into the country via neutral ports such as Hamburg. Confiscated pieces were sold at the Customs House,²² and the French warehouse employed émigrés to decorate continental china. However the English porcelain sector was not to suffer eighteen months later from lost export opportunities resulting from the war with France, when Lygo recorded only about half the Staffordshire potters were in employment.²³ Briefly Duesbury's sales revived. By 1796 the French china works were again prospering and exporting.²⁴

²⁰Preaud, *ibid*, p46.

²¹Lygo, March 12-April 3, 1792.

²²Lygo, May 23, 1793.

²³Lygo, Sept.23, 1793.

²⁴R.de Plinval de Guillebon, *ibid*, p297.

Domestic porcelain competitors

Worcester

Worcester's success was founded on the production of 'even at very cheap prices, pieces that not only work very light, but which have great tenacity & bear hot water without more hazard than the true china'.²⁵ By the later 1770s at least three-quarters of Worcester ware was transfer-decorated; production lost its vigour after the death the two pioneers of the works, Dr Wall in 1776 and William Davies seven years later. In 1783 the ailing works were acquired by Thomas Flight for his sons; none was a ceramicist. Their employees managed to retain their trade secrets whether as composition makers or gilders, resulting in considerable but unexpected difficulty by the summer of 1789. The foreman, Shaw, was suspected of sabotage and the Chamberlains had set up an independent business, effectively as rivals. In a position of hindsight, John Flight wrote in his diary 'the connection most likely would not have taken place between my Brother and I ... I see no possible way by which we could have carried on the business'. Yet four months earlier the Flight brothers had been appointed porcelain manufacturers to George III, and their newly opened London warehouse was attracting fashionable clients.

The granting of royal patronage had resulted from little more than luck. Following the King's return to health in the spring of 1789, he recuperated in the counties of the Severn Valley. Duesbury was soon to complain to Lord Rawdon:

... I believe it may be about thirty years since my Father was appointed 'China Manufacturer to the King', paying the customary fees after his death I succeeded him - paying the fees again - and we have neither of us been supplanted in his service (tho' of late years very little encouraged) till the King's journey thro' Worcester at which time his Majesty left liberal commissions which was no-more than encouraging one Manufactory without doing it at the expense of another - but they also directed the Worcester Manufactory to use their Arms and they call themselves 'Worcester China Manufactory to the King' - since that time we have not received the least attention from their Majesties but on the contrary they are making at Worcester as a present to the Duke of Clarence a very extensive Service to the amount of between six and eight hundred pound. The commission has

²⁵Robert Dossie, *The Handmaid to the Arts* (1764 edition).

made a great noise in the Country and we have heard of it from a number of persons who have called at the Works at Derby from whom I discovered the unmerited injury my Manufactory must suffer - those who had not seen the Worcester China jug'd no doubt by the King's decided preference it was easy to discover were prejudiced with the idea that the Worcester Manufactory had of late surpassed the Derby one ...²⁶

Duesbury gave an example of one gentleman who insisted Derby blue could not equal Worcester, and complained the Flights unlike himself were 'not at the expense to employ the best artists'. William Beard, who had bought porcelain for the Duke of Devonshire and Lord Camelford, in his capacity as steward, viewed the 'Hope' service and reassured Duesbury the 'Worcester crockery' although 'glareing and fine enough at first glance' was not 'perfect in shape or colour'.²⁷ Current ceramic historians equally admit to the Flight factory's failings at this period.²⁸

Flight tried to remedy his shortfall in experienced staff, and secured the help of Mrs Hampton 'to teach us gilding' and 'hired three of Chamberlain's men'. By mid-July a kiln had been constructed 'on the Plan of Chamberlain's', and Duesbury was soon complaining about the 'proprietor of Worcester enticing some of my workmen away especially my Fireman'. In the summer of 1789 the Flights began extracting soapstone from the Predannock Wollas Quarry that had been closed thirteen years earlier.²⁹ The Flight wares improved as Caughley declined and Chamberlain started production of its own hybrid hard-paste porcelain. In 1793 the Barr family entered into the partnership.

But the biggest attraction at the Flights' newly opened London warehouse from February 1789 were imported French porcelains. In the previous autumn John Flight had visited Paris, and purchased the first £300-worth of various French porcelains 'to improve our shapes'. The following month the Flights had acquired two properties in Coventry Street to convert to a warehouse to sell French china.³⁰ Their French porcelains obviously proved popular and fashionable, and Flight quickly returned to the continent to complete a six-year agreement with the Paris factory of Guerhard

²⁶DLS old ref. 1109 Draft letter WD to Lord Rawdon, Feb.21,1791.

²⁷DLS. Letter Wm.Beard, Bath to WD July 13,1791

²⁸Harry Frost, Curator Dyson Perrins Museum, Worcester, unpublished talk at DPIS Seminar, and private letter 1997.

²⁹B.Hobbs, 'New Perspectives in Soapstone', *ECC Trans.*, vol 15, pt 3(1995), pp368-392.

³⁰Lygo, Nov. 7th,1788.

and Dihl, to be supplied with over £2,000-worth of porcelain per year.³¹ Lygo recalled how he had thrice called on Lord Maitland to secure an order for Derby, but discovered that he had already visited the Worcester warehouse, and was obviously being tempted by the display of French and Flight porcelains. Soon Lygo reported the Flights were selling quantities of French porcelain 'cheaper than anything of kind we done'.³²

Donovan the Dublin dealer was able to purchase desserts wholesale from the Flights 'with small coloured sprigs and gold edge for £12 per set and 10 p.Ct [%] discount', these being '... cheaper than anything [Derby] have done of the kind'.³³ Three years later the goldsmiths Green and Ward, fed up with the procrastinations of the Derby factory in producing the Anspach's tableware, declared they wished they had given the commission to Worcester.³⁴ The Duke of Gordon, whom Lygo had variously wooed, bought a French china breakfast set from Flight and Barr in 1794.³⁵

Perhaps for fear of being made redundant, the Chamberlains established an independent decorating shop in Worcester, and acquired the Flight's old High Street retail outlet.³⁶ Backed by a sleeping partner, Richard Nash, and probably encouraged by Thomas Turner, the Chamberlains largely decorated Caughley white or underglaze blue wares, before commencing manufacture in their own right in the early 1790s.

Thomas Turner of Caughley, and the Chamberlains

Thomas Turner created the 'Salopian' china works by enlarging an existing pottery sited near Brosely from the summer of 1775.³⁷ Useful soapstone wares, mainly transfer-printed in underglaze blue designs, were produced for a middle market, that were efficiently distributed both in the country and in London.³⁸ Lygo recorded something of Turner's market: while searching for wash-hand sets and chamber pots he visited the Salopian warehouse. Here 'common' basins and jugs could be had at 10s.6d each, but no chamber pots, for 'they have not made any for some time and the

³¹R.de Plinval de Guillebon, *ibid*, p301.

³² Lygo, March 26 and July 8, 1789.

³³ Lygo, July 8, 1789. Equivalent simple Derby designs sold for 18 gs.

³⁴ Lygo, Oct. 19, 1792.

³⁵ B. Horn, 'Ceramic bills paid by Alexander, 4th Duke of Gordon', *ECC Trans*, vol 15, pt 3 (1995), pp 435-9.

³⁶ Account books of Thos. Turner in the Dyson Perrins Museum record Chamberlain accounts 1789-93.

³⁷ J. and N. Shearman, 'Thomas Turner Revisited', *NCS Journal*, vol 14 (1997), pp 71-80.

³⁸ G. Godden, *Caughley and Worcester* (1969), p2, 3, 7

reason is foreign Nankin ones are so much cheaper than theirs, and so much better'.³⁹ Despite labour-saving techniques, and easy proximity to coal, Turner was not able to compete with the price of Chinese tablewares.⁴⁰ Godden suggests that Turner bought in Nankin wares to sell perhaps to complement his own tea- or dessert wares, to make up services, or to decorate with added-value gilding. However Lygo made specific reference to the Irish dealers, who wanted cheap items, who 'go to the Worcester and Salopian warehouses and buy goods unfinished, and then have them gilt ... There is still more and more of the goods made laid with the blue only, which I think the manufactures will one day see their error, in so doing!'⁴¹

During the 1780s Salopian wares became more fashionably European in design.⁴² For a brief period from the summer of 1789 into 1793, the Caughley works regularly sent white ware to Chamberlain's decorating shop in Worcester.⁴³ The Chamberlains employed skilled artists on piece-work, including ex-Worcester decorators like Davis, and also Wood, and briefly Duvivier. In the early 1790s the Caughley-Chamberlain tea services ranged in price from 12 guineas for Duvivier-decorated fine wares, a similar price to Duesbury's plainer complete services, through to a simple set at 1½ to 3 guineas.

By 1793 Turner's relationship with Chamberlain was in decline; the Worcester decorating shop bemoaned being sent unsuitable stocks. Chamberlain had started to manufacture his own porcelain, while Turner in turn complained of a shortage of clay.⁴⁴ The importation of French porcelain lessened the home demand for Salopian wares. The 1792 Privy Council for Trade heard that Mr Turner had already reduced his prices by 20%. Mr Shaw, one of the proprietors of the Salopian China Manufactory, commented that their 'fine sort' in particular had been affected. Despite the war French porcelain continued to enter the British market, presumably hitting the Salopian trade. Turner's health failed, and by the autumn of 1799 the factory was sold. The stock was auctioned without reserve in Shrewsbury for over a week, and the works' lease was acquired by the Coalport partnership following 'dastardly acts

³⁹Lygo, Aug.26,1790. The 1789 Turner-Chamberlain accounts show that chamber pots had previously been made and supplied to the trade, for gilding, at 4s. each. Godden, *ibid*, p58. Lygo bought Nankeen chamber pots retailing at 7s to 7s.6d. each, bottles and basins at 10s.6d.

⁴⁰Godden, *ibid*, pp13-14. Nankin table ware sold for 20% less than Caughley trade price.

⁴¹Lygo, Sept 8, 1786

⁴²Lygo, June 30, 1787, recorded Turner had gone to France. There is no evidence porcelain was bought there.

⁴³ Chamberlain was supplied with £2,000 (plus 25% discount) of white ware by Thos. Turner from Dec.21, 1791 to Dec.31, 1792.

⁴⁴Turner had access to the Gew Graze soapstone deposits in the 1780s, but by 1795 had requested, though twice refused, china clay from Lord Camelford's Carloggas pit. Hobbs, *ibid*.

at night for the purpose of stealing moulds and models'.⁴⁵ The latter themselves went bankrupt in 1803, when both the Coalport and Caughley factories, the diminished Caughley coalworkings and grinding mill alongside other properties were offered for auction in six different lots.

A cooperative working relationship: Duesbury, Turner and Flight

Amongst the 'Goods recd. from Thos. Turner Esq.' by Chamberlain in 1789 were '6 caudle cups and covers with stands, Derby make, white', and '6 of those tall caudle cups you have Derby make'. Although other factory works' names appear in such lists, like Chelsea and Plymouth, they obviously appear in the context of pattern or shape names; the more complete references to 'Derby make' suggest that Turner was obtaining white ware, and perhaps even commissioning such items, from the East Midland factory. Figurative items possibly of Derby origin were also included: '4 dozen lambs, white'. Fragments of unglazed biscuit groups, apparently typical Derby pieces and matching accepted lists of Derby models, have been found at the Caughley site. Chamberlain too was selling Derby-type figures through his shop in Worcester between 1789 and 1792. Unfortunately, insufficient detail was recorded to be sure of a definite attribution to Derby: many were simple animals like dogs and sheep at 1s.6d a pair, or small figures such as 'Turks' at 4s. each. The cheapest were small white lambs, overcharged by one penny, at 4d, the most prestigious being two large biscuit groups, for sale at 14s. and 15s.

The precise nature of the business relationship of Thomas Turner to the Duesburys remains uncertain, for a number of Turners worked in the late eighteenth-century ceramic trade, notably John Turner and his two sons John and William. The latter were first-named partners of a leading London ceramic dealership, c. 1787-92, and thus feature in Lygo's letters.⁴⁶ The earliest mention of a 'Mr Turner' in a business context is April 1773,⁴⁷ while in September 1786 Lygo had sent Duesbury samples of 'Mr Turner's trials of smalt /cobalts'.⁴⁸ Lygo occasionally acquired utilitarian pieces from the Salopian warehouse, apparently in the context of completing a troublesome Derby set, which may have subsequently been decorated to match the Derby-made

⁴⁵H.Young,*English porcelain, 1745-95. Its Makers, Design, Marketing and Consumption* (1999),p63.

⁴⁶B.Hillier '*The Turners of Lane End*', 1965, and the family connection with the London dealer Abbott, c1780-92, see J.Howarth 'Andrew Abbott and the Fleet Street partnerships', *NCS Journal*, vol 13 (1996),pp75-118

⁴⁷DLS untraced. WDI writing from London to Derby April 13,1773, wanted various drafts sent to him in the capital, along with 'Mr. Turner's letter immediately'.

⁴⁸ Lygo, Sept. 8th,1786.

pieces. On occasion Lygo recorded boxes being taken to the Salopian warehouse,⁴⁹ but rarely was the Shropshire firm mentioned in the context of direct competition.⁵⁰ Sixty separate sales are attributed in Lygo's London accounts in 1789 variously to 'Mr Turner', 'Messrs Turner', and 'Turner & Co', all with 20% discount, amounting to nearly £450. These orders were well distributed throughout the year, save July. Most are valued under £10, and many are only of a few shillings; in each of the months of January, February and June, two larger orders, nearer £20 or above, were placed.⁵¹ The sales appear to be straightforward wholesale orders or commissions of finished pieces, and were not of a price or nature to be additionally decorated. Turner must have acquired white wares and figures direct from Derby, some of which c. 1790 were passed on to Chamberlain. It seems highly probable that these were in some way inferior pieces, destined for a different market than that of fine Derby porcelain. The Caughley order book for 1791-3 indicates Turner had some merchant connections, with a Mr Ferguson exporting wares to Holland.

In general, the metropolitan ceramic warehouses in the later part of the eighteenth century appear to have served in a wider capacity than merely selling their own porcelain or pottery. Lygo provided goods to Turner's Salopian warehouse, and on at least one occasion to Wedgwood.⁵² Lygo seldom purchased other ceramics: some were sent to Derby for Duesbury's own use, and perhaps even small-scale retailing, or for artistic inspiration; any items bought after 1792 appear to have been destined for the Bath shop.⁵³ Duesbury's London showroom appears not to have acted as a general ceramic retail outlet, however a few non-Derby items were sold: a daybook entry for 1787 reads 'Sold Lord Grey de Wilton 6 cups and saucers of Salopian Ware ... 1 large slop basin'; while the previous year Lady Tankerville acquired some cheap Worcester teaware.⁵⁴ On a number of occasions simple goods were bought from Messrs Flight, but also sold to them.⁵⁵ The impression of this trade from Lygo's viewpoint is one of convenience - it was easier to provide problem pieces or

⁴⁹ E.g. Lygo, July 22, 1789.

⁵⁰ Lygo, Oct. 17 and 28, 1786 Lygo hoped of getting a dessert order from Lord Walsingham, but it appeared he had chosen Turner's Prince of Wales pattern at Mr. Williams.

⁵¹ DLS Parcel 17x. Twelve months Feb. 1789-Jan. 1790 London accounts, excluding cash. It is impossible to judge how many were for Thomas Turner's establishment, as opposed to 'Turner and Abbott' in the Dec. 1, 1787 trade auction, 'Abbott Westminster', and 'Turner, Abbott' are listed separately.

⁵² KUL. Wedg. Acc. L11-1965, May 12, 1789 'for P. Wentworth Esq.', £4.3s. 6d. blue and gold tea ware and asparagus servers. The Derby day-book similarly records the sale 'Wedgwood for P. Wentworth'; DL82 7/91 June 27, 1794 Received of Lygo £4 for Salopian china bought at Public Sale for Thomas Turner.

⁵³ E.g. DL82 7/109a.

⁵⁴ DLS Parcel 17x. Day-book May 29, 1787 and June 30, 1786.

⁵⁵ DLS Parcel 17x. 'By Messrs Flight' April 2, 1787 £17.3s. and Feb. 19, 1790 £1.2s 6d; March 12, 1790 11s. 7d. included a biscuit figure. BM.BP. vol 4, Feb. 16, 1795 'to Mr Flight £21'. BM.BP vol 5, March 6, 1794 £44.17s worth of tea/coffee ware pattern '119' sold to Flight.

replacements of a cheap nature within town, rather than consider involving the factory, yet neither did one turn away such titled customers. Lady Tankerville certainly bought more Derby porcelain thereafter.

Chapter 8. Derby Porcelain and the English and French competition, c. 1800-1830

The porcelain trade with France, c. 1800-1830

There is no direct evidence of the effect that the continued importation of French wares had on the Derby factory from the mid-1790s; but Kean's porcelain displays much of the Empire influence. Although import duties on French porcelain were raised in 1799 to £48.19s.7d per £100 value, French designs were increasingly *de rigueur*. In the same year duties on Chinese porcelains were increased to 118%, though lowered to 80% three years later. At the turn of the century only nine British manufacturers of varying size were capable of producing fashionable porcelains for the upper and middle classes. Despite the war and blockade in 1806 there were by comparison 33 Parisian porcelain manufactories or decorating firms, employing 4,000. Dihl and Dagoty had built up a profitable export trade to England, but were worried that foreign potteries were 'naturalising in their own countries the products that we were once exclusively qualified to supply'.¹ In 1810, with an increase in import duty to £63.15s. per £100 value, French porcelain continued to flood the market. Many of the Duesburys' old customer-dealers were stocking French porcelains, both antique and modern.² Christie's and Phillips continued with prestigious auctions of the finest French porcelains in 1813-14, although sale prices were low.³ Something of the universal appeal and availability of 'foreign' porcelains can be judged by the purchase in 1811 by the Coalbrookdale ironmaster Francis Darby, who rather than support the nearby Coalport factory, purchased a 300-guinea 'foreign' service from his local Shrewsbury dealer.⁴

Probably more damaging to the manufacturers of fine English china, but less quantifiable, was the easy availability of French white porcelain blanks for decoration by independent workshops. Although similar establishments had thrived in London prior to c. 1770, Duesbury I had witnessed their demise, yet the powerful

¹R.de Plinval de Guillebon, *Paris Porcelain, 1770-1850* (1970), p87. In 1806 Dagoty claimed two-thirds of their stock worth 350,000 francs was destined for export, Dihl had 800,000 francs unsold were largely destined for England and Russia.

²G.Godden, *Godden's Guide to European Porcelain* (1993) p21-26, Robert Eliot, Jones of Ludgate Hill, Fogg, Pearce, even the now independent chinaman Lygo.

³ French porcelain auctions included : Christie's June 1813 with 184 lots, including Dihl pieces; a year later 164 lots of Parisian tablewares were to be sold but few reached their reserve, raising a little over £50 in total. Phillips, June 1814, commenced a ten-day auction of fine Dagoty porcelains, with few items sold, prices were low and mainly bought by private buyers. The trade may have been overstocked with French wares.

⁴Godden, *ibid*, p173. Accounts only record the service as 'foreign' although it was likely to be French, richly decorated Chinese services were still available.

retailing houses of the early nineteenth century happily supported their revival. In the capital Thomas Baxter, Thomas Martin Randall and John Powell established fashionable decorating shops; blanks were painted by William Billingsley in 'Derby-style' at Mansfield and Torksey, and by Chamberlains of Worcester who purchased indirectly from the dealer Mortlock.

Some English producers of fine porcelain were effectively obliged to collaborate with this trade: Coalport and the Welsh porcelain factories in particular made white ware for the London decorators. In September 1814 the management of the Nantgarw china works, including Billingsley, had written to a government trade committee expressing concern over the French porcelain competition. Although £2,000 of capital had been tied up in the Nantgarw works, producing 25 dozen plates a week, this was a very trifling quantity compared with the imports of white French wares, and they urged that the duty be raised further 'to act by degrees as a prohibition'.⁵ Most of the Nantgarw production of 1818-20 was sold in the white. There is no direct evidence that the Derby factory sold white china commercially, except at the 1814 clearance auction; during Kean's and Bloor's management stored white seconds were said to have been finished off at the works. However, the reputation of the London workshops was such that in the early 1820s Bloor copied plates decorated at the Sims studio, on Nantgarw blanks, to 'create one of the most costly services ever got up at Derby' for Lord Ongley.⁶

During the Napoleonic period the capacity of the British ceramic industry as a whole had grown by about one third, largely due to the widespread introduction of the bone china body within the existing pottery sector; by 1830 more than a hundred works were producing bone china.⁷ Within Bloor's period of management, the capacity of the English porcelain industry had doubled. In 1810 a Wedgwood traveller reported that he could not sell enamelled earthenware because customers preferred the similarly priced china.⁸ But even the newly emerging 'super potteries' producing a wide range of utilitarian and ornamental wares made relatively little porcelain; only one-eighth by value of Minton's output was bone china, though by quantity a far smaller proportion.

⁵Godden, *ibid*, p21.

⁶J.Haslem, *The Old Derby China Factory* (1876),pp207-8. Sims may have been a Derby decorator himself c.1790. Lygo mentions the studio, and Zachariah Boreman may have worked there after leaving Derby, c.1810.

⁷L.Weatherill, *The Growth of the Pottery Trade in England,1660-1815* (1986),p299.

⁸KUL.Wedg.Acc.18-16174. J.Bateman to JWII, April 15,1810.

By 1820 the duty on French porcelain imports had risen to £75 per £100 value. This, combined with the relative decline of the Parisian enterprises, and the emergence of our own bone china industry, had reversed the flow of porcelain by 1830. Some 90% of the Swansea production in 1821-2 was able to be factory decorated. Unfortunately Bloor had released five of his apprentice-trained painters, missing any advantage of the 1823 boom that was readily exploited by newcomers like Daniels. The rococo revival, heralded in particular by Minton, proved internationally popular. In 1834 the Parisian manufacturer Honoré, reporting to his own minister of commerce told how 'the English flood us with tea services of gilded red and blue porcelain which is sold over here at between 72 and 80 francs but bought in England between 25s. and 30s.'; while for the last three or four years American customers had been sending the French ceramicist English designs to be copied! Meanwhile Davenport senior, writing to his son in Holland, realised that French competition could be thwarted, advising 'if we beat them out of Holland and Belgium we shall find a good market'.⁹

The early nineteenth-century porcelain showroom and retail outlets

Other fine ceramic manufacturers re-sited or opened metropolitan showrooms from the later 1790s: Spode opened its Lincoln's Inn warehouse in 1795, and two years later Wedgwood had moved to St James's Square. But it was not until the close of the Napoleonic period that the Derby factory's competitors created their own London outlets; meanwhile Kean had acquired a new showroom in Old Bond Street. Although payment for rent for the new Derby porcelain warehouse commenced in August 1806, it is far from clear what became of the old premises on Bedford and Henrietta Streets, and at least one property appears to have remained in use until 1811, perhaps as accommodation only. No documents survive from the operations of the later Derby showroom.¹⁰ Davenport who had exhibited at the Shakespeare Gallery, Pall Mall in 1807, took over existing premises from the retailers Abbott and Mist in Fleet Street in 1818. Chamberlains acquired a shop in Piccadilly in 1813, while in the 1820s John Rose opened a showroom off the Strand, followed by the Rockingham works establishing a wholesale outlet on Vauxhall Bridge Road.

The best documented of these early nineteenth-century porcelain showrooms is that of Chamberlain of Worcester, operating initially from January 1814 in 63 Piccadilly,

⁹T.Lockett, 'John Davenport and his wares', *ECC Trans*, vol 9, pt1(1973) p19-35

¹⁰ The showroom post 1811 may have become a more independent agency. By 1816 Barker appears to have established a Derby agency in Liverpool, which Bloor tried to repeal two years later.

and moving to new premises at 155 New Bond Street three years later.¹¹ Unlike the Duesbury showroom the Chamberlain warehouse was run by two family members, Henry and James Chamberlain, who were each paid a flat rate £50 salary, but making an income approaching £200 with the aid of 15% commission. This arrangement appears to have been harmonious, and contrasts with that recorded in the 1820s between John Davenport and his London managers, the excitable Henry Portigny and his inept son, Victor.¹² Like Lygo, a generation earlier, the Worcester managers returned bills of exchange, prints, gold and examples of French porcelain to the parent factory, paid for from the capital's takings. Sales through the saleroom were limited: amounting to a little over £2,500 in 1814, and only £3-4,000 annually during the following decade. Most of the factory sales were centred on the country trade, directly from Worcester, or through an established network of provincial dealers, although the dozen or so metropolitan dealers were increasingly supplied through the London shop, usually with a 30% discount. Cash sales were small. In contrast to the Duesburys, when Chamberlain established his porcelain enterprise in 1788 he was obviously able to benefit from the shifting patterns of national distribution, no doubt aided by the reputation of the town's earlier-established porcelain works, and the later opening of a London showroom was more closely linked to prestige and fashionability, rather than necessity.

The more middling china works established at New Hall in 1781 also appeared to thrive without a direct access to the metropolitan market; taking advantage of the established north Staffordshire trade routes, travellers could be used. Wares appear to have been largely aimed at the home custom, with marked New Hall products known to have been sold at warehouses in London, Edinburgh and Liverpool.¹³ At the turn of the century its cheaper coloured-and-gilded styles on hard-paste porcelain proved popular, and were imitated by newly formed firms like Coalport and Minton. But despite a limited export market, New Hall in common with the Staffordshire pottery industry suffered in the period 1806-12, and from competition from bone china. Subsequent labour unrest after 1825 made its final closing in 1835 inevitable.

The up-and-coming Davenport china and glass works received its royal orders as a result of 21st birthday celebrations at Trentham Hall in September 1806. During the

¹¹Dyson Perrins Museum. Chamberlain Archives, 7 (journal 1804-7), 14 (cash book, 1804-11), 15 (cash book, 1804-14), 28 (Bond St.cash book, 1814-25), 57 (Bond St.cash book, 1825-33), 70 (journal, 1800-1804), 90 (journal, 1811-16). See Godden, *Chamberlain-Worcester Porcelain, 1788-1852* (1982), pp31, 102-4, 136, 140-1; and O.Fairclough, 'The London china trade', *ECC Trans*, vol 16, pt 2 (1997), p198-9.

¹²T.Locket, *Davenport Pottery and Porcelain* (1972), p13-16.

¹³D.Holgate, *New Hall and its imitators* (1971), p16-18

visit the Prince of Wales and Duke of Clarence had toured the manufactories of Spode, Wedgwood and Davenport. Over a hundred pounds of glass were initially ordered from Davenport, followed next summer by a 600-piece table service at £620, and by Christmas an order for '24 Egyptian porouse wine collers etc [in] silver lustre'. The *Staffordshire Advertiser* had recorded the visit, reporting that the Prince had considered the Davenport porcelain 'in texture and execution equal to old Seve'. Although royal approval would have given the factory prestige, the Davenport empire was commercial, providing a wide range of pottery, transfer-prints and export wares, alongside fine porcelain for the 'country set', but relatively few ornamental pieces.

In the summer of 1817 Spode and Copeland's London 'porcelain, Staffordshire and extensive glass warehouses' received a royal visit akin to the visit to the Covent Garden showroom some 42 years earlier. 'Her Majesty, accompanied by the Princess Elizabeth, went in a private manner, in the Countess Dowager of Cardigan's carriage'.¹⁴ Wedgwood's chief travelling salesman subsequently reported: 'since the Queen went to Mr. Spode's the stone china is much inquired for and getting more into repute - indeed a dealer cannot be without it, and a great deal is sold'. Although Spode and Copeland's London showroom made about £11,500 a year by 1830, supplying London and export outlets, a substantial profit of £8,000 was made from the country trade direct from the Stoke factory.

Trade directories indicate how fast the capital's base of china dealers was growing numerically:¹⁵ 130 ceramic manufacturers or dealers were recorded in the 1805 'Post Office Annual Directory', but in 1832 Pigot's 'New Alphabetical Trade Directory' had 425 similar entries. In 1827 Wedgwood were planning to give up their London showroom completely, and through Josiah Bateman were negotiating with metropolitan dealers to supply their shops direct.¹⁶ In 1830, on witnessing the opening of the Liverpool and Manchester Railway, Davenport Senior predicted 'not much warehouse room will be wanting' as goods would be able to get to the capital at 15 miles per hour.

¹⁴L. Whiter, *Spode* (1983 edition), p70-1.

¹⁵ Pigot and Co's *New Alphabetical Directory* (1832); H. Mui and L. Mui, *Shops and Shopkeeping in Eighteenth-century England* (1989), p67, table 7 indicate as a percentage of trades the china and earthenware dealers were relatively static in London c. 1783 and 1822-3, at 2.5-2.9% though in new towns beginning gentrification, like Manchester, percentages had risen from 0.6 to 2.8% at this period.

¹⁶Their post-1797 premises had proven less suitable, see L. Miller, 'Wedgwood's York Street London showroom', *Ars Ceramica*, no 12 (1995), pp45-53.

The power of the leading dealers, following on from the 'China Club', is obvious in the early nineteenth century.¹⁷ Fine tablewares of very similar nature were being produced at numerous works: Derby, Coalport, Worcester, Davenport, Spode, Minton, Rockingham, Swansea et al., allowing the dealers to switch allegiance between manufacturers if at all slighted. Bateman recorded how easily offended the 'leading houses' could become if a manufacturer also sold to a 'certain class', and suggested the factory 'must ever look to the lower class of dealers for business'. Instead of the factory's own markings the important London dealers insisted on their own back-stamps, obscuring the original source of their ceramic goods. In 1817 John Mortlock's dislike of the Swansea soapstone body effectively sealed the fate of this factory; while the following year the Edinburgh dealer Child and Co., upset by Mason's auctions in the city, took his ironstone order to Davenport. Smaller firms, like H. and R. Daniel of Stoke were able to benefit from others' weaknesses, and made headway into the fine market; thus in 1823 the younger Daniel related to his father that 'Everybody says they never saw such goods before. Poor Ridgway says we cut up his trade and John Rose sends out the goods so bad everybody complains', and suggested 'now is the time or never' for expansion.¹⁸

Although in the eighteenth century there may have been few provincial porcelain retailers who had laid out large sums for fashionable stock, this was no longer true, and it is not surprising to find such dealers upset by fly-by-night sales. Unfortunately this was the method adopted by Kean from the autumn of 1801, through the following decade, into 1814.¹⁹ Nearly £7,000-worth of Derby wares, perhaps a mixture of porcelain and creamware, and almost certainly of old stock or inferior quality, were sold by this method. Kean's choice of sale in the ports of Hull, Liverpool and Glasgow might indicate that such cheap goods were intended for purchase by exporting merchants, but the Dublin and Edinburgh auctions were more likely for home consumption. How damaging such practices were in the long run, to Kean, and in his wake Bloor, cannot be quantified, but the factory's reputation, apparently so carefully nurtured by the Duesburys and Lygo, may have been seriously undermined outside London. In 1829 the Bloor management returned to Dublin for a fine porcelain auction, advertising 'one hundred hogshead of the most costly and superb china', with an estimated value of £3,000.²⁰

¹⁷See O.Fairclough, *ibid.*

¹⁸M.Berthoud, *H. and R.. Daniel, 1822-46*, (1980), p146. This short-lived firm commenced manufacture in 1820, by 1827 the Earl of Shrewsbury had commissioned wares.

¹⁹BM.BP.f2025,f2031-7.

²⁰Private letter from Mairead Dunlevy, Keeper, National Museum of Ireland, Jan. 29th, 1998.

Prestige porcelain commissions were still being sought. On the succession of William IV the British porcelain producers effectively entered a competition for a Royal Service. In November the Earl of Fitzwilliam had 'submitted 3 of the pattern plates', on behalf of the Rockingham works, while Davenport predicted 'we shall have trouble with this thing'. Although the latter indicated '4 or 5 services are now ordered', only Flight and Barr seemed to have otherwise entered the fray. Rockingham, employing the ex-Derby artist Corden, completed theirs in time for Queen Victoria's coronation, effectively making themselves bankrupt. Davenport completed their service to schedule, arranging a public display at Longport as a clear manifestation of their supremacy over Spode and Wedgwood. Bloor had produced some large services c.1820 for the Persian ambassador and Lord Ongley, and ten years later for the Earl of Shrewsbury, but nothing for royalty until 1841-2 when a dessert was made for Queen Victoria.²¹

²¹Haslem, *ibid*, p204-6. Replacement pieces for this service were regarded as amongst the highlights of the King St. works' production, p237.

Conclusion

Both Duesburys invested considerable time and finances in providing suitable art-works to inspire their craftsmen. This commitment to obtain a variety of topical sources was ongoing in the luxury sector, and thus contrasts with Wedgwood's similar use of resources for the Frog service. Aesthetic considerations dominated Duesbury II's production, although it was Lygo rather than a Derby manager who practised rather arbitrary quality control and pricing of wares. Commercial approaches however are in evidence related to the use of the artist-decorators, who were highly regarded for their versatility, speed and consistency, and as copyists. The status of the professional artist in eighteenth-century England allowed the Duesburys (and Wedgwood) access to talent increasingly denied their successors; by the close of the Napoleonic period ex-Derby decorators were setting themselves up as genteel drawing masters, or had greater ambitions as artists in London.

The Duesburys had little competition at home c.1770-90 in the production of luxury china. Lygo clearly believed that Caughley and Worcester, as well as Wedgwood, served a more middling 'common' market; nevertheless all cooperated, sharing trade to varying degrees, within the London distribution system. The Duesburys' relationship with Thomas Turner was the most complex, for the latter inexplicably received white ware from the Derby factory.

Any trends emerging in the British-based porcelain industry, and presumably other related luxury goods, were severely shaken by the impact of the 1786 French trade treaty. The initial importation of French porcelains appears to have worked in Duesbury's favour, popularising French styles at a time when only he was able to produce, or even copy, similar fine hand-decoration and gilding, tailored to the customer's needs, but apparently more cheaply. The Flights sold French wares, despite gaining a royal warrant. Unfortunately no one could have anticipated the consequences of the French Revolution: the flood of luxury consumer wares that flowed into Britain looking for replacement markets at any price. Derby's sales declined by over 12%, while the Salopian works cut prices by 20%. Even the war, and subsequent increases in trade duty, had a negligible effect on porcelain imports, or on the fashion for French designs. Duesbury appears to have recovered some trade after 1793, but significantly the anticipated three-fold demand for Derby porcelain did not occur. The market for French-style porcelains had undoubtedly been stimulated but was largely filled by French

imports, and lesser quantities of decorative Chamberlain and Flight wares. Although there are no comparable sales accounts for the Kean works, French competition continued, with the corresponding return to silver status items; in the main only Napoleon's blockade allowed our own porcelain manufacturers some respite.

Although there were a number of stimuli to the porcelain industry at the close of the eighteenth century, including the expiry of New Hall's hard-paste patent and rising duty on Chinese porcelain, these were related to the middling markets. Growth in the London-based luxury market centred on a few influential dealers, who encouraged the independent decorating-shops using various porcelain blanks, thus diminishing the status and increasing the anonymity of specialist porcelain producers. By the close of the Napoleonic period a manufactory's use of a London warehouse was clearly for prestige, rather than a necessity of communication; even provincial dealers were exercising more influence over the producers. The capacity of the ceramic industry grew with the increased use of bone china; notable in the opening decades of the new century was the appearance of the new super-potteries, like Davenport and Spode who had received royal approbation. But when the impetus to the luxury sector of bone china production occurred in the early 1820s Bloor's factory had lost any artistic or competitive edge.

Whereas the pottery industry had maintained a rather erratic export market during the extended war years of the early nineteenth century, export of British porcelain was negligible.¹ In America, whose eastern seaboard towns were barely months behind the fashions of European capitals, they continued to buy cheap Oriental porcelain direct from China, or robust hard-paste porcelains from their French allies. Newer British colonies like India only became suitable luxury trading partners as European wives and families started to reside there too, in the early part of the century. Coalbrookdale wares and some useful Wedgwood were advertised in the Calcutta press in 1806. Copeland and Spode, as well as Davenport, appear to have sent pieces, but the former lost about £6,000 in this speculative Indian trade.² The attraction of this distant market may have been to be rid of old stock that would no longer sell in Europe. By 1830, rococo revival British bone china was being given international recognition.

¹L. Weatherill, *The Growth of the Pottery Industry in England, 1660-1815* (1986), pp306-11.

²R. Kilburn, unpublished talk 'The ceramic export trade to India', Morley College Ceramics Seminar, 1997. Davenport goods were on a vessel that had sunk in 1805; while Spode and Copeland, plus a further 109 dealers, were owed £12,900 following the death of an East India Co. captain, Henry Christopher, in 1819.

PART 4. THE DERBY CHINA WORKS: LOCATION AND ACQUISITION OF RAW MATERIALS

Chapter 9. Derby: a suitable location for porcelain manufacture

Although the exact origins of the earliest production of porcelain in Derby in the late 1740s remain a mystery, what is important is how this particular provincial china works thrived, 130 miles from London, when so many similar enterprises failed. Housley, uncontroversially, suggested 'the four essential pre-requisites for a successful manufacturing industry were, then as now, a ready market for finished goods, reasonable access to raw materials, adequate working capital and an available labour force.' However he believed that Derby was 'notably deficient' in providing a local market or one for the rest of the country, because 'communications were woefully inadequate'; while the 'largely unskilled but dextrous pool of labour resulting from the textile industry' was the only significant advantage over any other small county town. His thesis was that access to raw materials, notably clays associated with the lead industry, was the *prima facie* rationale for the factory's location.¹

Derby was no provincial backwater in 1750. A thriving textile trade, based on the more luxurious end of the market involving silk spinning and dying, had been established a generation earlier, while after about 1745 a growing jewellery industry was creating fashionable paste items. Significantly, the silk trade early in the century attracted London investors, as had the county's lead industry.²

Communications

Transport and communication from Derby to all parts of the country was comparatively good. The geology of the Derbyshire uplands, with its grits and dry limestone ridges, had resulted in reasonable access through the county since Roman times. These routes remained the principal arteries effectively connecting

¹P.Housley, 'A study of Derbyshire raw materials and their possible relationship to the manufacture of porcelain at Derby', *ECC Trans*, vol 14 pt2(1991), p126-143.

²E.g. Liversage Charitable Trust Papers, Derbyshire Record Office, D1955, Silk Mill leases were acquired by Francis Cockayne from Mile End, Stephney, Middlesex merchant in 1739, and Thos. Cheshire, London silk throwster, in 1718. Francis Gell a London lead merchant moved to Derbyshire in 1692 to begin the Hannage sough, while John Heaton from Westminster was a proprietor of the Cromford sough.

Manchester and its neighbourhood to London, and going east across the drier Bunter sandstones towards Nottingham and the rivers Trent and Idle. However some areas, particularly the low and deep lands, proved more inhospitable, and in the 'winter season no waggons and carriages can pass'.³ Nevertheless, droves of 40 to 60 packhorses strung together, each carrying two panniers, were a common sight on this east-west crossing. Before 1740 the Manchester to Buxton road had been turnpiked, as had the Brassington to Loughborough route through Derby. Branches linked Chesterfield to Worksop, and Ashbourne to Hurdlow and Bakewell. By 1756 Derby was connected by an improved road north to Sheffield, and south west to Burton, soon followed by one to Uttoxeter. Twenty-two Derbyshire turnpike acts were passed between 1758 and 1766, although following the national pattern 'few counties did so abruptly'.⁴ The Cavendish and Gell families were prominent trustees in the turnpike movement, helping to fund routes for the extracted minerals, initially limestone and lead, followed by iron and coal. By the 1770s new turnpikes were largely 'in fills', and within twenty years Hutton was able to write that 'eight roads proceed from Derby to adjacent places; all are turnpiked. These are all excellent and used with pleasure. But I knew them when the best was incommodious even in summer and barely passable in winter'.⁵

A trade directory from 1772 confirms that a regular 'flying machine' travelled to Derby from London, every night and three mornings per week, as well as four 'car' connections.⁶ After 1784 the armed mail coach provided postal services daily, except Sunday, allowing carriage up to one pound weight. The London showroom manager certainly sent weekly and sometimes daily letters with orders or comment to Derby. To save pennies in the cost of postage, Lygo went to some length to get a free parliamentary 'frank from friends in town'.⁷ 'The box', carried on any of these vehicles, proved the most important method of conveyance and communication between London and Derby. These boxes, or solid wooden crates, enclosed on their way to Derby gold, half banknotes, bills of exchange, porcelain commissions, copy accounts, family purchases like tea trays or muslin, samples of raw materials, artist's test pieces, and sculptural models; and on return went the majority of the factory's finished porcelain destined for the London showroom customers. Lygo's letters make

³J.Scott, 'Turnpike roads in Derbyshire', *Derbyshire Miscellany*, vol 6(1971-3),pp198-209, from the pre-amble to the 1739 Chesterfield-Worksop turnpike act.

⁴Scott *ibid.*, p198.

⁵Hutton, 1791 in E.Pawson, *The Turnpike Trusts of the Eighteenth Century: a Study in Innovation and Diffusion* (1975), p267

⁶*Lowndes* (1772): the flying machine left the Swan with Two Necks at 4 am, or 6.30pm; fare £1.8s. By 1774 the *New Complete* directory shows a coach had been added to the route; *Kent* (1779) records a 'diligence, machine, coach, waggon or carrier and vessels' on the London-Derby routes.

⁷E.g..Lygo, Jan 17,1793.

some subtle differentiation between the services, mainly based on cost and timetabling. Ideally, the box was placed on the mail coach, which was ‘softer than the heavy coach’⁸ but other parcels sometimes precluded this; alternatively it could be placed ‘on waggon to save expense of coach’.⁹ The coach journey took about 20 hours, and was apparently a far more reliable service than the waggon; boxes from the waggon went missing for weeks at a time.¹⁰ Lygo asked specifically for the Duke of Northumberland’s service to be put on the coach.¹¹ Surprisingly few incidents of damaged porcelain are recorded, and some of these were acknowledged a consequence of poor packaging.

Improvements in overland transport may have reduced costs by as much as 30%,¹² but it was still expensive, particularly for factory personnel and low-value bulky goods. The coach fare to Derby by the late 1780s was £1.11s.6d, or the equivalent of over a week’s wages for one of the factory’s most skilled decorators. This was certainly prohibitive. When Lygo was helping set up the Bath shop he suggested ‘a great deal of economy in our travelling expenses’ could be realised by not visiting Staffordshire but by organising the orders and discounts through the London merchants.¹³ While getting skilled workers to Derby from London was problematic, occasionally Duesbury agreed to pay their expenses, but more often the costs were only an advancement. Two of the factory’s more difficult employees, Brocklesbury and Spangler, walked back to Derby to limit their indebtedness; the former was given 10s.6d for expenses. However families like the Banfords and Brewers, looking for employment, had less option. Duesbury I paid for a coach hire on his trips to London in 1780, but these were for considerable periods: his son who visited the showroom for a matter of weeks travelled to London by horse.¹⁴

Tolls added to the cost of bulk carriage; while on a long slow journey, perhaps only averaging two miles per hour, the cost of maintaining the waggons and horses could be colossal.¹⁵ Wedgwood bemoaned the fact that between three-quarters and five-sixths of the final cost of his pottery was due to transportation costs.¹⁶ Duesbury paying for the carriage of charcoal from Hanley Wood in 1788 set the carriage ‘at 7d

⁸Lygo, Sept.2,1790.

⁹Lygo, Dec 27,1789: DL82 7/2 June 1-21,1788 accounts record ‘box fr. London w.[aggon]coach 1s. 6d. carriage’.

¹⁰E.g.Lygo, April 22,1795 and Jan 28,1796.

¹¹Lygo, July 7,1795.

¹²N.Crafts, ‘The Industrial Revolution’ in R. Floud and D.McCloskey,eds, *The Economic History of Britain since 1700*, vol.1(1994), p57.

¹³Lygo, Sept 7,1792

¹⁴DL82 7/26 WD I average coach hire and expences 1780-81 about £1.14s. each way.

¹⁵T.S.Ashton, *An Economic History of England: the Eighteenth Century* (1955), p71

¹⁶J.Thomas, *The Rise of the Staffordshire Potteries* (1971),p85

per quarter', while two turnpikes were freed at another 4½d and 9d. The charcoal burner was paid a little over £8, but the haulage costs appear to have added a further £15-plus.¹⁷ Considerably cheaper carriage could be obtained over water, either on coastal sea routes or navigable rivers, and, post-1760, on the increasingly popular canal. Such were the potential savings that water carriage provided, that goods were sent considerable distances apparently out of their way by sea, to save a few miles' carriage overland.

Although the River Severn 'was remarkable as being the only great English river that could be navigated without flashes, floodgates, locks or sluices',¹⁸ the River Trent served the eastern Midlands well despite intermittent excess and deficiencies of water. The southerly reaches of the Derwent had been improved in 1721 by Sorocold, making access from Derby along the Trent to Gainsborough, and hence by sea to London. This created a far superior and cheaper route for bulky goods coming to or leaving Derby and the environs. A number of London wharves, with coastal and barge services destined for Derby, are listed in the trade directories.¹⁹ Certainly up to the mid-1770s large dispatches of fifty cases, destined for Williams, the Derby factor in London, were waterborne.²⁰ The inland waterway connection in the south of the county was further improved in 1777 following the completion of the Trent and Mersey Canal, which ran from the westerly estuary near Runcorn, through Staffordshire, to the Trent at Wilden Ferry. The Duesbury papers, however, make little reference to the use of the growing canal system; on one occasion in 1790 clay from Vauxhall was to have been shipped via the Hungerford Stairs, presumably to travel north via the Oxford and Coventry Canals, to the Trent and Mersey, and on to Derby.²¹ Water transport may have been cheaper, but it was not efficient. Scheduled sailings from London to Cavendish Bridge should have taken 10 to 15 days, but items were being traced after 4 weeks, or went missing altogether. The Derby factory's supply of bone ash seems to have suffered particularly, despite being labelled discreetly 'dry goods'. Pilfering on the waterways was a common and costly problem to the pottery industry at large, but such injury was limited by the Duesburys, with their use of overland routes for their valuable china. The Derby

¹⁷DL82 8/118, and BM.BP f506(Nov 1,1788)

¹⁸T.S.Willan, 'The River Navigation and Trade of the Severn Valley, 1600-1750', *EHR*, VIII, no 1, p68-9

¹⁹*New Complete* (1774).

²⁰DL82 8/87 Oct.22, 1776 letter Wood to WD, £1900 worth of china put on board for Williams.

²¹Lygo, Oct.25,1790, the Hungerford Stairs' carrier however believed the cask was not strong enough to make the journey, Lygo sent 0.25 cwt on the waggon, the rest appears to have followed on Nov.18 by the coastal and Trent route.

china works' use of road transport confirms that this form of communication was indeed more important to the industrialising economy than was once thought.²²

The topography of Derbyshire otherwise restricted canal building, and most were rather peripheral, though a complex system developed in the 1790s along the Erewash valley, which would have directly benefited the Derby china works.²³ Canal mania spread to Derby with the intention of connecting the town directly to the Trent and Mersey Canal and Erewash Valley waterways. On 7 May 1793 an Act of Parliament created the Derby Canal; capital was raised with the issue of 6,000 shares of £100 each. Duesbury II actively supported the canal project, buying £600-worth of shares, to become the twelfth largest shareholder. By October 1795 three additional Derby Canal shares had been bought up. William Strutt by comparison bought £200-worth.²⁴ The china works were to benefit from flood control measures; Duesbury had complained on a number of occasions previously about seasonal flooding, while the new port of Derby, with four basins, was to eclipse Shardlow, and was to have numerous wharves including one adjacent to the china works. The first phase was opened in May two years later, and ran from Swarkestone to Little Eaton, the rest of the route to Derby then being completed by horse-drawn rail. The complete canal was finished on 30 June 1796.

By comparison, North Staffordshire's communications were poor in the mid-eighteenth century. Even the nearest navigable waterway, the River Weaver, connecting to Liverpool beyond, involved a twenty-mile haul overland. Roads were poor and disjointed even with the turnpike improvements; the potter, Wheildon, was among those who subscribed to the first Staffordshire turnpike, but this was 35 years after the turnpike movement had already begun in neighbouring Derbyshire. The trade directories indicate that North Staffordshire was not served by various waggons or carriages from London even by the mid-1770s, nor were there wharves designated for destinations in the Potteries. Wedgwood in his letters reveals that Etruria was effectively an extra day's distance from London, for he was obliged to spend the night either near Birmingham or Derby before travelling on to the capital. Not surprisingly, in the mid-1760s the earthenware manufacturers and mine owners turned to the building of the Trent and Mersey Canal with some enthusiasm, in part led by Wedgwood. The potter had suggested that transport costs of bulky raw

²²N.Crafts, *ibid*, p56

²³These comprised the Erewash, Cromford, Nutbrook, Nottingham and Derby Canals, which connected to the Trent Navigation, and Trent and Mersey, and a host of other waterways into Lincs., Leicestershire and the West Midlands. Boughey *Hadfield's British Canals*, 8th edition (1994), p135-7.

²⁴DLS Derby Canal Co. Records Box 4, 35. Duesbury's original 6 shares were numbered 195 to 200, additions included '124', '134' and '135'.

materials would be reduced from an average 15s. per ton to 2s., while the conveyance of finished earthenware would be reduced from 28s. to 12s. per ton.²⁵ The surviving Hull Port Books indicate something of the boon that this waterway was for the earthenware, tinned and iron plate and textile manufacturers in the West Midlands and beyond, exporting to northern Europe, Russia and the Baltic ports.²⁶ However the Wedgwood archives reveal that the volume of pottery sales must have made distribution from Staffordshire more problematic, with seasonal hold-ups due to the River Derwent flooding, and even frozen canals. Domestic coastal carriage was often reliant on spare capacity in the likes of 'cheese' or 'tin' ships. As with Duesbury's porcelain it had obviously become easier for superior pottery in the later eighteenth century to be sent to the London warehouses, for redistribution nationwide to take advantage of more regular carriage services. In 1818 one of Wedgwood's Scottish dealers requested goods were sent directly to him from Staffordshire, rather than through the capital, not for speed but because it saved money.²⁷

Worcester however, at 122 miles from London, was served much as Derby with regular coaches and carriages, and of course was able to take advantage of the River Severn.²⁸ When the Bath shop was initially being considered Lygo confirmed that carriage there from the capital was 5s. per hundredweight and would 'go in 3 days with the flying waggon'.²⁹ When finally equipped three years later, the bulk of the goods for the shop opening reached Bath via the coastal route and Weymouth.³⁰ Carriage or packing for the Bath outlet appears to have been less sympathetic to the porcelain by the mid-1790s, and a greater number of pieces appear to have been found damaged here prior to sale.

Derby: a provincial centre

Derby had a population of around 7,000 in 1750; but this was at a time when only 20 English towns or cities, including the capital, had a population over 10,000. London had 675,000 inhabitants; the next largest city was Bristol with 50,000, then Norwich

²⁵K.E.Farrer, ed, *Correspondence of Josiah Wedgwood* (1903-6), appendix, pp249-50, these 1765 figures were used by Wedgwood to gain support from the Mayor for the Trent & Mersey Canal.

²⁶Hull Port Books PRO E/190/386/3 and 6. These books have proven of little value in tracing Duesburys' acquisition of neither raw materials nor the disposal of porcelain.

²⁷J.Turnbull, 'The role of the traveller marketing ceramics particularly in Scotland', *NCS Journal*, vol 10 (1993), p7-21.

²⁸ Worcester had no flying waggons in the 1770s; fares at 25s.were slightly cheaper than Derby ones.

²⁹Lygo, Oct.28,1790.

³⁰Lygo, Oct.17,1793.

with 36,000. The newer industrial towns and ports of the North and Midlands were growing, but many of the communities with populations over 5,000 remained the traditional market towns. The county's topography had made Derby a natural centre of communications; the town had seven coaching inns. Even as early as 1727, Defoe had noted that Derby

... has more genteel families in it than is usual in towns so remote from London, perhaps the more, because the Peak, which takes up the larger part of the county, is so inhospitable, rugged and wild a place, that the gentry choose to reside at Derby rather than upon their estates, as they do elsewhere.³¹

Furthermore the market town thrived as a social capital, with various entertainments, luxury trades and shops, and professional services for the 'gentry'.³² In the 1730s the weekly *Derby Mercury* newspaper was first published, being distributed in the counties of Derby, Nottingham, Leicester, Stafford and York. Although the residences of the aristocracy and gentry declined in the latter half of the eighteenth century, Derby retained its position as a centre for the judiciary and for local politics, with the attendant ceremony. A whole range of professions and service industries continued to flourish, as did more artistic occupations such as those of the painter Joseph Wright and the architect Joseph Pickford. From the later 1750s educational opportunities and centres of debate thrived, with the opening of the Derby Coffee Room, an increasing range of circulating libraries, and a choice of visiting scientific lecturers.³³ The first philosophical society meeting was held in 1779, although it was not until 1783 and under Erasmus Darwin's guidance that the Derby Philosophical Society was set up. The Wedgwood archives show just how wide Derby's hinterland was for a variety of genteel services in the later eighteenth century.³⁴

³¹D.Defoe, *Tour through the Whole Island of Great Britain* (1727)

³²E.g. William Sewell advertised 'fine and ordinary' glass and various ceramics for sale at his warehouse in the Cornmarket, Derby, *Derby Mercury*, March 3, 1743

³³Visiting scientists included: John Waltire (lectures included the use of air, and effects of heat and managing it) 1771, 1781, 1798. Wedgwood had attended Waltire's lectures in 1779 and employed him to teach his children chemistry; John Banks (treatise on watermills) 1780 and 1795; Mr. Pitt (various instruments e.g. pyrometer, thermometer, hydrometer, air pumps) 1773, 1778, 1785; John Booth (series of 13 lectures on mathematics) 1783.

³⁴KUL.Wedg.Acc. e.g 1764-1802 indicate Derby, rather than any other Midlands town provided the potters' family with a variety of consumer goods. Derby is also mentioned by Josiah Wedgwood in the context of education, plus Darwin, Pickford, Wright etc. M.Craven, *The development of the city of Derby*, *DPIS Journal*, 4 (2000), p110, mentions further genteel Derby craftsmen.

The Duesburys' social and economic sphere in Derby

A number of famous Midlands industrialists were noted for their nonconformist activities or spheres of influence. Derby and its immediate vicinity had nurtured the dissenter intimates of Wedgwood: Erasmus Darwin and Thomas Bentley. In Derby the nonconformists centred around the Unitarian Church and a wider social group who met at Strutt's and Evans's houses.³⁵ The Duesburys however were orthodox church, and moved within a separate social circle. Certainly by the close of the century this included the Boott, Haden, Wallis and Wright families. The elder Duesbury was a native of Staffordshire, and worked in London and Longton Hall before moving to Derby; he appears to have spent nearly half the year in London, in contrast with his son's brief visits.³⁶ Although there is no evidence for Duesbury's 'connections' in the capital, the Covent Garden warehouse was sited at the hub of artistic and intellectual life.³⁷ Many of Josiah Wedgwood's scientific and artistic associates in London were known to the Derby proprietors, too; however, surviving archival evidence confirms only a customer-client relationship with such as Joseph Banks, Hamilton, or Bacon.

Of the second generation, only two of Duesbury I's four surviving children settled locally. Anne, the eldest, married the London mercer, Richard Egan, who following his bankruptcy took the china shop in Bath; Dorothea wed the vicar of Church Broughton, Charles Chawner, while William junior married the daughter of a Derby solicitor, Elizabeth Edwards. The youngest, wayward, son James, lived abroad and in London. Duesbury II at the age of twenty-one joined the newly formed Tyrian Masonic Lodge in Derby.³⁸ Of the third generation early in the next century only Duesbury III took on any active, though unsuccessful, community or civic rôle, although Nathaniel Edwards, Duesbury II's brother-in-law, had been Clerk to the Corporation Improvement Committee in 1792.³⁹

³⁵R.P. Sturgess, *Cultural Life in Derby in the late Eighteenth Century* (1968), p3, suggested wrongly that the Duesburys were non-conformists. The Unitarian Church members and social group included the Cromptons, Strutts, Foxes, Evans, and Drewrys, also in this sphere were the Darwins, Batemans, Leapers, Daniel Parker Lowe, Forester Forester and Uptons. J.Heath, 'The Borough of Derby, 1780 - 1810', *Derbyshire Miscellany*, vol 8, pt 6 (1979).

³⁶This evidence post-dates the death of Duesbury I's wife in 1780, when the second generation are already involved in the business, possibly freeing his time.

³⁷E.g A. Dawson, 'Three friends: Joseph Banks, Josiah Wedgwood and Thomas Bentley', *ECC Trans*, vol 11 (1981), p21-32. In 1773 a club of 13 met at Old Slaughter's Coffee House in St. Martin's Lane.

³⁸T.Hall, *The Centenary Celebration of the Tyrian Lodge, no.253 of the Freemasons held at the Masonic Hall, Derby, April 9, 1885*. This contains a reprint of the original membership. Duesbury II was the 41st member being initiated on June 14, 1785. This Lodge had a mix of local gentlemen, tradesmen, professionals and militia. Joseph Strutt esq, had joined in May, 1785, but prior to 1790 there were few industrialists save for Brown the marbworker, Cartwright (hosier) and Bott(cotton spinner).

³⁹Heath, *ibid*, The Derby Town Commissioners, April 24th, 1812, reported WDIII, as collector of

Apparently a more influential sphere of influence came from the small parish of Church Broughton, about 15 miles east of Derby near the Derbyshire-Staffordshire boundary. This village in the 1770s is known to have provided both the London warehouse managers, Wood and Lygo, and in 1786 a husband for Dorothea, the Rev. Charles Chawner. More intriguingly, but beyond the scope of this current work, recorded in the parish registers are the family names associated with Duesbury I's early business: for example, the Raggs and Stubbs, owners of the London property leases; or Fisher, Bakewell and Keeling, the three carrier families. Other names associated with the Duesbury II's financial dealings, not as customers, are also to be found among the Church Broughton parish records: Agard, Marshall, Shaw and Harrison. Although many of these names appear as common, they are far less so in the central Derby St Alkmund's records. It was this close circle of relationships that Crouzet suggests was the likely source of personal financial backing.⁴⁰

Scientific influences

Membership lists of the Derby Philosophical Society and its library loan records indicate that it was the dissenter group that formed the nucleus of the resident members, although these were outnumbered by various gentlemen, doctors and clerics from Derbyshire and the neighbouring counties.⁴¹ The name 'Mr Duesbury', presumably junior, was added by hand to the original 1785 printed membership list, but there is no record of either father or son attending meetings, nor did they borrow from the extensive circulating library. Dr Haden, Duesbury II's physician and friend, regularly used this facility, as did the Rev. Coke of Brook Hill, whose son John later founded the Pinxton china works. Ralph Wedgwood, the potter-inventor, and one of the Etruria Wedgwoods were also members.⁴² 'The Derby philosophers seem to have been more interested in chemistry than in the mechanical sciences', and although never as distinguished as the Lunar or Manchester Literary and Philosophical Societies, the Derby Philosophical Society did nurture the spirit of enquiry that became such an important part of England's industrial superiority.⁴³ Duesbury II's

rates, had failed to collect three years rates, and had become insolvent.

⁴⁰F.Crouzet, 'Capital formation in the Industrial Revolution: editor's introduction', in J.Hoppit and E.A.Wrigley, eds. *Industrial Revolution in Britain*, vol 2 (1994), pp117-148.

⁴¹DLS. Derby Philosophical Society Membership and circulating library: BA106 MSS/9230. Meetings (ledger B, 1787-89) MSS 9229. In 1791 out of 37 members only 13 were residents in the town.

⁴²E. Robinson, 'The Derby Philosophical Society', in A.E.Musson and E. Robinson, eds, *Science and Technology in the Industrial Revolution* (1969), p190-199. Robinson suggests Josiah Wedgwood was a member, the society records are more ambiguous and read 'Ja^o. Wedgwood esq. Etruria'

⁴³ibid, p195

apparent lack of interest in the society is surprising, for he clearly applied a range of scientific interests to the manufacture of porcelain. Even if the young ceramicist was reticent about social situations, it is hard to believe he would not have been impressed by the wide variety of scientific and artistic periodicals, treatises and books that could be loaned for 2d per day. Many publications were medical, but scientific works such as Keir's *Dictionary of Chemistry*, Watson's *Chemical Essays*, Hutton's geological works, or Kirwan's *Mineralogy* would have been of considerable interest, as would access to current transactions of English, Scottish, American and French learned societies for arts and sciences. The library also contained illustrated material highly suitable for transfer into porcelain designs, for example botany publications by Linneaus or Curtis, *Quadropeds*, or Pilkington's *Views of Derbyshire*. Duesbury helped the society to obtain works, including one from the continent.⁴⁴ He did however borrow books from, and apparently attended meetings of, the 'Friendly Book Society'.⁴⁵

However the Duesbury manuscripts indicate that the china works proprietor after 1789 purchased his own copies of some of Watson's, Nicholson's and Keir's chemical works.⁴⁶ Price's *Mineralogy* was included in Duesbury II's estate.⁴⁷ Duesbury appears to have been particularly anxious to find references to kaolin, and Lygo was able to use his publishing contacts to suggest likely new sources. Early in 1795 he had asked Lygo to obtain the *Dictionary of Chemistry*, in fact 'not yet published for two weeks'.⁴⁸ In 1795 the purchase of 15 volumes of the *Encyclopaedia Britannica*, presumably the second edition, was under consideration at one guinea each, or the commitment to a 300-plus part edition, at 6d per copy, of an *English Enclopedia* of which only the first four parts 'A' were available. One of the most protracted and significant transactions involved the acquisition of Count de Milly's treatise on porcelain making, originally published in Paris in 1771. At first his friend De Basse seems to have placed an order 'behind enemy lines' for this work, only to discover seven months later that it was unavailable; but it had effectively been incorporated into a larger set on the French arts and sciences

⁴⁴ Mr. De Basse provided Duesbury with books from France, that were passed onto the society secretary Mr. Roe, possibly including Diderot's encyclopedia, 1789-94 (DLS.Derby Phil.Soc. MSS9229; DL82 14/78).

⁴⁵ BM.BP.f1362 Friendly Book Society book hire at 2d per day included 'Gilpin's Forest Scenery, two volumes 'Impartial History of France', two volumes 'Lavaters Phiscognomy'(sic), 'De La Crox', April 4, 1795.

⁴⁶ Lygo, July 23, 1789 sent '2 volumes Watsons Chemistry, 8s' to Derby, while a bill from Drewry the Derby bookseller for April 1791 records 'binding Kerr's [and] Nicholson's Chemistry'. Nicholson must have been 'The first Principles of Chemistry', 1790; also bill for binding Watson's Chemical Essays BM.BP.vol 4 & 5, Oct. 12th, 1793.

⁴⁷ BM.BP.f 118

⁴⁸ Lygo, Jan 22, 1795, presumably Nicholson's.

covering the years 1771-83. The nineteen volumes could be purchased for 10 guineas, though could initially be borrowed for two weeks for 'Mr Roe and the Society', and translated. Nearly two years later the set was actually purchased through Duesbury's accounts, and subsequently may have been passed on to Mr Roe and the Derby Philosophical Society.⁴⁹ Roe provided Duesbury with suggestions as to where he might find a pantograph, while the philosophers were to be asked to look-out for a *camera obscura* for Duesbury's own use.⁵⁰

Duesbury's papers demonstrate that he was more than a mere reader of scientific works, and applied science in manufacture: specific references can be found.⁵¹ There are also notes and sketches related to geological formations and possibly sources of raw material. One is annotated: 'system of mineralogy formed chiefly with plan of ... Crowstedt'.⁵² Other drawings record Duesbury II's work on pyrometers. The factory's use of artistic source-material to create sculptural pieces, painted miniatures on tablewares and so on has long been one of the more widely researched aspects of the Duesbury's use of reference material. Much is in the category of 'fine or popular art', and has been introduced in Chapter 6, but nevertheless this did include subjects that would have appealed to the philosophers, too, such as natural and industrial landscapes, and illustrations in Curtis's and Sowerby's botanical magazines.⁵³ Contrary to popular belief, there is no evidence that Joseph Wright provided direct artistic guidance to the factory; this seems to have come directly from London, although the painter made a small portrait of Sarah Duesbury. Neither is there any indication that the Derby architect Joseph Pickford, who designed Wedgwood's Etruria, learnt or carried over his expertise in ceramic factory design at Duesbury's china works, nor of any specialised work provided by John Whitehurst.⁵⁴

⁴⁹Lygo, Sept 11 and 15, 1794, April 21, 1795; 'De Boffe's books in box' July 1, 1795, paid for by Lygo June 29 (BM vol 4).

⁵⁰DL82 8/250 Roe to WD undated, 'perhaps Mr Smedley of Chaddesdon might have a pentograph'; DL82 8/27.

⁵¹E.g. undated WD note related to the manufacture of gold balances is annotated 'Phil. Trans. vol 66, p509'. Also BM.BP.f387-8 re. description of kaolin in Scotland annotated 'p15. vol 2. Jn[?] Williams 'Nat. His (of) the Min. Kingdom', and quotes passage.

⁵²On reverse of Lygo, Dec. 15th, 1792 stratification sketch of marl and sand; and May 19, 1795 in pencil note 'White sand at Franent 6/7 miles fr Addington, 11 miles fr Edinburgh, 2 miles fr Morrison's [?] Avon'; and DL 82 13/83 on reverse letter WD to Edwards, 1795 'system of mineralogy.'

⁵³'Curtis's Botanical Magazine no 1-51' were at the binders in April 1791, while July 5th 1792 a further 19 copies had been borrowed for the artists to copy, with more in September; Sowerby's Magazine had been similarly acquired by Oct. 7, 1795.

⁵⁴M. Craven, *ibid*, p112, hints that Joseph Pickford, the Derby architect of Etruria, may have been involved in designing elements of the porcelain factory; JW, April 9, 1769, in A. Finer and G. Savage, *Selected Letters of Josiah Wedgwood*, p73, recalls Whitehurst's connection to Wedgwood having designed the potter a slip kiln. While plate 10, *ibid*, illustrates an undated Whitehurst time-recorder from Etruria.

Chapter 10. Raw materials and their acquisition

The ingredients of eighteenth-century British porcelain

Evidence as to exactly where mid-eighteenth century English porcelain manufacturers obtained their recipes, and what ingredients they used, is limited. Continental workers brought their expertise, but at the very least this had to be adapted to British raw materials. The experimental ceramicists appear to have turned to the basic principles of porcelain production notably recorded in two influential eighteenth-century works by Du Halde and the Comte de Milly. Du Halde published eyewitness accounts of Chinese porcelain production, and an English version was available from 1738. This work gave invaluable descriptions of kaolin and petunse, and the manufacture and firing of 'true' or hard-paste porcelain; it was quickly disseminated and became familiar to such as William Cookworthy, John Wedgwood and the American, Andrew Duche.¹ A copy of Du Halde's work was in the library of Radbourne Hall in south Derbyshire.² De Milly's own *Treatise on Porcelain*, printed in Paris in 1771, included references to the French scientist Reamur's earlier experimentation with glass-like materials, ignoring argillaceous clays, to produce a false porcelain. It also included descriptions of Meissen and Sèvres, wood-fired kilns, and the newly discovered hard-paste clays. Josiah Wedgwood and William Duesbury II are known to have referred to de Milly's work.³

Experimentation during the 1740s had created three principal types of soft-paste porcelains in Britain: the 'glassy frit' ones similar to the French 'pâte tendre'; 'soapstone', using a 'soapy rock' or talc from the Lizard Peninsula; and the 'phosphatic', characterised by the presence of calcium phosphate derived from bone ash. Cookworthy's persistence in following the lines of true porcelain resulted in its commercial production at Bristol and Plymouth from the later 1760s, using china clay and china stone from Cornwall, and compositions comparable with those from Jinghetzen. Cookworthy and his partner Richard Champion effectively restricted by patent the rest of the porcelain industry's large-scale use of these materials until

¹ P.Housley, 'Derbyshire raw materials and their possible relationship to the manufacture of porcelain at Derby', *ECC.Trans*, vol XIV,pt2(1991),pp126-43; KUL.Wedg.Acc.L108-20422/22a 'J.W.notes & Expts', 1775, includes 'Du Halde, expts. of the Artificial crystallisation of Alabaster, Soapstone etc'

² JW to E.Darwin, July 1789,in K.E.Farrer,ed, *Correspondence of Josiah Wedgwood* (1903-6), vol 3, p89. Darwin had briefly lived at Radbourne Hall following his marriage; the Duesburys had various contacts with extended Pole family from Radbourne.

³ G.Elliot, 'Wedgwood and De Milly Compared', *ECC Trans*, vol.16,pt 2(1997),pp226-233, and Lygo, Sept.15,1794 mentions encyclopaedia set containing De Milly's work, these were purchased June 29,1795 (BM.BP. vol 4).

1796. At the beginning of the nineteenth century bone china, popularised by Spode, became the predominant British porcelain body, incorporating 40-50% bone ash, with the remaining composition largely of china clay and stone. Feldspar conspicuously replaced the china stone in the 1820s. The bone china formulae significantly allowed earthenware producers to process porcelain for the first time alongside their pottery. Bone china variants have remained in use for the last 200 years.

The analysis and content of eighteenth-century British porcelain

Table 2. Constituents of Derby Porcelain c.1750-1840

% by weight	Derby 1750-70	Derby post 1770	Derby c1764	Derby c1837
	Glassy/frit	Phosphatic	Soapstone#	Bone China
quartz	30-55	31-39	30	21.6
Flint glass frit	34-56		20	
Crown glass			15	
kaolinite	6-10	21-24		34.3
calcite (up to)	17	1-6		3.5
bone ash	0-6	31-43		40.5
gypsum	0-1			
'hard/soft soapy rock'			30	
'Soap'clay contaminants			5	

#From Holdship's 1764 recipe in Binns, R.W. 'A Century of Potting in the City of Worcester', 1877.

Various methods of scientific analysis of English porcelain have assisted the study of production and development in the eighteenth-century industry, helping to explain the range of raw materials used by British porcelain manufacturers, and, importantly, how the materials reacted with each other when subjected to temperatures exceeding 1000°C. Until the work of Owen and Barkla, Derby remained the most important group of eighteenth-century British porcelains that lacked analysis.⁴ This work, combined with that of Tite and Bimson,⁵ allows the rudimentary composition of the

⁴ J.V.Owen and R.Barkla, 'Compositional characteristics of 18th-century Derby Porcelains: recipe changes, phase transformations and melt fertility', *Journal of Archaeological Science*, vol 24,(1997),pp127-40. Only 13 samples of excavated sherds were tested, judged on style to date c1750-1840. These sherds were wasters, perhaps experimental pieces, and may not be typical of successful production.
⁵M.S.Tite and M.Bimson, 'A technological study of English porcelains', *Archaeometry*, vol 33, pt1, (Feb.1991), p3-28. Items tested were effectively factory 'first' quality.

three main phases of eighteenth-century soft-paste, and bone china Derby porcelain to be differentiated.

Unfortunately, the scientific approach appears to create undisputed 'facts'. For example, Tite and Bimson wrote:

The manufacture of glassy paste had begun at Chelsea by 1745, continued there until 1758, at Derby until 1764 and at Longton Hall to 1760 and, subsequently, by the same potter, at West Pans until 1767. Glassy porcelains had a relatively short life in England because, though beautiful, they were difficult to fire without considerable wastage.⁶

There is no suggestion that factories may have created and used a variety of bodies simultaneously, nor that change might be gradual. Even contemporary comment from de la Rochefoucauld in 1784 suggests that some form of 'glassy' body had persisted post-1764, when he criticised Derby porcelain as being 'a little too vitrified'. The reliance on the scientific approach does not give the early porcelain makers credit for increasing mastery and confidence in their use of raw materials, which is the subject of the following chapter. Observation and handling of porcelains from Derby thus indicate that there were more subtle innovations in eighteenth-century production than the introduction of the three main soft-pastes. The Planché pieces of c. 1750-6 display remarkable dynamic modelling, indicating some considerable control of the body, glaze and firing conditions at the earliest factory. However, similar types of figure are moulded both in slip and wedged clays, suggesting a period of experimentation and refinement of moulding techniques. The high proportion of known white porcelain may reflect a preference for 'blanc de chine' type wares, but may also indicate Planché's limited awareness of enamelling and gilding skills. Usually assigned to the years immediately following Planché's departure there is an obvious visual deterioration in quality: cruder modelling, and smaller pieces, for example, but this is balanced by a far greater number, and range, of surviving later 1750s to early 1760s style wares. In itself this may point to a shift to larger-scale production, and the transference and 'relearning' of skills and methods to suit a more commercial enterprise. Derby pieces of the later 1760s, alongside utilitarian soapstone wares, show an increasing maturity of production,

⁶ Tite and Bimson, *ibid*, p3; Owen and Barkla, *ibid*, suggest that this was not necessarily a problem with glassy Derby compared with contemporary Longton Hall, with a small ratio of flint glass to calcite, or Bow with a smaller percentage of clay to calcite.

with, for example, the use of gilt, strong colour and bold patterns, combined with larger moulded figures and tablewares.

It is not known from where the first Derby recipes derive: Planché may well have had some connection with the soft-paste Vincennes factory in France; nor is it obvious that the body changed significantly after Duesbury's arrival from Longton Hall c. 1756. However the potential instability of glassy porcelains would have been most noticeable in thinly potted items, like tea- or tablewares, and may have proved less suited to the production of utilitarian wares, as heralded by the intention of Heath and Duesbury in 1762 'to deall in the Blue & White way pretty Largely'.⁷

Duesbury's 1764 agreement with Holdship related to the provision of a soapstone body, combined with the introduction of transfer-printing, suggests the Derby management wished to expand along commercial, 'middling' lines. Soapstone would have created a more utilitarian body, capable of withstanding hot liquids; but although the compositional analysts assert that it completely took over from the frit paste, comparatively few pieces are known today.⁸ The 'blue and white' and transfer-print production was closely associated with the Cockpit Hill Pot Works, under John Heath's aegis, sharing Holdship's engravings and, as suggested by archaeological evidence, moulds too. Attributed pieces of 1760s Derby 'blue and white' or soapstone porcelain wares display considerable variation and some unattractive qualities, for example in the running and inconsistent depth of blue colouration, and a bluey-grey body. In the early 1780s Duesbury I again made trials of Cornish soapstone.⁹

Duesbury's purchase of the Chelsea factory in 1770, and acquisition of a phosphatic recipe, may reflect a dissatisfaction with the soapstone wares, and a positive move to go up-market. Bone-ash bodies had also been in use for some years previously at Bow, Liverpool and Lowestoft. The presence of bone ash would have allowed for easier creation of larger, more ambitious pieces by extending the temperature range of firing before distortion occurred. The addition of more kaolin to the composition would have sacrificed the translucent property of the body, although this visual quality could have been restored by increasing the silica content of the melt. This in

⁷J. Turnbull, 'Scottish cobalt and Nicholas Crisp', *ECC Trans.* vol 16, pt 2 (1997), pp144- 51.

⁸In the later 1970s quantities of 'blue and white' utilitarian pieces were assigned to Derby, some of which have recently been re-attributed to the Thames pottery at Isleworth. R.Howard, 'Isleworth Pottery, recognition at last?', *ECC Trans.*, vol 16, pt 2 (1997), pp345-68.

⁹B.Hobbs, 'New perspectives on soapstone', *ECC Trans.*, vol 15, pt 3 (1995), pp368-392. At Predannock Wollas, Oct.1781 to June1782, Duesbury was searching and making a trial of the 'soapy rock'. No obvious soapstone Derby porcelain, akin to Worcester, has been recognised in the factory's style of the 1780s, but Wedgwood also tested its fusible properties while making his Jasper body, c. 1775.

turn would have led to technological problems and increased susceptibility to sagging if high firing temperatures were poorly controlled.

A wider range of bodies and glazes were developed at Derby from the 1770s than scientific analysis has indicated. Derby and Chelsea clays continued in use some time after Duesbury purchased the Chelsea factory, perhaps reflecting useful or ornamental bodies. In April 1770 the Chelsea works created '24 strawberry comports made with the Derby clay', and plates and comports;¹⁰ while in December '1 ton of Chelsea clay and 2 tons of fine clay' were shipped to the Irongate wharf, with bone ash.¹¹

Significantly the Duesburys' porcelain wares were successfully adapted to new recipes, using all three categories of soft-paste, while many other works never more than experimented, or failed to develop. China manufacturing at Worcester, although under a variety of owners, continued with a soapstone body for over half a century, and until the change to bone china. The Duesburys could also have continued to utilise one or two of their early pastes, yet consciously chose to alter their recipes. Why? There was little English competition post-1770, and it was not until the lapse of Cookworthy and Champion's patent for 'Cornish Stone and Clay' in 1796 that the ceramic industry as a whole commenced experimentation, and the exploitation of bone china.

The sourcing of raw materials

Clay

Clay was relatively unimportant in the manufacture of porcelain during the early period when the Derby factory was being commercially established, with far greater proportions of quartz, flint glass and calcite being used. Even after 1770 china clay was only of third importance by volume after quartz and bone ash. However clay was also used in association with the firing of porcelain, in the manufacture of saggars, kiln construction and various kiln furniture for supporting wares, and in at least some of the original models from which plaster of Paris moulds could be made. What volume of clay would the Derby works need for the manufacture of fine porcelain and saggars?

¹⁰DL82 9/93-4.

¹¹DL82 9/34.

The only reference to quantity relates to Kean's 1818 estimates of the factory's needs c. 1798-1810, when he recorded that 140 tons of clay per year were used. But this tonnage relates to the period of creamware, and even bone china production, when far greater proportions of clay were used. Billingsley's first orders for clay at Pinxton in 1796 make a useful comparison: these included seven tons of 'imported' clay coming from Gainsborough, which probably represents china clay or stone, and 59 tons of local clay from Buckland Hollow, presumably used to make saggars. It is difficult to judge the Derby factory's clay requirements relative to Pinxton, for the former made heavier ornamental wares and large table wares alongside the teawares that would be most comparable to Billingsley's output. The Derby factory relied on quality rather than quantity; a 'guesstimate' of the Duesburys' post-1770 yearly requirements would be in the order of 15-20 tons of white-firing clay, and 90-120 tons of local saggar clays - total figures not vastly contradictory to Kean's New Works' requirements.

A number of invoices of the early 1770s record Duesbury's acquisition of pipe, coarse and fine clays for the Chelsea works.¹² These were shipped from London to Chelsea in one to two ton quantities, and similarly at least some fine clay was sent to Derby. The carriage from London was charged at 5s. for two tons to Chelsea, and £2.7s.0d to Derby.¹³

Although weekly Derby factory accounts covering a 25-month period from late 1781 to early 1784 record all transactions including purchase and carriage for factory materials, references to clay provision or its transport are absent.¹⁴ Only a single non-London payment for clay has been found in the Duesbury accounts.¹⁵ Yet Derbyshire and its immediate neighbouring counties were particularly well endowed with a variety of ceramic clays. Since the 1690s the coal measures in East and North Derbyshire had provided suitable stoneware clays for saltglazing; but the pale buff compositions, associated with the Brampton and Denby stoneware potteries, did not become widely used until the 1820s.¹⁶ However the Derby Pot Works produced cream earthenwares and white stonewares from about 1750, and along with the porcelain, both manufactories needed clays that fired white, but there is no documentary evidence from factory accounts to indicate from where this came pre-1790.

¹²DL82 9/12 Oct.9,1770, and 9/20 May 17,1770.Clay supplied by Edward Bryer. Messrs.Booth also supplied and shipped clay to Chelsea, 9/34 Dec11,1770,and 9/43 May 3, 1771

¹³DL82 9/98 Dec.1770 , and 9/14 March 28, 1770 shipping costs of Wm. Johnson.

¹⁴DL82 7/9 a. Nov.1781-March 1783, b. March 1783-Feb 21 1784, c. 1781-86.

¹⁵BM.BP.f501. Sept 23rd 1788. Jos.Wainwright paid 'on account of clay £7', and £5.13s.carriage.

¹⁶A.Oswald, R.J.C.Hilliard,and R.G.Hughes, *English Brown Stoneware* (1982), p152.

It has been supposed that the Derby factory obtained suitable white clays from within the county, notably from the lead mines around Brassington. Duesbury I and both Heath brothers, before their bankruptcy, owned interests in lead mines in Derbyshire. Duesbury paid the appropriate dues to work the 'Sucstone' lead mine near Brassington in 1776, for which he was still paying in 1782.¹⁷

White kaolinitic clays or 'halloysites', known today as the 'Brassington Formation', are indeed associated with lead mines of Derbyshire and Staffordshire. Robert Dossie, writing in 1758, recorded that he had seen kaolin in some Derbyshire lead mines, but within thirty years Pilkington wrote of 'porcelain of a most delicate white colour, and a very fine texture from a lead mine near Brassington. Some years ago a small quantity was used in the porcelain works at Derby. What is gotten at present is sent to the potteries in Staffordshire.'¹⁸

While it is difficult to substantiate the Derby factory's commercial use of Brassington clays, it is known from contemporary ceramic sources of the 1770s that these clays were being exploited to manufacture porcelain at Wirksworth, and were the subject of experimentation by Turner of the Salopian works. The cost of raising this kaolinite was said to be £10 per ton. However, Housley has argued that Duesbury might have used the rather antiquated lead mining laws to his advantage: by paying for the rights to mine the lead, he gained access to the waste or 'gangue' materials that were mining by-products including clay, calcite and baryte. In the Brassington Liberty the ownership of these lesser mineral rights had been leased since 1690 by the Duchy of Cornwall to the Dukes of Devonshire. It is conceivable that the Cavendish family granted Heath and Duesbury the use of such materials as a form of patronage, but this cannot be confirmed.

Realistically, the small workable volumes and cost of kaolinite deposits from the Brassington Formation, plus carriage, may have limited its use at Derby. Furthermore Duesbury may have found that the use of clays associated with lead mining was unpredictable, as recorded by Wedgwood. Recent compositional analyses also indicate that Derbyshire halloysite clays were not used commercially at the factory, the presence of titanium oxide in samples suggesting the sourcing of

¹⁷DL 82 6/63, 6/68 re Sucstone Mine, Brassington Liberty Dated Aug.28th 1776, and Oct 13 1778. DL82 7/9a. March 1 1782 'Paid Thos. Slack on Supton Mine Acc. in full £2'.

¹⁸R.Dossie, *Handmaid to the Arts* (1758), Pilkington, *View of the Present State of Derbyshire* (1789).

white clay to be Devon / Dorset ball clay.¹⁹ Imported earths from the south west seem a far more likely source of white-firing clays, even in the late 1740s.

Devon ball clays had been reaching south Derbyshire since the late seventeenth century, used for slip trailing on Ticknall coarse dark-brown or red-bodied earthenwares. Although by the mid-eighteenth century the area had declined as a centre of production, its associated trading network for raw materials, and finished wares, continued to thrive.²⁰ Meanwhile pipe making was already established in Derby, using imported Devon clays; Benjamin Strong was working at this trade at Willow Row in 1748. This is significant, for it links with a historical tradition that it was a foreigner working in a pipe-kiln that produced the first Derby porcelain as small toys. The early fine saltglazed stoneware manufacturers in Nottingham and Crich, using east Derbyshire clay, may also have used pipe clay to lighten their bodies.²¹ Archaeological evidence from the Derby site of Cockpit Hill Pottery indicates that commercial quantities of white saltglazed stoneware (with lesser quantities of brown) and cream wares were manufactured from the early 1750s to 1779;²² while sherds suggest some collusion and pooling of resources between the early china works and Cockpit Hill pottery. There were also other established trades in Derby and its locality that would also have used white clays - druggists and papermakers.

Although the south west may well have been the original and primary source of Duesburys' clays, they may not have been acquired directly. There is no reference to Hyde in the Duesbury papers. In the early 1770s Duesbury was being supplied with fine clays by the London dealer who had supplied the Chelsea works. Intriguingly, a batch of turnpike receipts has survived dated 1785-9 recording the transport of clay by Paul Fisher to Duesbury via Chester.²³ Chester had itself become an early pipe-making centre using clays from the south west in the 1690s, and its port had an established clay trade. Following the opening of the River Weaver Navigation in 1733, white firing ball-clays had entered North Staffordshire from this route with ease. Holdship's soapstone from the Lizard may have come to Derby from the mid-

¹⁹Owen & Barkla, *ibid*, p134.

²⁰Unpublished research by J.Spavold and S.Brown, shows the importance of Ticknall families in associated non-manufacturing trades in the eighteenth century; the Hyde family was transporting clay from Poole to Wedgwood in 1771(KUL.Wedg.Acc E49-29841), at least until 1790.

²¹A.Oswald, R.J.C.Hildyard and R.G.Hughes, *ibid*, p106, footnote 13, quotes a reference dated 1712

²²R.G.Hughes and A.Oswald, 'Nottingham and Derbyshire stoneware', *ECC Trans*, vol 9, pt2 (1974), p173

²³DL82 12/7 a,b,d-r. 17 Chester Turnpike Machine receipt slips dated April 1785 - Aug. 1789, bearing the names Paul Fisher and Mr.Duesbury. These are pre-printed, however the word 'coal' has been crossed out on eleven slips and 'clay' added by hand. Carriage of between 1.5 to 2.5 tons of clay are recorded. 5 slips are dated 1788 (May-Nov.), while 7 are for first 8 months of 1789.

1760s, also using this route. Fisher, better known in the Duesbury papers as a haulier of broken glass, was also credited for eleven unspecified services in 1782-3, possibly some of these being earlier deliveries of clay from Chester.²⁴ The turnpike receipts suggest that Duesbury's consumption of Cornish clays had begun to increase considerably by the summer of 1789. In August 1789 Duesbury purchased clay direct from Carthew in Cornwall.²⁵ However Carthew then encountered problems shipping clay direct to Hull because he had 'little or no connections with port', and was forced to suggest goods were delivered to London.

Lygo's London letters from 1785 also record a number of boxes and casks of different clays being sent north as trials, or for a specialist use like Vauxhall modelling clay. From the autumn of 1790, when Duesbury's preoccupation with experimentation in Derby begins, more references to trial clays include mention of 'Stourbridge, Salisbury, Notts.', Wedgwood's Cornish clay and Stone, and samples from private individuals like Lord Dunmore.

Although never producing commercial porcelain himself, Josiah Wedgwood continued to investigate suitable clays too, including samples from America, France and Germany. However, despite this rich potential source of imported porcelain clays, he was confident 'our own Materials when properly used will make so fine a porcelain that I do not think it worth to seek farther'.²⁶ In 1795 the Wedgwood company must have been anticipating the expiry of Champion's lease patent and had forwarded some of their Cornish clay and stone to Derby for Duesbury to try. Even Mrs Duesbury's personal letters from holiday in Cornwall record something of the activity in the local clay industry at this time, as Mr Beard, Lord Camelford's steward, offered clay samples.²⁷

By the spring of 1791, Duesbury's interests had spread to French kaolin and petunse from Grelle and Sons of Limoges, and through his brother-in-law he obtained costs of 'pâtes et couvertes' and 'kaolin brut', along with details of mixing and shipping arrangements through Bordeaux.²⁸ A year later the Derby ceramicist was requesting

²⁴DL82 7/9a,b.

²⁵DLS Jno.Carthew, St.Austell, to WD Aug,1788. The Carthews were also shipping clay for Wedgwood from the Trethewy's estate in 1786-90, (KUL.Wedg.Acc.L32-5369-75, 6441). In 1775 Trethewy had allowed Wedgwood and Turner to take clay and stone from Gonamaroos, St.Stephens (KUL.Wedg.Acc.E49- 29843). The production overheads of these clays are said to be smaller than the 1770 Cookworthy-Champion lease for the Carloggas China Clay Pit owned by Pitt (Lord Camelford), which contained a restrictive penalty.

²⁶JW letter to Sir John Dalrymple, Oct 20,1789 , Farrer,ibid,vol 3,p104.

²⁷DL82 8/46 ?Dec.1795.

²⁸DL82 21/19. 1791 April 8 letter to Egan, King St., from Grelle & Sons, Limoges.

information about Christopher Potter, an Englishman, who had set up a button manufactory in France, using clay ready-prepared in Paris, and was soon to purchase the Chantilly factory making hard-paste porcelain. A friend was enlisted early in 1793 to dine with Potter to obtain further details of his manufacturing, for Potter 'keeps no secrets'.²⁹ Duesbury II was to have visited France himself in the summer of 1792, accompanied by Vulliamy, but illness and subsequent political upheaval prevented Duesbury ever making such a journey. Vulliamy however was requested to supply 'as large a bitt as can be procured of the Body of all the Manufactories you visit', along with treatises on colour making.³⁰ There is no evidence that Duesbury imported kaolin from France. Duesbury II's letter to Vulliamy also refers to Neopolitan clay trials carried out by both generations of ceramicists. As usual, distant sources increased the chances of irregular supply and the costs of transport. However Duesbury II might well have tried a Scottish source. An undated document describes Chinese porcelain ingredients, with an account of the presence of kaolin in Scotland,³¹ while in March 1794 a box with a piece of stone and clay left as a trial was sent to Derby by an unnamed 'Scotch gentleman'.³²

Although the source of finest white clays and china stone may well have been non-local, it is still remarkable that so little direct evidence survives about its acquisition, or that of 'lesser' clays for the manufacture of saggars or kiln furniture, and Kean's brief production of earthenware. Jewitt states that 'the Denby clay was also supplied to the Derby China Works in considerable quantities, where it was used for saggars, and for a few other articles which were produced'.³³ Although these extensive beds of clay had been known for some years, their commercial working seems to relate to the Bourne family's expansion of their stoneware enterprises, and the canal improvements at the turn of the century. Arthur Young, writing in 1793, commented on clay coming to Derby from the Denby coalfields.

Two factors appear to be associated with the exploitation of much of the local clay, namely agricultural enclosure and the working of the coal and iron fields. Although the Duke of Devonshire or Lord Rawdon may have provided patronage in such form, little evidence can be found relating local landowners to the early provision of such raw materials.³⁴

²⁹Lygo, 1792 April 3, re. Potter making buttons in France, where all the Parisian clay was ready-prepared ; DL82 8/226 Mr Roe to WD Jan 16, 1793.

³⁰Letter in Minton Archives, see J. Twitchett, 'William Duesbury II', *DPIS Journal*.2 (1991), pp57-62.

³¹BM.BP. f387-8.

³²Similarly Scottish landlords sent trials to Wedgwood: Sir George Stewart McKenzie (1799-1817) including feldspar from near Inverness, and clays from Richard Forester French, Edinburgh (1792).

³³L. Jewitt, *The Ceramic Art of Great Britain*, (1878), p357.

³⁴Thomas Fisher, manager of the Harpur's Calke estate was selling: 'limestone, cord, lead, coalwood',

Kean's initial involvement with Dewes and the Ashby Wold works c. 1796-8 may not have been solely related to his desire to diversify into the manufacture of creamware, but a reactive step in his, and Duesbury II's, search for a new source of clays. Kean recorded: 'when we were deprived getting clay from the estates of Lord Moira and Sir N. Gresley Mr. Dewes was I believe the only proprietor to whom we could apply'.³⁵ Presumably this had been the Duesburys' previous local source for clays, which had been denied to them as Gresley had established his own china works in 1794. Although Gresley 'employed the very best men he could obtain [including the Derby modeller Coffee]... the china always came out of the ovens cracked and crazed'.³⁶

Kean went on to compare the Ashby Wolds clay with that from Stourbridge, specifically the savings made as a result of obtaining such clay relatively locally. This amounted to £2,688 on 140 tons per year over 12 years. Both these deposits are amongst a rare British group of high-refractory clays whose thermal characteristics are close to china clay, and which fire extra white in colour. A third example can be found in the Bovey Basin of south Devon. The Kean-Dewes partnership appears to have already established an agreement in December 1797 with a 'Mr Coke' concerning the New Works. A John Coke, 'Derby coal dealer' was also Kean's neighbour in Calver Close in 1797-1801. This may well have been the John Coke who had commenced porcelain manufacture at Pinxton the previous year, for the family owned a local colliery. Coke the coal merchant reassigned his Calver Close plot to Kean in mid-1801,³⁷ which would coincide with Coke of Pinxton's own financial problems. The agreement may have related to the provision of coal to Ashby, and / or clay to Pinxton. The Kean-Dewes partnership also set up a pottery at Ashby Wolds, possibly making crucibles.³⁸ A further source of clay had been used in early 1796, and again by 1811, for the factory owed money for 'Moorhouse Clay';³⁹ during the summer of 1782 'Messrs Charles and Jno. Morehouse' had been paid £7.10s. in full for unspecified goods, presumably clay, but of unknown provenance.

1748-50. DCRO.D2375/761/121.

³⁵BM.BP.f 1381-2. Kean memo dated April 21, 1818.

³⁶Jewitt, *ibid*, p375. Wedgwood may have helped fund Sir Nigel's venture, (KUL.Wedg.Acc. E31-24102/3)

³⁷DCRO Liversage Charible Trust D1955/2/148-9.

³⁸ BM.BP.f2036. June 15 1807 'Expences of sale of crucibles - £4. 9s.4d.' annotated by the receiver 'was this not on the AW [Ashby Wolds]accounts?'.

³⁹DL82 b7/9a June 4, 1782.re. Messrs. Morehouse's draft in full. BM.BP.f2101 1796 Feb.17, 'Moorehouse Clay at Xmas £22.16s', also f2129 for £11.15s., c.1811.

Whiter cites Derby as being amongst a number of ceramic works competing for the rights to lease the clay setts on Lord Camelford's land on Carloggas Moor in Cornwall in 1799.⁴⁰ Spode and Wolfe successfully obtained the lease, with Wedgwood, Derby and the sitting tenants, New Hall, failing in their bids. The Carloggas pit yielded 300 tons of china clay and 1,200 tons of china stone annually, the £900 lease thus allowing clay production at £2 per ton, and stone at 2s. per ton. By 1816 this was insufficient to meet the potters' actual needs, but had Kean been successful in his bid, presumably output of porcelain and earthenwares at the New Works would have grown considerably.

'By 1817 clay and granite used at the Derby works were bought from Cornwall',⁴¹ a debt six years earlier from the Hendra Co. for £7.10s.0d would tend to confirm this. Unfortunately no records survive relating to acquisition of raw materials from the Bloor period. Only a single sherd of this later phase of Derby porcelain production has been analysed, confirming the use of a bone china body c. 1837. A notebook, dated to the 1830s and containing John Hancock's recipes, refers to the use of Cornish clay and stone.⁴² One body recipe includes 'best blue clay', a plastic ball clay that made compositions more workable; unfortunately, as reported by Abner Wedgwood, it was 'very apt to turn brown in bone china bodies'.⁴³ By about 1810 the Derby porcelain itself exhibits a change in its appearance, presumably reflecting a change to the popularly adopted bone china recipe, but it also heralds an inconsistency in standards. Crazed glaze and body discolouration are an unfortunate feature of Bloor porcelain.

Lead and glass

These ingredients provide a flux; the lead oxide lowering the melting point. Flint or lead glass and / or crown soda glass was added to the porcelain body to provide extra vitrified melt. The Chelsea works in 1751 used a recipe that incorporated 10lbs of 'flint glass that is rock crystal from London crystal works' and 15 lbs of lime derived from calcined flint.⁴⁴ A ready supply of glass would have been available from the capital's numerous glass houses. Composition analysis of Derby porcelain shows that

⁴⁰L. Whiter, *Spode* (1989 edition), p34.

⁴¹ Lyson's *Derbyshire* published 1817, quoted in Twitchett, *ibid* (1980), p62.

⁴²F. Barret and A. Thorpe, *Derby Porcelain* (1971), pp121-23. Recently acquired by Derby Museum.

⁴³R. Haggard, 'Abner Wedgwood's Recipe Book', *NCS Journal*, vol 1, (1972-3), p26.

⁴⁴ B. Dragesco, *English Ceramics in French Archives: the writings of Jean Hellot, the adventures of Jacques Lois Brollet and the identification of the 'Girl-in-a-swing' factory* (1993), p6: '4 Oct. 1751. Mr. Wouters recipe took Chelsea receipt to Sèvres'.

cullet was added to both pre-1770 recipes, but factory accounts of the early 1780s also show that regular supplies of broken glass continued to be used.⁴⁵ Similarly, in 1788 and 1797 glass had been delivered.⁴⁶ There is no evidence where the flint or soda glass came from, although within 30 miles there were numerous glass works. Tutbury on the Staffordshire-Derbyshire border was certainly making lead glass by the end of the century if not earlier, with Stourbridge beyond. Shepherdson, who also delivered glass to the Pinxton works, might have got glass from further north, for example the Catcliffe glass furnace outside Sheffield, or via the Trent and the Newcastle factories. At Whittington, Chesterfield, a John Dixon is recorded as 'glass manufacturer and coal miner'.⁴⁷ Thomas Bakewell is named in Derby trade directories towards the close of the century as glass and pot seller.⁴⁸ Broken glass was not obviously supplied through the London showroom.

Lygo did however make a single purchase of '2 lb. 3 oz. blue glass for Mr Spangler' in January 1791, costing 11s. Spangler was a modeller, recently taken on from the Tournai factory, and may have introduced a new technique to the Derby factory. The blue glass was bought a few weeks before Spangler's fine biscuit figures were being fired; these were being created for the fastidious Vulliamy. Cobalt had been previously used as a 'whitener, and the addition of blue glass may have been a more subtle and better controlled alternative. Vulliamy had previously declared a preference for figures 'from the yellow cast ... rather than those that come out of a blue cast', preferring a 'dead white to a yellow body'.⁴⁹

From 1792 Lygo began to purchase 'Dutch beads' from Phillips and Co., one of Duesbury's London suppliers and makers of colours. No contemporary reference to the term 'Dutch bead' can be found, the phrase being used today for decorative colonial trading beads, but it might be assumed to refer to enamellers' glass 'cakes'.⁵⁰ Lygo's beads were purchased from the City in quantities up to 14-20 lbs, and appear to have been large single beads, some of '2 lb sort'. They also vary in quality and

⁴⁵ DL82 7/9 a,b. Derby accounts specifically record the carriage of broken glass by Paul Fisher and Thos. Bakewell, on seven occasions, most were charged at 1-3 gs., one December load cost £5.13s. These two carriers received a further twelve payments for unknown goods.

⁴⁶ Glass/cullet supplied by Sheherdson : DL82 7/50 accounts 20 Jan to 21 June 1788., and BM.BP. f2023 , April 21, 1797 £1.13s.11d. The receiver queried 'what this [and] 7 others for?'. 'Mr. Shepperson' also supplied Pinxton with glass, Exley, *ibid*, p41.

⁴⁷ *Bailey's Western* (1783).

⁴⁸ *Universal Trade Directory* (1791).

⁴⁹ Lygo, Jan 17th, March 1st, June 23rd, 1787.

⁵⁰ R. Charleston, 'Glass "cakes" as raw material and articles of commerce', *Journal of Glass Studies*, V (1963), p54-68. Quotes a 1792 recipe book from Stevens and Williams of Stourbridge, making 'white cakes'; L. S. Dubin, *The History of Beads from 30,000 BC to the present* (1987), pp112-4. records red, blue or white beads from Holland, that entered the colonial trade system earlier in the century.

depth of shade, although strangely no mention is made of colour. The quantities supplied suggest that this material was for experimental or ornamental-body use, and not comparable with the loads of cullet added to a 'useful' body composition or glaze.

Towards the close of the century the Derby works was also purchasing quantities of broken foreign china. Some pieces may have been suitable for design inspiration, but most were sherds of hard-paste French and oriental porcelain that were recycled to become an ingredient in the East Midlands wares.⁵¹

Housley in his argument for the use of Brassington clays stresses the presence of white lead or ceruse (lead carbonate) in Derby porcelain, and even Owen and Barkla,⁵² assigning the presence of lead to the use of lead-rich flint glass, acknowledged that the addition of ceruse could not be ruled out. Both Duesburys did however purchase white lead independently from the Brassington mine from a London and a Nottingham source.⁵³ White lead was an important constituent in the decorative 'soft' Chelsea and Derby glazes, but it was also used in Chelsea-style gilding.

Silica

Flint, chert and quartz sand provided the silica, much of which melted to create the glassy matrix in high fired ceramics. Despite the growth of cream and white stone ware production Staffordshire potters in the 1760s had on occasion found flint 'the scarcest Article ever known'.⁵⁴ Flint supplies into Staffordshire by the River Weaver were very seasonal, and highly fluctuating, with yearly ten-fold variations at this period.

Silica appears to have been relatively easily available in Derbyshire, the local geology being able to provide flint, chert and sand. Bakewell chert was being used by the Yorkshire potters some time before 1782, and also formed into millstones to

⁵¹eg Day-book Feb 27th, 1790 'By Mr Blast for a hhd. of china - £1.7.0.'; Lygo, April 19, 1792: 'all broken French china that Mr. E. could procure' sent by waggon. Oriental porcelain named in 'recipes', e.g. DL82 6/7.

⁵²Owen and Barkla, *ibid*, p136.

⁵³E.g. DL82 9/37 March 6, 1771 3 guineas white lead from Fowler of Piccadilly; DL82 7/50 'white lead Wm. Barlow carriage cask fr. Nottingham..2/6-', June 1788.

⁵⁴John Baddeley of Shelton was forced to obtain 20 tons from Matlock, in L. Weatherill, *The Growth of the Pottery Industry in England, 1660-1815* (1986), p26.

grind calcined flint for the china industry.⁵⁵ Despite this abundance from late 1787 the Derby management sought their flints from new sources outside the region. Duesbury sent Lygo precise instructions relating to the hand-picking of flint nodules from chalk beds at Northfleet, and their subsequent knapping. Although the Northfleet wharves had a plentiful supply of flint for ships' ballast, it proved difficult to find empty passing ships to transport the flint north to Gainsborough as cargo. Lygo's first consignment consisted of six loads, each of 36-40 cwt. At Northfleet the flints cost 14s. per load, and were originally expected to be delivered to Gainsborough for 1s. per load, or about 6d per ton. One month later an unloaded ship had to be hired especially from London to call at Northfleet; the cost of carriage had apparently risen to 8s. per ton. Duesbury ordered more flint the following February, and again Lygo went to Northfleet to supervise the selection, now valued at 16s. per load. Lygo's day expenses were a further 14s. Again there was delay in finding a boat. At least two more similar-sized deliveries to Derby occurred that year that were billed for £6.13s.4d each.⁵⁶ At the close of 1792 and in autumn the following year, comparable quantities of flint were supplied via Lygo.

Silica could also be provided by the addition of 'gritty' clay, of the stoneware variety, but this may have added undesirable iron-staining. There are no early references to the supply of sand to the Derby factory, although this could be easily found locally; Housely suggests white sand related to the Brassington formation could have been used. However the 1777 sale of the nearby Wirksworth china works makes specific mention of imported 'Lynn Sand'. From May 1795 Duesbury sought more specific types of sand, and Lygo applied for sand samples from Maidstone, Lynn, and the Isle of White. Four months later Isle of Wight sand was to be ordered. Lynn sand is specifically named in the Hancock recipes of the Bloor period.

Bone ash

Despite being famed for their use of a phosphatic porcelain, little detail has survived on the acquisition of bone ash pre-1784 for either the Chelsea or Derby porcelain works.⁵⁷ Certainly in the mid-1780s Duesbury's regular supplier of bone ash had

⁵⁵*Victoria History of the Counties of England : Derbyshire* (1905), p364. Chert, a very pure silica, was mined from a Bakewell quarry. In the eighteenth century 400-500 tons were mined yearly, at 8s. per ton.

⁵⁶ DLS.Parcel 17x. Day-book April 24, 1789 'paid Messrs Gregory & Co. in full for flints £6.13.4', also Aug. 13, '6 loads trimmed flint'.

⁵⁷ DL82 9/4 Chelsea bill from Wm. Johnson, March 14, 1770 10 bags of bone ash from London, carriage 3s.; DLS (untraced, old ref. 998) bill 'bone ashes to Derby £4.5.6.'

been Spicer of London, but from 1788 this firm encountered problems obtaining suitable fine white bones to make into ash. Prior to that three or four deliveries appear to have been sent a year. In May 1787 a bill for £31.13s.6d 'was paid in full to Xmas': this would be equivalent to about four tons of ashes; each ton cost a further £1.3s.4d to transport from Gainsborough.

By late 1788 this supplier was providing smaller quantities as they became available, but casks went astray on the Trent, and by April the following year Duesbury was getting desperate. Lygo was forced to look for alternative suppliers, and was to take 30 or 40 buckets on trial from a man in Poplar. No one seems to have had the quality Duesbury expected, and he still took small quantities from Spicer as available, but once again some of these went astray. In October 1790 Spicer was able to offer 100 bushels or about 1½ tons of bone ash, and for a time supplies must have been forthcoming. At Christmas-time Duesbury wrote directly to Messrs Cope and Biddle in Birmingham for four tons of 'bone dust ... as free from filth of any kind ... not packed in too large sized casks for fear of bursting in carriage'. He admitted to 'make use of them in the composition of the cases in which we burn our porcelain'. A year later a saga akin to Lygo's purchase of Northfleet flints repeats itself with the London manager obliged to go to Oldfield to pick out bones. The proprietor of the Oldfield works claimed his ash, although not presently milled on the premises, would be of 'finer quality than any Mr Spicer ever made'. Lygo noted his works were twice the size of Spicer's, and therefore appeared to offer more choice. Lygo had spent half-an-hour picking out the finest bones, without sheep's trotters, to fill saddle-bags to send a trial to Derby. Unfortunately the journey seems to have discoloured them, and months later Lygo was in 'great mortification' with 'nothing as good as Xmas sample'. The ash works was itself erecting new kilns, and it was not possible for them to burn their bones white. The 'great inconvenience for want of them' continued, with Lygo trying to find further sources. One hundred bushels, or about 1½ tons, of bone ash appears to have been the suitable minimum weight required by the mid-1790s to 'make do.' Other makers were tried, with Lygo being forced to hide his identity and intended final destination of the ash at the Derby China Works; at least one delivery was addressed 'to Messrs Evans & Sons'. Slightly closer to home 'Cope & Biddle' of Birmingham also forwarded a supply of bone ash care of 'Brown and Waterall, Druggists, Derby'.

Of all the bulky raw materials procured by Lygo, bone ash seemed to be most problematic, and most easily lost. Although there is no indication that the Birmingham firm had problems supplying the Derby factory, Lygo's continued

search for bone ash in the south might suggest that the West Midlands' materials were regarded as inferior, suited to saggar making, but not for the composition of fine porcelain.

As the popularity of bone china compositions in general increased into the next century there is a greater body of evidence for ceramicists' preferences related to the type of bone used to make ash. One believed leg bones of oxen were best but on 'no account horse bones', while another potter noted 'Fish bones are best: next Sheep's Bones: and next Horse Bones'.⁵⁸ It is perhaps surprising to find that large quantities of fine quality bone ash appear to have become readily available only 20 years after Lygo was scouring the south east for bucketfuls. Unfortunately no study of the development of this trade appears to have been completed.

Other bulky materials that could easily be found locally include calcite in the form of limestone. The early 1780s factory records show payments for horseloads of Crich lime, and loads of Breedon lime carried by Richard Finney; although whiting or ready-ground chalk is known to have come from Hull. Gypsum, calcined to make plaster of Paris for moulds, could be had from nearby Chellaston.⁵⁹

Raw materials used for the decoration of Derby Porcelain

Evidence for this group of raw materials largely derives from the Lygo letters and London showroom accounts of the decade following the mid-1780s. Common factors, which differentiate them from the body and glaze ingredients already discussed, are their relatively small weight and size, frequently allowing them to be transported within the mail, or on the waggon, and their high value. Most are luxury items, and would certainly not be used by common potters in the eighteenth century.

Cobalt and smalts

Most cobalt used in Britain in the eighteenth century was imported from eastern Europe, notably Saxony. Its trade was highly protected there, with secretive labour laws, and restrictive processing limiting the quantity available for export, thus maintaining its high value. Its use was largely confined to the fine ceramic industry,

⁵⁸J. Hewitt in Haggart, *ibid*, p26.

⁵⁹*Victoria History*, *ibid*, p364. In 1789 500 of the 800 tons quarried was calcined and sent on the canal to the Staffordshire ceramic industry.

imitating fashionable oriental porcelain designs. Champion was unusual in holding a large supply at any one time, with his 1782 insurance policy covering £400-worth of cobalt.⁶⁰

In 1760 cobalt was discovered in Scotland at the Alva mine near Alloa, and trial samples were sent to leading porcelain manufacturers. Supplies are known to have been tried and used by a number of ceramicists including Nicholas Crisp, William Littler, Duesbury and the Worcester china works. It is not surprising the manufacturers were keen to obtain sources free from the vagaries of European princes, but unfortunately the Alva promotion appears to have been rather premature. The mine owners were loath to commit themselves to processing the ore themselves until they were sure of the quantity of the cobalt veins. The Worcester firm asked for more cobalt, and the Alva managers confided that they had 'this day putt up 34lbs 3oz of Zaffre ... of a Quality rather superior to the Samples you had'. Duesbury too tried to follow up his order in 1762, having been 'almost Run a Ground', and required 'one Hundred weight of your strongest at 7.10.0. per cwt', and more to follow, for the Derby works intended 'Going to deall in the Blue & White way'.⁶¹ Littler set up his china works at nearby West Pans, following his failure at Longton Hall, and used the Alva cobalt, but largely as a ground colour, rather than for fine line patterns. The Alva deposit appears to have had limited use, and was probably incapable of meeting the strict needs of the finest commercial porcelain producers, despite Crisp's claim that one trial 'exceeds the famous Mazereen blue of Chelsea'. Saxony not surprisingly kept the monopoly for supplying fine cobalt throughout most of eighteenth century. Well documented through the post-1770 Duesbury sources, the acquisition and use of cobalt in the contemporary fine china industry provides a striking contrast with its association with mass-production in Staffordshire two generations or so later.

The vast majority of Derby's fine Saxon cobalt was bought in London. A Mrs Balm, who supplied Duesbury with samples of powder blue at 11d to 15d, did suggest the best market for powder blue was in fact Hull. These were probably the cheaper smalts of cobalt ready-processed with the addition of sand. In 1790 Lygo referred to the London firm of Harman as the 'old cheap blue merchants', though fine samples regularly came from the merchants Teush and Hickens, and smalts from the 'indico makers' Grace and Freeman.⁶² As with other raw ingredients Duesbury's desire for

⁶⁰Salop.Fire Office vol 1/546 in H.Blakey, 'Fire insurance and ceramic history - including extracts from the Sun Fire Office Policy Registers,1782-93', *NCS Journal*, vol 10(1993),p166.

⁶¹J. Turnbull, *ibid*.

⁶² Frederick Teush had been a merchant since at least 1747, and had supplied John Baddeley of Shelton with smalts c. 1760. See E.Adams, 'The Bow insurances and related matters', *ECC Trans*,

the best quality caused Lygo escalating problems: specimens of fine blue cobalt became increasingly difficult to find, and prices rose considerably.

Small numbered samples of cobalt from the dealers' larger parcels were regularly sent to Derby to test suitability, and only after processing was proved successful was the lot, or part, bought. This practice created problems, for the dealer was expected to keep the sampled batch to one side unsold, until Duesbury declared the trial successful. Ideally the parcel was put aside even longer in case more was needed in a hurry; this relied on the goodwill of well-established contacts. Prices varied considerably, reflecting the quality. By 1790 the price of cobalt was being quoted upwards of 70s. per pound, more than three times the topmost value quoted by Crisp in about 1760. One of the most expensive Lygo bought was three guineas per pound, purchased specifically to decorate the Prince of Wales's order for a crested dessert service in 1787.⁶³ The cheapest tested cobalt pre-1792 was 39s. per pound. By the summer of 1789 Lygo had difficulty getting supplies, with dealers expecting fresh parcels from abroad any day. The traders may well have been forced to find different suppliers too, for a period of confusion follows, perhaps related to political upheaval in France. There is an obvious discrepancy between prices quoted and actual weights supplied, caused by a continental pound only weighing 12 oz. Lygo eventually bought 7 lbs for the price of 6 lbs, at 68s. per pound, the dealer claiming he made no profit. However, quantities of far cheaper cobalt were purchased by Lygo too, and by mid-1792 the prices appear to have dropped. Interestingly, Wedgwood recorded in the summer of 1790 that he had been offered 'regulus' of cobalt from a Cornish source,⁶⁴ so some non-Saxon cobalt may have been available, keeping prices down. The London agent acquired a box of cobalt nearly 20 pounds in weight, bought for 21s. per pound, and further 20s. samples followed. However by early spring the following year smalts 'come over in prepared fine state' had all been bought up from Lygo's usual London dealers by the East India Co., who were exporting it to China; more was not expected in the capital within two to three months.⁶⁵

Ready-prepared cobalt in the form of smalts was infrequently bought by the Derby factory prior to 1795, although Turner provided trials of both types through the

vol IX, pt I (1973), p 89,p98.

⁶³ Fine blue Messrs Teush & Hickens, 1 lb. £3.3s. Aug 25th,1787

⁶⁴JW Sept.9,1790, in Farrer,ibid, pp154-5. Wedgwood was offered 'regulus' of cobalt by John Penwarne of Penryn in August 1790, and was interested in its supply for German cobalt was the only foreign material he used. Wedgwood thought after the nickel contaminants were removed its value would be 1 g. to 30s. per pound.

⁶⁵DL82 7/105a. bill from 'Grace & Freeman Indico makers, Aldermanbury, Poftern. March 28th,1795: smalts a cask £5.2.8. plus 1/- cask'.

London showroom in 1786. A single 2 lb. consignment of bismuth appears to have been sent to Derby, probably of Saxon origin; in its native state with copper contaminants, it had been used like cobalt in the glass industry, but to produce a green colour. However this silvery-white metal is also used as an alloy to reduce the melting point of other metals, and may have had an experimental use related to gilding.

Enamels

Other than cobalt, the only two enamel colours that Duesbury was obliged to buy in London were white and yellow. In 1786 Vulliamy was to be asked about the provision of white enamel from Venice. Six years later Hancock in Hanley had processed 20 pounds of it at a cost of 1s. per pound. In the summer of 1794 Lygo again recorded difficulty finding samples of white enamel, and had been promised samples within four days; these were to cost 1s.6d per pound.

The purchase of yellow proved far more troublesome, yet Duesbury II persisted in its acquisition throughout the late 1780s, to produce a deep yellow ground colour unmatched by any other British china works. The best quality yellow enamel came from Italy, and the British government imposed a high duty on its import. In theory, smuggled yellow from Holland could be bought, but Lygo's contact was reluctant to buy it because he was obliged to take other enamels with it that were more difficult to sell. By late 1788 Lygo was despairing of getting any good yellow, for there was 'not a cake in London', although he sent a quarter-of-a-pound of 'common' up to Derby. By Christmas he had tracked down a single 3 oz. piece, which he refused to buy at the outrageous price of 5s.

The following year the management considered importing the enamel directly, using the services of two of their foreign merchant customers - Williams, who frequently visited Holland, and Micali from Leghorn. Micali was to send yellow, which he claimed was as good and cheaper than elsewhere, meanwhile Lygo sent half-a-pound of the best yellow that the capital could provide to Derby. In June 1789 Lygo eventually went to the Custom House to collect the Leghorn yellow, to find that having paid duty at 3s.4d per pound, its private importation was no cheaper than buying at home. Furthermore the 40 pounds ordered turned out to be the continental 12-ounce pound, and the parcel was a further three pounds short. Lygo tentatively sent two cakes to Duesbury to be tested, apparently later sending a few pieces north

as required. Further Italian enamel followed.⁶⁶ However French yellow porcelain had flooded the London market by early 1791, and Lygo declared he wanted 'no more yellow ground teasetts [I] cannot dispose of any', so presumably the quantity of raw material needed reduced too. The following year Hancock in the Potteries had access to yellow enamel, and sent Duesbury 'two sorts, please to trigh them both they will either of them make a very fine yellow if properly fluxd ...'

Gold and silver

This topic will be discussed more fully in the following section on processing. In the Chelsea-Derby period, references are made to the acquisition of 'gold to powd.r', 'brown gold', 'fine gold' and 'light guineas', while in 1786 Lygo had 'sorted out indifferent gold'. Samples of 'silver grain' and 'fine silver' were occasionally supplied by the London verditers from at least the summer of 1784. By March 1791 Lygo provided the Derby works regularly with quicksilver or mercury, followed by jeweller's rouge referred to as 'red stuff for glossing gold at 1s per oz' being sent to the factory, although 'sometimes finer sort at 2s per oz' could be had.⁶⁷

The value of the gold sent to Derby as a raw material for decoration was considerable (see appendix 7). Under the elder Duesbury, in the early 1780s, about £260-worth of gold was used annually; within a decade, under Duesbury II, this rose to about £950. The cost of gold increased proportionately, relative to sale of goods through London, from about 5% to 18%. Curiously, eighteenth-century Derby was well-known as a jewellery manufacturing town, with Lygo even being asked by a London verditer to request gold trimmings from the Derby practitioners.

Fuel: wood, charcoal and coal

The nature and use of fuel as directly related to factory processing is the subject of a later section, but detailed documentary evidence on wood and charcoal, combined with a paucity of information on coal, suggests that the provision of wood as a fuel was of far greater consequence to the eighteenth-century Derby factory than coal.

⁶⁶ DLS Parcel 17x. Day-book Sept.28,1789. The Italian merchant Mr. Gentil was paid £5.14s. 'cash in full for the Custom House Duty etc for the yellow enamel'.

⁶⁷Lygo, Jan 13,1792.

Sited near extensive coalfields to the south and east, Derby had relatively easy and cheap access to coal. However for much of the latter half of the eighteenth century its use appears rather confined, and it was possibly not used for firing porcelain at any stage until the final decade. The Chelsea works may provide a model for the acquisition of coal by early English soft-paste factories, when for a single two-week period in later August 1772, seventeen deliveries of coal were acquired, amounting to some 30 loads, and costing about £35.10s.⁶⁸ Evidence for the acquisition of coal at Derby dates from 1783;⁶⁹ significantly, no coal deliveries are recorded for late 1781 nor 1782. Ten consignments were made between mid-January to mid-March 1783, and two more in October the same year. The spring loads amounted to a little over 30 tons; the autumn deliveries about 20 tons each. A very seasonal yet irregular pattern of coal purchase at Derby has emerged. A number of different carriers are involved, but there is no mention of pit names or original source, save for 'from the Derby Wharf'. The standard charge from the wharf was 13s.4d per ton, suggesting that the coal was actually purchased and carried from there. In Staffordshire in the 1780s coal could be had for 4s.6d a ton.

In the autumn of 1788 two coal accounts were paid in full amounting to nearly £109; these were probably yearly bills. By 1811 Swift was owed a not dissimilar amount for coals.⁷⁰ However coal prices were lowering; within a decade of the final closure of the Chelsea works, coal costs at Derby could have been reduced by over 50%. In 1793 Arthur Young recorded that Denby coal could be purchased by the Derby factories for 5s.10d per ton, whereas potteries near the mine only paid half this at 2s.6d to 3s. per ton. The c. £100 bills mentioned above could therefore equate at 1783 prices with the purchase of about 130 tons, or ten years later with nearer 330 tons of coal.

Certainly not all the delivered coal had an industrial purpose. A small delivery from the 'Sea Coal Co.' to London cost £1.5s.11d, and is suggestive of domestic heating, while two waggons of coal were specifically for the house. Furthermore, at least two employees had been entitled to receive a waggon of coal at the end of every year as part of their wages.

⁶⁸DL82 7/19. Chelsea notebook, possibly owned by Boyer, March 22 to Nov.28,1772. Only records of coal deliveries are between August 14 to 28, when 30 loads (about 75 tons) at c.11s. per ton were paid for; although references to wood and charcoal are comparatively plentiful in the early 1770s.

⁶⁹DL82 7/9 a,b. Two factory account books running from (a).Nov.1781 to Feb.1783, (b) March 1783 to Feb.1784.

⁷⁰BM.BP.f 1703-38, f2100, f2129. Swift was owed £96.7s.6d. by Kean.

The lack of evidence for the supply of coal contrasts with the detail relating to the use of wood, and derivatives. A number of notebooks and legal agreements from the late 1760s show the huge capital commitment made by Heath and Duesbury to buy wood valued at nearly £2,500 within a single year.⁷¹ Oak was the preferred choice, although elm is mentioned. Some timber may have resulted from the permanent clearance from enclosure, although the reappearance of provenances twenty years later might suggest timber was the product of a managed environment, and that woods had subsequently matured.⁷² What is significant is that the quantity of wood acquired by the Derby works was huge, and beyond the means or control of a single large estate.

The early Derby factory records of 1782-3 give information on the source of the felled wood, referred to as 'cordwood', the main locations being Shirley Park, Locko Grange and Morley. Carriage of 7¾ cords (25 tons) of wood from Locko Grange some four or five miles away cost two guineas. Consignments from Shirley Park were paid for at five guineas to £9. Extra supplies of wood also seem to have been purchased, as shown by a bill specifically for the provision of 'saggar cord'.⁷³

Not all the wood was used in 'raw' form: some was provided as charcoal. The 1769 Chaddesden Wood agreement allowed the china manufacturers to fell, make sawpits in the ground, get turf and build 'cabbins', the latter presumably to burn wood to make charcoal. The most notable 'wood collier' employed by the Derby china works was Leonard Lead of Belper. Rather confusingly, Lead's processing is referred to as 'coaling' and charcoal as 'coal'.⁷⁴ In 1791, 77 cords of wood remained at the works to be 'coaled': rough computations suggest this would last less than 6 months. However, nearly a further 300 cords remained *in situ* at six different local woods, totalling 940 tons, but this stock would have lasted less than two years. Ideally timber was dried for two years before use, for green sap wood smoked. Piles of timber measuring some eight feet high and nine feet long were sited around the works to dry, including in the enamel house. The logs were cut into pieces when

⁷¹E.g. DL82 6/19; 6/44; 6/45; 6/47 and 7/9a.

⁷²See C.Welsh, 'Glass making in Wolseley, Staffs', *Post-Medieval Archaeology*, vol 31(1997), p1-60. and. M.Palmer and P.Neaverson, *Industry in the Landscape, 1700-1900* (1994), p47. A single sixteenth-century glass house needed a managed wood the size of Cannock Chase to provide fuel; a seventeenth-century iron and blast furnace similarly needed charcoal from 8,000 acres of coppiced woodland, cut in a 14-year cycle. By the later eighteenth century Derbyshire mines took pit-props of 25-year-old growth. Duesbury's cut timber was referred to as 'boles, bark, top', 'timber and bark' and 'trees and cyphers'.

⁷³E.g. DL82 7/9a, Aug.29,1782; 7/9b April 9 1783; 7/9 b Dec 14,1783.

⁷⁴ BM.BP.f353 1788 re. Hanley Wood . Lead produced charcoal at Duffield in 1790, and Eddington Wood in 1792.

required. Good site management kept the different sources, types and ages of woods separate, although this proved difficult due to human error.

Other than an undated request for a first refusal for wood at Morley, there is no continued record of similar purchases of living timber *in situ*.⁷⁵ In the spring of 1795 Lead was made redundant; a letter of recommendation early the following year explained that Duesbury 'had intirely declined the branches in which he used to serve me'. In seeking new employment Lead claimed 'this last seven years back I coald for Mr. Wm. Duesbury, but ... he has quite left off using Charcole'. Whereas the works had given up using a charcoal burner, it had not given up using charcoal. In August 1797 a Thornwell was paid over £60 for charcoal.⁷⁶ The previous year the burn quality of 'Langley coardwood' was being tested before being purchased.⁷⁷

It seems highly probable that the large capital investments made in the purchase of standing trees c. 1770 discontinued. By the mid-1780s pressure on the woodlands had increased. Although some smelters had changed from charcoal and brushwood to coal, many miners continued to claim rights over the diminishing woods. By 1811 Farey recorded that the Matlock miners had to obtain wood from Beechwood Forest in Staffordshire. As the Derbyshire coalfield developed, this industry increasingly took 25-year-old wood growth for props. Much of the ancient forests to the north of Derby around Duffield, which had resisted the enclosure movement, succumbed in 1786.⁷⁸ In 1784 William Cox, who had two years earlier supplied Duesbury with cord wood, cut down his entire 150 acreage of ancient oaks at Shirley Park. By the 1790s, wood from 30 miles away was being charcoaled, but at considerable carriage expense, while pre-purchased stocks were also running down. Although the use of timber for the ceramic industry had never been restricted, unlike the glass industry in the middle of the previous century, external factors like the strengthening of the British fleet may have seriously curtailed the availability, and increased the cost, of suitable timber for china firing; and oak was the Duesburys' preferred fuel. However this scarcity would have coincided with cheaper and more available coal in Derby.

⁷⁵ To a Mr Outram at Bell Inn, possibly Gell's agent.

⁷⁶ BM.BP.f 2059-2104.

⁷⁷ DL82 8/309 Kean to WD, Feb. 12, 1796.

⁷⁸ *Victoria History*, *ibid*, 1905, p420.

Chapter 11. Processing and firing materials

Milling and mixing raw materials

To the producers of fine ceramics the control of the quality of raw materials was of utmost importance, and one method of assurance was the self-management of the grinding processes.¹ Insurance policies from the most prestigious mid-eighteenth century china works show the importance of grinding raw materials on site: Bow and the Chelsea works contained mills. Although no mills were specified in the Worcester fire policy, a horse-powered mill, akin to a 'cyder mill', was in use in 1764, while a nine-year lease on a grinding mill upon Glasshampton Brook had been signed the previous year.² No mill is recorded for the Lowestoft china works.³

The Duesburys' mills at Derby and Chelsea

Haslem indicates that ground flint was originally purchased from mills at Little Eaton, a few miles north of Derby; while early in the next century, the King's Mills eight miles away on the Trent at Castle Donnington were providers.⁴ However in 1765 Duesbury I acquired his own water-mill on St Michael's Lane, Derby, sited on the River Derwent, on the opposite bank from the china works, near the Silk Mill.⁵ The mill may have ground materials, flint in particular, for use at both the porcelain and earthenware factories, its acquisition occurring during the period of shifting emphasis to 'commercial' production. The Cockpit Hill works was thriving, and like the china factory had its own slip house for the final preparation of compositions and glazes.

A mill house continued to be insured at Chelsea under Duesbury I; contemporary payments are known for cleaning flint, possibly indicating that it was calcined and ground on site.⁶ Despite having a mill the Chelsea works were not run as a

¹L.Weatherill, *The Growth of the Pottery Trade in England, 1660-1815* (1986), p285. Larger North Staffordshire potteries invested £200-500 in water mills.

²H.Sandon, *Worcester Porcelain 1751-93* (1974 edition), p10.

³ Dated Lowestoft fire policies for 1756 and 1765 make no mention of mills or grinding equipment, however by comparison neither do any of the Duesbury nor Kean insurance policies.

⁴J.Haslem, *The Old Derby China Factory* (1876), p32, refers to all 3 sites in use. J. Twitchett, *Story of Royal Crown Derby*, p32 states that flints and colours were ground at the earliest period at Castle Donnington.

⁵BM.BP.f1303-4 Lease dated Oct.23,1765 from Thomas and Jane Bradley to WD. Quoted in full by W. Bemrose, *Bow, Chelsea and Derby Porcelain* (1898), pp122-5. The yearly rent for the 12-year lease then being 6gs, by the 1780s rent was £12.

⁶DL82 9/75 Chelsea accounts Sept.22-29,1770.

continuous 'industrial production line'; on the contrary, processing was slow, episodic and labour-intensive. Major but infrequent tasks like 'pounding glass' or 'grinding of the case clay and working the Bruisers' gave one man occasional employment for the best part of the week; many other processing procedures were equally intermittent. Admittedly the Chelsea works under Duesbury was small compared with the Sprimont concern, but from its creation Chelsea was always a luxury producer, and the method of manufacture perhaps more akin to a craft-workshop. Its sales of ornamental pieces were largely limited to the public spring auction, and not year-round dispersal. Its mill would have aided processing of materials to the finest degree, rather than of large quantities. Bow, in contrast, with five mills recorded in the mid-1760s, was a more commercial venture with a greater output by volume of useful wares. Consequently the manner in which the Derby mill functioned may have changed by 1770, as 'Derby clay' was supplied to Chelsea, and again after 1779 when the failure of the Cockpit Hill works may have created spare capacity.

Evidence as to exactly how the Derby mill functioned is limited. A 1785 act of vandalism suggests the mill also contained one or more slip-drying tanks.⁷ However the inclusion of a 'slip house' in the 1786 insurance policy of the Derby factory itself, and at Cockpit Hill, suggests some mixing was carried out at the works too, although seemingly without benefit of mechanical aids. Presumably all dry goods had been previously rigorously ground and sieved at the mill, and some liquid bodies were transported between the sites.

Although Duesbury's revenue outlay was small, conversion and fitting out the mill may have required considerable capital investment.⁸ The valuation of the business 'list of stock at Derby' as at the onset of the Duesbury-Kean partnership in 1795 records the relative importance of the mill and its materials, compared with the works kilns and fixtures:

⁷*Derby Mercury*, July 21, 1785, p4 c4, recorded an incident at Messrs. Duesbury's Flint Mill on July 12, when someone had entered the mill and 'wilfully pulled out a Plug, whereby a large Quantity of Slip, or Composition for Making Porcelain or China Ware, was let out or lost, or rendered totally useless'.

⁸ The mill had been used as a Civil War gun-powder mill, Sorocold's water works, corn and textile mills. The Bradley lease suggests the mill had most recently been used for malt, however the family appear to have owned another mill by 1790 for ceramic processing, perhaps in London.

Ware finished and unfinished	£2345. 19s . 8½d.
Raw Materials	}
Mill Work	} 449. 19 11½
The kilns	350. 18 2½
Fixtures	475. 16 8
Utensils	24. 9
total	£3647. 3s. 6½d.

Duesbury's water-mill seems to have been relatively trouble-free; only a single occurrence is recorded of the Derwent's low water-level hindering mill-work.⁹ This and a further reference, five years later, to three to four weeks' worth of prepared clay and glaze might indicate something of the mill's working cycle, and usable volumes of processed material on hand. However, a real and continuous hazard of two separate processing sites was highlighted by Duesbury II, when he wrote:

The composition is ground together & pass thro' fine silk sieves or lawns when the intustices of the threads are about the 150th part of an inch (and here is a danger if the workman imployd finds his composition not well ground and begrudges the trouble of carrying it back cross the water to the Mill a separation of the materials may take place spite every precaution) - afterwards boild to the consistency of thick Cream when it is ready to make into figures.¹⁰

Although physically difficult to run, with clayman Wardle and Duesbury II independently complaining of the need to be in two places at once, the isolation of the mill may have been perceived as an advantage to help protect the secrets of the ingredients and recipes used in the porcelain. The site of the old china works was itself severely restricted, and not suitably located for direct access to its own river-power. An ink and wash plan entitled a 'Rough sketch of a Mill Intended at Derby' on the bank of the Derwent, may relate to Duesbury's proposed expansion in the 1790s.¹¹

⁹DLS old ref. 847 Oct 26, 1784 letter fragment Wardle to WD jnr.

¹⁰Minton Archive, Letter WDII to Vulliamy, June 17, probably 1792. Quoted in full in J. Twitchett, 'William Duesbury II and his influence on the Derby China Manufactory', *DPIS Journal*, 2 (1991), pp53-62.

¹¹Derby Museum, acc. no. 1989-197/18.

Alternative and steam power

There is no direct evidence to suggest that at the close of the century any attempt was made at the Derby works to grind materials, or mechanise production, using alternatives to water power, such as wind or steam power. A mill horse was kept, but this may have provided carriage across to the factory, rather than power. However in late 1789 Lygo had been ordered to investigate some technical improvements for 'Mr Hunt's Principal for saving fuel'. He had visited a Messrs Hannah and Co. to see 'one of his pans working', and recorded a Pimlico factory was soon to install a 'Sham Engine'. Although the nature of these devices is speculative, at this period a number of millers had written to Wedgwood, fearing it was the 'intention of the potters to erect a fire Engine to grind flints'; the rumour was groundless.¹²

The capital needed to adopt steam power was considerable, and relatively few Staffordshire potteries could justify such outgoings until the later 1820s.¹³ Glover in 1833 indicated that a steam engine had been used at the New Works in Derby, but Haslem corrected this statement suggesting that although a building had been erected, an engine was never installed following the abandonment of the earthenware production.¹⁴ Kean's exploitation of the Ashby Wold clays may indeed have required different treatment, as Wedgwood explained to a potential brick manufacturer: 'whether a mill will be useful in the working of your brick clay will depend on its hardness. If it is refractory like the fire clay of which the glass pots are made it will require a mill to grind it; ours is of softer kind & does not stand in need of such assistance'.¹⁵ Plans to lease the Carloggas clay setts in 1799 would also have called for greater mill capacity. But St Michael's Lane Mill was still used by the china works up to 1811, when £47.3s.10d of mill rent was still owing. During the legal wrangle, Kean dismissed the £450-rated valuation of mills in 1795 as being high, noting that although in a better state in 1811 they had been estimated of lower worth.¹⁶ Duesbury III continued to maintain the mill until at least 1813.¹⁷

By comparison Billingsley was not so fortunate in obtaining cheap and unlimited power at Pinxton, and 'the Millwork ... appear'd a Principal obstacle'. The local corn mill could have been used, but at a prohibitive cost of £70 per year, so it was

¹²KUL.Wedg.Acc. E10 8369/70. The millers were from London and Hanford.

¹³Weatherill, *ibid* (1986), pp358-366.

¹⁴Glover, *History of Derbyshire* (1833), quoted in Haslem, *ibid*, p32.

¹⁵JW to Sir John Dalrymple Oct 20, 1789, K.E.Farrer, ed, *Correspondence of Josiah Wedgwood* (1903-6), vol 3, pp104-6.

¹⁶BM.BP. f425-8, see appendix 4.

¹⁷DL82 7/110.

suggested 'that [a] wimsey at the works to do the millwork will be the most advantageous plan and must be adopt'd ... besides an Opportunity of fixing the Sagger Clay works to the Wimsey, and grinding the sagger clay at Vacant times'.¹⁸ A Newcomen-type steam engine and boiler were ordered from Francis Thompson of Chesterfield, which proved unfit, and was eventually removed. The local water-wheel was subsequently pressed into service, but even by early November it had frozen up. The need for power here was for saggar making; by late 1798 these were bought in ready-made.

Potting techniques and processes

Commercial porcelain firms used many of the production skills common to varying degrees in all branches of the ceramic industry from the 1720s or so onwards. In the 1760s the Worcester china works 'turn'd very much in the same method of any other Pottery', combining thrown forms with pressing techniques and the lathe; utilitarian Bow forms were produced by some 200 turners.¹⁹ Similarly Derby hollow wares of the 1760s and 1770s display signs of lathe-turning, while in 1777 Boswell had admired the Derby manner of fashioning 'clay into a cup, a saucer, or a teapot, while a boy turned round a wheel to give the mass rotundity'.²⁰

A technique that particularly separates the finest manufacturers from mid-eighteenth century coarseware production was the adoption of form-making tools: simple bat-moulds or jollying for plastic clays, and complex multi-piece plaster of Paris moulds for slip casting. Despite the potential variety of rococo, and later neoclassical, form produced by moulds, this was achieved neither cheaply nor quickly. To many potters the disadvantages of moulds outweighed the advantages: they were difficult and expensive to produce, required skilled but intensive labour in use, were a liability to carry and cumbersome to store. Worn plate moulds continued to be used at Etruria to give general form to green wares finished off by the lathe; even by 1820 the Wedgwood management still regarded slip casting procedures and firing as troublesome.²¹ At Worcester the plastic clay procedures were preferred well into the twentieth century, being quick and without waste.²²

¹⁸C.L.Exley, *The Pinxton China Factory* (1963), p12.

¹⁹ Accounts quoted in J.Mallet, 'Lady Shelburne's visit to Worcester in 1770', *ECCTrans*, vol 11, pt 2 (1982), pp109-111.

²⁰ in Twitcett, *ibid*, p49.

²¹KUL.Wedg. Acc. 60-32817. 'Pottery Memos., c.1819', p7 and p76,

²²Sandon, *ibid* p10, pp22-25. Fired clay pitcher moulds were preferred to short-lived plaster of Paris.

However at Derby in 1776 an eyewitness recorded liquid slip used

‘...in casting the Images .., the Composition is almost liquid, they run it into the Molds & it almost instantaneously hardens to such a Degree, as to bear handling.’²³

Duesbury’s use of slip appears to have been something of a rarity.²⁴ However archaeological sherds suggest such casting was not foolproof; many figures failed in firings of the 1770s, not as a result of poor composition or inappropriate temperature, but as a consequence of attempts to thicken the thin clay walls with a second application of slip. The two layers failed to adhere.²⁵ Weatherill in contrast suggests that slip casting had not become commercially viable until the 1830s, and the introduction of deflocculents.²⁶

The Duesburys trained factory-craftsmen as repairers or mould-makers, and bought models from sculptors like Bacon, investing considerable resources in the ornamental branch. The value of the moulds in 1795 was estimated at up to £4,700.²⁷ In 1848 on the dispersal of the factory, moulds were an important part of the haul taken to the Potteries, and continued to be used there.²⁸

Alongside liquid slip, plastic clay was also processed at Derby to a consistency suitable to throw, press, and turn. Plates, saucers, basins, teacups, ice pails, teapots and sugar boxes all appear to have been manufactured from ‘solid’ clays.

Secret Derbyshire ingredients: clays, spath fusible, fluorspars, and baryte

Derbyshire’s mineral resources, mainly related to the lead deposits, were being exploited by ceramicists in secret from at least the early 1770s; Wedgwood in particular procured and conveyed such materials ‘in Cog’ to hide their true provenance.²⁹ It seems highly probable that Duesbury I exploited local minerals, but

²³ N.Valpy, ‘Extracts from the journal of Peter Oliver, Chief Justice of Masochist Bay’, *ECC Trans*, vol.XIV, pt2 (1991), pp211-2.

²⁴ P.Bradshaw and R.Grainger, ‘Evidence that a few Bow figures were cast solid’. *NCS Journal*, vol 1 (1972-3), pp41-44. In general Chelsea, Longton Hall and Derby pieces were slip-cast, Bow and Worcester ones press-moulded. The Derby factory would have been unique post 1770.

²⁵ R.and R. Barkla, ‘A 1770-90 kiln dump of the Derby China Works’, *DAJ*, vol 117, (1997), pp28-33.

²⁶ Weatherill, *ibid* (1986), pp243-4, pp367-70.

²⁷ BM.BP.f551-2, f1417-21, f1425-29.f1501-2 .Various valuations of the moulds c.1795 at between £2,000 and £4,700 . The Chelsea moulds and models were valued at £500.

²⁸ P.Rowan, ‘Derby models and moulds’, *DPIS Journal II* (1991), pp23-34.

²⁹ JW, Jan 5, 15, 1775, Farrer, *ibid*, vol 2, pp215-217.

documentary evidence is limited.³⁰ Circumstantial evidence and the testament of other contemporary potters is, however, far more compelling.

The short-lived china works at Wirksworth, operated by the wealthy lead-mine owner Phillip Gell, c. 1772-77, made use of 'spar'. Gell's works appears to have been producing wares akin to Duesbury's, employing ex-Derby workers, including the modellers Stephan and Briand. Thomas Turner of the Salopian works at Caughley purchased moulds and materials from the disposal sale of the Wirksworth factory stock in 1777, and the following year wrote to the Gells regarding his experimentation:

The spar, a bit of which I brought with me, I have tryed several Times & Different ways, but I can by no means equal that excellent little cup of Mrs Gell's which to arrive at would be perfection indeed; one principal bad tendency of this Spar (or those tryals I have already made) is rendering the body subject to fly, which the china stone will do unless there be some admixtures which I am unacquainted with. The Derbyshire clay I have again made tryal of & find it much superior to any other clay yet found in England and could it be obtained at about ten pounds per Ton it would superceed all others.³¹

As the Wirksworth porcelain factory was being established, Josiah Wedgwood was striving at Etruria to produce a 'finer body for gems'. Five years, and supposedly 10,000 experiments later, Wedgwood succeeded in producing his renowned 'jasper'. His trials, to discover a suitable flux, were aided by porcelain texts, including De Milly's 1771 treatise, essentially recounting 'that porcelain will always be made ... by ... mixing all kinds of clay with vitrifiable substances such as quartz, fusible spath and other non-vitrifiable matter'.³² Although lead oxide had long been used as a flux, alternative materials were tested including minerals associated with the Middleton lead mines near Matlock: barytes and spath fusible (witherite), both compounds of barium. Wedgwood eventually preferred his 'cauk no.74' or barytes because of its

³⁰BM.BP.f389. Undated quotation or invoice for carriage of 'sulphate of barytes' at £1 per ton from Tissington, Matlock; and Duesbury II's own reference to 'the calcination of a very pure stone found in Derbyshire' used within his ornamental slip composition. The use of barytes at Derby is not confirmed until 1836 with John Hancock's dated 'New Body' recipe; Duesbury III used baryte in paint as a replacement for white lead, in his Bonsall colour manufactory in the early 1820s.

³¹*Derby Mercury*, 16 and 23 May, 1777 records the disposal of the Wirksworth factory: 'A quantity of Zaffer, Borax, Red Lead, Lynn Sand, Whiting, Umber & Salts with some fine fritt ready made'; DCRO. Gell Papers 41/32ab., Oct 5th, 1788

³²G. Elliot, 'Wedgwood and De Milly Compared', *ECC Trans*, vol 16, pt2(1997), pp226- 234.

predictable nature. Wedgwood also refers to 'felspar'.³³ Gell's spar, which was compared to china stone, was presumably feldspar; early the following century its properties were more widely recognised. Billingsley was said to have been attracted to Wirksworth because of its feldspar, while c. 1820 the mineral had been adopted by the ceramic industry as an alternative to china stone.³⁴

Both Wedgwood's and Turner's accounts are quite explicit in their reference to the use of Derbyshire baryte and 'spar' in the manufacture of jasper and porcelain respectively, following the earlier French methods for 'pâte tendre.' With the Duesburys' and Heaths' ownership of lead mines, access to 'gangue' materials would have been easy, and relatively secretive, while further sources of suitable flux material would have been readily available, in Derby itself, using the by-products of the town's spar industry. Adjacent to Duesbury's mill lay Richard Brown's monumental works that used a wide range of local alabasters, fluorspars and marbles.³⁵

Against this background, around 1770-71 Duesbury seems to have created a biscuit porcelain body to rival that recently introduced by Sèvres. Initially the biscuit body may not have differed from that of glazed examples, although some modification and perfection of the recipe is visually soon evident. Duesbury II differentiated between his body compositions:

My Useful Biscuit Ware [being made of] stout argilacacious earth in a very large proportion but this earth admits of no other admixture that Twenty years practice have been unable to discover but that which is now used with it & we cannot use it on account of its colour being very imperfect untill its outer surface is intensely vitrified ... The remaining part of my Composition for Figures is composed in form of a Fritt & principally form'd by the calcination of a very pure stone found in Derbyshire & afterwards pass'd thro successive Fire having added to it before each a proper proportion of a very fine salt prepared for the purpose which according to the success in the preparing

³³JW Jan 24, 1776, in A.Finer and G. Savage,ed, *The Selected Letters of Josiah Wedgwood* (1965), pp104-5.

³⁴Jewitt, *ibid*, vol 2, pp142-3, suggests Billingsley was attracted to Wirksworth 'by the fact of feldspar being abundant in the neighbourhood'.

³⁵Derbyshire spars had been used for ornamental works from at least 1743, alabaster had a far longer tradition. The date of the establishment of Brown's works is unknown; he had paid duty on an apprentice in Jan.1769 (PRO IR/1/57), and sold items at Duesbury's London showrooms from c.1774. Boulton used Derbyshire stones from 1768, supplied by Bradley of Castleton, including 'hatterel', a fluorspar-barytes combination.

processes in greater measure finer or less fine things - The Composition is ground together ... boiled to the consistency of thick Cream when it is ready to make into Figures ... etc. ³⁶

Whether central Derbyshire clays associated with the lead mines were ever commercially used by the Duesburys is debatable. Anecdotal evidence from the 1770s suggests that Thomas Gell had used 'fine White Clay, found near Brassington' to create Wirksworth porcelain.³⁷ Excavation of the Wirksworth site however indicates creamware was also made there; it seems unlikely that such expensive clays would have been profitably used for such middling ware, and other pale-firing clays must have been imported into Wirksworth, alongside the likes of Lynn sand. Nevertheless in 1796 Wedgwood had leased a lead mine in Brassington Manor 'to search and carry away clay'; this project was abandoned the following year.³⁸

Evidence at least of experimentation using central Derbyshire clays has been located for the Derby factory. Three trials, probably dating to the 1770s or the early 1780s, record recipes of unknown use:

- 'No 1. - six of ashes, two of C. stone - one of flint, 9 of Brass in clay
- No 2. - one of flint - one of ashes, 2 of C. stone - 2 do. clay
- No 3. - 5 of Ashes, 2 of C. stone, 1 of flint, [?] of clay'

A footnote pronounces the clays to be 'B[r]asse', 'Bakewell' and 'pipe' respectively. The Bakewell provenance is unambiguous, the Brassington one less so. This trial is also significant because of the nature and range of proportions of the basic elements: ash, china stone, flint and various white-firing clays. The silica content from the flint appears low, and may have created something approaching 'bone china' at a very early date.³⁹

Although no formal accounts of the ingredients or procedures used to manufacture eighteenth-century Derby porcelain survive, two separate documents do indicate the mode of their use within the Derby factory itself, as opposed to the mill.

A sketch-plan dated 1789 records ingredients in a factory workroom and includes instructions for mixing 'hard useful', 'soft useful', ornamental bodies and glazes. In

³⁶Letter WDII to Vulliamy, see footnote 10.

³⁷KUL.Wedg.Acc.'Common Place Book No.1', c.1775 describes the problematic deposits.

³⁸KUL.Wedg.Acc. L134-26859 1796 lease, and L52-9485 1797 letter.

³⁹DL82 6/18 Undated scrap, 2 x 6 inches, no.1-2 in ink, no.3 in pencil. In rounded hand seen on WDI and Chelsea papers, possibly Boyer.

eight different bins are the semi-prepared dry materials: 'pounded brick for hard useful, ground ornamental brick, clay for soft useful, scraps for soft useful, broken glass for glaze, ground flint for ornamental, whiting for ornamental, ground glass for ornamental'; also available was 'blue'. If Wardle needed to prepare a 'hard glaze' he also had call to 'broken glass, broken white enamels, white lead and foreign pounded china'. Unfortunately, recipe weights are disguised with the use of existing measures named for example 'old leaden with handle' or 'new castmettle'. The volumes produced from such recipes were in quantities capable of being carried, and dry-mixed by hand. There is no record of liquid being added in this workroom.⁴⁰

A further list of 17 ingredients, headed 'Toy [?] Cobs.', possibly dates to the preceding decade. Many ingredients are common to those of the 1789 bins, but also included are 'burnt and unburnt ornamental brick, ashy bone, sand, burnt flint, oriental porcelain' and a number of chemical components, 'Comm. Salt, Nitre, Sal. Am., Borax, Charcoal, Am. Salt used in diluting blue, Of. Am. & charcoal', and 'W. Smith's very soft flux'. Appended to the foot of this list is the annotation that pieces had been 'biscuited in one Bacon in a common saggar - the other in one glazed with brick'.⁴¹

Although the documents lack the detail of ceramic recipes, they clearly highlight improvements and early awareness and use of new materials.⁴² In contrast, simple additions such as incorporating ground foreign hard-paste porcelain to make a more hardy glaze is a variation on an established tradition of adding glass or flint. However the actual use of these chemicals is more speculative. A number were newly 'discovered' or only recently available; sal. ammoniac was not commercially available until c. 1760. Any modern potting technological reference suggests the potential use of such chemical additions. Borax for example is usually made into a frit either to flux silica, or mixed with feldspars and clays to compound a leadless glaze. Bismuth is now used as an alternative to silver, as a carrier of lustre colours, or to produce a 'mother-of-pearl' effect on glazes. The use of saltpetre, common salt and sal. ammoniac has a more traditional basis, and can be found in mid-eighteenth-century ormolu gilding recipes; however by the 1820s they were used to increase the blend properties of glazes related to 'flown blue' prints.

⁴⁰DLS untraced. This workroom was probably the upstairs clay room; its position would have allowed some secrecy to have been maintained..

⁴¹DL82 6/7 paper scrap.

⁴²R. Haggard, 'Abner Wedgwood's Recipe Book', *NCS Journal*, vol 1 (1972-3), pp19-40. This gives precise measures. Saltpetre and 'nitre oil' were invoiced at Chelsea, 1770-1 (DL82 9/4, 9/35).

Between May 1790 and August 1793 experiments with the composition itself were being carried out. Wardle was mixing samples of differently numbered clays, also referred to as 'yellow', 'brown with red streaks Salisbury clay' and 'Notts.', with whiting, flint, brick and other ingredients, to make a variety of bodies for different types of ware.⁴³ Richard Bradley supplied 8-10 cwt of prepared Stourbridge clay along with 2 cwt of potsherds ground over again, which he advised putting 'about one quarter part among the raw clay' because he thought 'it will be the means of its standing to coal better'. He further suggested 'it must be wet up with clean water and well tempered by turning over & treading before it will be fit to use'. Bradley paid '30s per ton in the country' for the clay 'before it was ground'.⁴⁴ On receiving another sample of clay Duesbury wrote he had

... found such properties about it, as encourage me to prosecute my experiments to render it generally useful - & I have yet great hopes of succeeding - There are many qualities to be considered in making China besides those which an ingenious Chymist would attend to, & which are extremely essential.⁴⁵

The owner of the Derby works was acutely aware that the acquisition of suitable clays, or other raw materials, was but a small, though important, part of the total production process in the manufacture of fine porcelain.

Although the Derby body post-1770 was probably never as heat-resistant as that of steatitic Worcester, Lygo had regularly 'cautioned the customers ... to warm the table china well by the fire ... and we have very seldom any complaints of a dish flying'. However in 1790 a number of incidents of pots breaking in use are reported. Duesbury blamed the flying pots on a single workman's accident when 'part of the composition was wanting', and that the latter had been too afraid to admit it. Duesbury suspected that Lord Rawdon's 'teacup ... was broken from a very different cause, from some internal flaw - & if so, a hole will be found in some part of the place broken'.⁴⁶ As a consequence of the embarrassment of the flying pots, Duesbury declared 'my intention immediately to make a body that will stand sudden heat better (if the colour is not so good) for tureens, teapots etc.'⁴⁷

⁴³DL82 6/111

⁴⁴DLS old ref. 507 Letter Richard Bradley to WDII Nov 17, 1790. Kean in 1818 comparing the cost of Ashby Wolds clay with Stourbridge quoted the former at 4s.6d. per ton with 11s. carriage, the latter at £1.5s per ton with 18s carriage.

⁴⁵DL82 8/3, draft letter to unknown gent who supplied trial clay, c.1795.

⁴⁶DLS old ref. 601. WDII to Lord Rawdon, copy letter, Nov 8, 1790.

⁴⁷DLS untraced letter from ?WD to Lygo, Dec 17, 1790

Kiln and factory planning

The ceramic industry was never subject to a technological macro-invention as in, for example, the textile or iron industries. Change was gradual, with improvements and modifications both of local traditions and foreign innovations; many of the technical firing improvements associated with the development of the fine ceramic industry had been in place by the 1730s. Hilary Young's recent work summarises such development in the British eighteenth-century porcelain industry.⁴⁸

Exactly what sort of kilns were used in the china industry as a whole is poorly documented; the excavation of the 1750s Longton Hall site in Staffordshire remains the most extensive of any British porcelain site.⁴⁹ Although some limited excavation has been attempted at the Derby China Works, the structure of the site has not been confirmed by archaeological evidence. The fire policy of 1780 simply refers to a 'brick and tiled kiln house'; five years later 'two kilns and houses adjoining near brick and tiled' are recorded, but with no differentiation between types of kiln. Even in Bloor's 1815 lease plan of the Duesbury site only two 'cones' are shown, the slightly smaller one with the addition of an 'air furnace'. These must be the biscuit and glaze kilns respectively. However it is known that the enamel house was regarded as a separate entity, and final decoration was not fired using a 'muffle', as at Longton Hall. Possibly the 'stove' room, adjacent to two wood rooms, contained the enamel kiln.⁵⁰ The Bloor plan does not include the New Works, but presumably records any alterations made under Duesbury II and Kean, and thus any enlarged ovens.⁵¹

The French architect Belanger sketched 'Les fourneaux à cuire la Porcelaine' and 'le moulin à fayence Darby' c. 1768-71.⁵² His depicted kiln structures are sophisticated, but as Young has suggested, difficult to interpret specifically as porcelain or saltglaze kilns. Belanger's oven and surrounding hovel appear to combine elements of both the

⁴⁸H. Young, 'Evidence of coal- and wood- firing and the designs of kilns in the 18th-century English porcelain industry', *ECC Trans*, vol 17, pt1 (1999), pp1-14.

⁴⁹H. Tait and J. Cherry, 'Excavations at the Longton Hall porcelain factory. Part 1 : the excavation of the factory site', *Post-Medieval Archaeology*, vol 12 (1978), p1-29; D. Barker and S. Cole in *Digging for early porcelain* (1998), pp4-21, describe other sites.

⁵⁰Duesbury (DL82 8/102) refers to the enamel house rebuilt to a new plan, while in his trials (Nov. 1790) he refers to wood dried in the enamel kiln house.

⁵¹ Weatherill, *ibid*, 1986, p381, suggests by the 1780s ovens were reaching their maximum feasible size of 15 ft internal diameter with 8 to 10 firemouths; the 1790s Derby biscuit oven appears (as Bloor's plan) to have been c.20 feet, or 17.5 feet internally (from evidence in DL82 6/111), perhaps with 8 mouths.

⁵²K. Woodbridge, 'Belanger en Angleterre: son carnet de voyage', *Architectural History*, vol 25 (1982), p16 and plate 16.

'traditional' Staffordshire and London tin-glaze and stoneware potters; given the backgrounds of the three original protagonists at the Derby works it is perhaps not unexpected to find eclectic firing technology there pre-1770. Kilns nevertheless had to be constantly maintained and rebuilt.⁵³ Duesbury's spy at Etruria was able to report that kilns there lasted '6 or 8 years with some trifling repairs', despite being fired from one to three times per week.⁵⁴ The context would suggest that this was somewhat longer than a Derby kiln's life expectancy.

With the closure of the Chelsea works in 1783-4, the Derby factory and its work practice must have needed some consolidation and alteration. Originally the Chelsea kiln was to be dismantled and taken to Derby, but Boyer declared 'it hardly worth sending for the corners are a good deal burnt at the bottom & the sides are opened or drawd so much as 4 or 5 inches on each side'.⁵⁵ The elder Duesbury, cautious that improvements might prove costly, placed legal financial restraints on his son. Over the following two years just over £69-worth of alterations were to be allowed relating to the store/drying room, clay room or cellar and cool room. However a fire had soon caused damage within one of the kiln buildings, resulting in a claim for £43 of masonry and carpentry work. A week later Duesbury junior wrote about the enamel house rebuilt to a new plan, which was to be fired the next day.⁵⁶ The young co-owner continued to make improvements.

Saggars

Saggars and some form of simple kiln furniture were in common use in the porcelain industry from the 1740s: they protected the susceptible wares from fumes, excessive heat and problems resulting from the collapse of other unstable pieces.⁵⁷ Early Derby and its later ornamental wares are characterised by three or four 'patch marks', remnants of clay pads. The 1770 Chelsea accounts record 'case making' as a regular activity, but also the construction of more sophisticated kiln furniture: 'tiles, bricks and triangles ... for work to be placed on in glaze kiln', and 'making supports for the

⁵³DL82 7/15 James Young employed Dec.1771-Jan.1772 to repair kiln ; DL82 7/9 (a). Nov30, 1781 Thos. Woolley paid £1.5s. to make firebricks.

⁵⁴DL82 8/166 letter from John Hancock to WD, May 21,1790.

⁵⁵DL82 9/60 letter from Boyer to WD, Feb 18,1784.

⁵⁶Derby Museum acc.no. 1997-137 'memorandums respecting the intended alterations. Sept.26th,1784', apparently in WDI's hand; DLS untraced agreement between WDI and II, Feb. 3, 1785; Claim on Sun Policy 431569, April 21, 1785 for £53.4s.1d.; *Derby Mercury* April 14,1785, p4 c2 places the fire in kiln building; DL82 8/102 letter WD to Lygo, April 22, 1785.

⁵⁷ H.Tait and J.Cherry,'Excavations at the Longton Hall Porcelain Factory,part 2: the kiln furniture', *Post-Medieval Archaeology*, vol 14 (1980), p1-21; J.Potter, 'The Limehouse Story', in Barker & Cole, *ibid*, pp40-52; S.Cole,'Early Worcester' in Barker & Cole, *ibid*, pp63-74.

inhamil kiln'.⁵⁸ 'A good deal of kiln furniture' was found on the dump site of the 1770-90 Derby china works by the Barklas.⁵⁹

Like Longton Hall Derby may have used different types of saggar for biscuit and glost firings. The glazing of saggars was already an established practice at Derby by the early 1780s.⁶⁰ By early 1790 Duesbury was making his own improvements to the saggar composition, asking John Hancock in Hanley to glean information regarding Wedgwood's firing and kilns. Duesbury appears to have already known 'some of the potters use bone in the composition for saggars', and requested further details plus a piece of saggar-clay. Hancock's spy was able to confirm that the master-potters' saggars lasted between six and seven years each; this longevity resulted in the necessity of only 'half employing one man', despite 'not firing less than 12 or 14 kilns each week'.⁶¹ Although not specifically stated, this durability would have considerably reduced the quantity of clay and fuel used to make the saggars. By the autumn of 1790 the Derby factory was purchasing bone ash from Birmingham specifically for saggars.

Firing porcelain

Many attempts at porcelain production failed for want of critical temperature control and cost-efficient firing; successful firms had to fire consistently to minimise their losses. At Worcester in 1770 damage limitation included recycling: 'if any pieces of it fail it can be Ground & mix'd up again into Clay'.⁶² Later eighteenth-century attempts at monitoring the firing can be seen with Wedgwood's and Duesbury II's use of pyrometers. However Weatherill suggests that despite obvious improvements by the 1820s, firing control remained problematic and still reliant on the skills of the fireman.⁶³ Duesbury II's kilnmen were experts: despite over twenty hours in firing they were able to judge the readiness of the ware to within a few minutes. In 1790 Duesbury recorded the kilnmen's opinion: the 'useful glazed' would possibly have

⁵⁸eg DL82 9/82 ; 9/84; 9/166; 9/168 Roberts, Inglefield and Piggott were paid for such tasks, c. 1770.

⁵⁹R. and R.Barkla, 'A 1770-90 Kiln Dump of the Derby China Works', *DAJ*, vol 117(1997), p32. Plus private correspondence and personal inspection of sherds .

⁶⁰DL82 6/7 mentions 'saggars common or glazed with brick'.

⁶¹DL82 8/166 Letter John Hancock to WD, May21, 1790.

⁶² J.Sandon, 'Recent excavations at Worcester, 1977-79', *ECC Trans*, vol 11, pt.1(1981), pp2-11.

Signs of firing problems were rare: saucers fused together by over heating in 'hardening on', while a cup was melted to a saggar base. Quote from Mallet, *ibid* (1982).

⁶³Weatherill, *ibid* (1986) pp382-4. Control was not really achieved until Seger's cones were used in the 1880s.

borne 10 minutes longer, yet the ornamental 'had it to the minute' though '2 careful rounds more w'd have been better'.⁶⁴

The Derby biscuit and glaze kilns were generally fired weekly. However by 1795 John Duesbury complained that over the previous twelve months this had declined to '12 full biscuit kilns of ware only, and 15 with sagars and part ware, ... similarly 21 glaze kilns with useful ornamental.'⁶⁵

Despite soft-paste porcelain's reputation for firing failures amongst contemporary potters, notably Wedgwood, the Duesbury papers rarely mention such problems. In his computations for Pinxton, Billingsley allowed for one-seventh loss in firing useful wares, possibly reflecting the Derby factory's own failure rate c. 1795. Excavation of the kiln dump has shown that collapses in the oven did occur. Glazed and biscuit figure sherds, datable to the 1770s, were conspicuous, no doubt the result of experimentation with the new bone-ash body, biscuit porcelain wares and slip-casting.⁶⁶ Later, on one occasion, having suffered much loss in the white ware, Lygo suggested salvaging the situation by finishing not 'anything like our patterns - but rather like the Worcester'. A mention of 'your loss in the composition' would seem to refer to the preparatory stage of making the body, like the vandalism at the mill. That is not to suggest that there were never any problems with the firing, but the Lygo letters probably over-emphasise these as a result of Vulliamy's and Catherine's regular complaints. However, these customers had exacting standards relating to the use of the ornamental biscuit wares, not the more commercial utilitarian ones, whose faults might be disguised with a little judicial over-painting. But the most documented and most disruptive misfirings occurred during 1790, and in following years, when the Derby kilns were being redesigned and Duesbury commenced his experimentation with various clays and fuels.

Fuels: coal, wood or charcoal

Although the increasingly widespread use of coal as a fuel in the eighteenth century is generally regarded as a force of industrialisation and improved efficiency, British porcelain manufacturers adopted coal more reluctantly.⁶⁷

⁶⁴DL82 6/126

⁶⁵DL82 8/294 Letter John Duesbury to WDII, June 25th, 1795.

⁶⁶R. and R. Barkla, *ibid.*

⁶⁷ A common mistake compounded by the use of coal in, and later dominance of, the Staffordshire potting industry, e.g. R. Gray in P. Atterbury, ed, *History of Porcelain* (1982), p15, states 'whereas in Europe coal replaced wood in the eighteenth century'.

Young's recent compilation shows the varying uses of coal, charcoal and wood in the china industry. Not surprisingly, Staffordshire potters, who had long used local coals, at least tried this fuel on china: John Baddeley from Shelton apparently only used coal, while his son Ralph had to use wood, for his 'body would not bear coals'. Longton Hall, and the associated works at West Pans, utilised coal for the lower temperature firings. Similarly, coal was used in the china works of the 'Severn corridor', where nearby coalfields had long been exploited in conjunction with the iron industry, and specialist smelters had any prior claim to local wood. Caughley and Lowestoft also used coal.⁶⁸

Wood, however, was the preferred fuel of many early porcelain manufacturers.⁶⁹ Wood was used by the purists who had studied accounts of porcelain making in China, by De Halde for example, or knew of continental methods that had themselves been founded on eastern principles, and published by the likes of De Milly. The finest continental porcelain factories were very reluctant to change from wood firing to coal, but economic necessity led to its replacement in the early nineteenth century. Meissen resisted until 1839; in France the change took place from 1845, Sèvres adopting coal in 1849. But even after 1900, wood was still regarded as a superior fuel, and considered indispensable for firing sensitive colours.

It is therefore not surprising that non-potters aiming at the luxury market used wood to fire porcelain. The urban china works incurred large carriage costs for wood: Bow acquired ash and elm from Oxfordshire, while the Bristol works transported timber from 45 miles away in eastern Wiltshire. Cookworthy had even considered moving his factory in 1768 to Thomas Pitt's Cornish estate, to be near a source of wood fuel, although he did experiment with coal, too.

Coal, wood and its derivative charcoal were all capable of reaching high temperatures, but sometime between c. 1770 and 1790 there seems to have been a shift in favour of coal, at least for tasks requiring less sensitive firing control. Presumably this change was for reasons of economy and accessibility. An ex-Chelsea employee trying to find a patron to fund a Dublin porcelain factory argued:

⁶⁸Caughley had local deposits on site, see Whiter, *Spode* (1989), p305; S. Smith, 'Lazowski and the Lowestoft Works', *Connoisseur*, vol CXCIV (Feb.1977), p99. Suggests sea-coal was used.

⁶⁹Brollet recorded such sites in 1758 see Dragesco, *English Ceramics in French Archives: the Writings of Jean Hellot, the Adventures of Jacques Loius Brollet and the Identification of the 'Girl-in-a Swing' Factory* (1993), pp13-14; See also R. Haggard, 'Three Frenchmen in search of a Patron', *ECC Trans*, vol 10, pt5 (1980), p257. Hoping to manufacture china c.1746-9 they estimated the cost of 'firewood for ovens' at £10.8s.6d per month.

‘there are some very particular objections against any attempt of this sort in London. Wood and coal, two capital materials, are here very dear, besides the dearness of provision. These would always allow a country manufactory to undersell a London one’.⁷⁰

Duesbury was at this time paying Chelsea bills for ‘ChaCoals’, and the ‘cartage of wood’, with one employee regularly cutting wood in preparation for firing.⁷¹ However, for a single two-week period in 1772, about 70 tons of coal were delivered.⁷² At 11s. and £1.9s. per load, prices paid are not obviously higher than coal costs at Derby a decade later, then about £1.7s. per 2½-ton load. Rather than an annual stocking-up of coal reserves for year-round firing, it seems likely the purchase of coal at Chelsea was related to a specific factory task. Boyer had two summers earlier spent a four-week period ‘laying zaffer’.⁷³ This summer work would take advantage of two seasonal traits - quiet trade and cheap coal.

Similarly at Derby, few bulky items of raw materials appear to have been purchased ready-processed, yet many would have required some form of heat treatment. The first purchase of coal at Derby is recorded in autumn and late winter of 1783, when totals of 40 tons and 30 tons respectively were delivered to the works. This represents comparable quantities of coal previously recorded at Chelsea, and corresponds to the period when the southern works were being run down prior to closure. Presumably cobalt processing had shifted to Derby. By 1788 nearly twice this quantity of coal had been purchased, insufficient to fire a weekly biscuit kiln; its acquisition may still be linked to processing, various drying procedures, or more domestic-style heating.

The purchase of fuel is a ‘hidden’ cost in porcelain manufacture. To finish one ton of New Hall hard-paste porcelain, Holgate estimated that 10 to 12 tons of fuel would have been required.⁷⁴ Although the Duesburys’ china works never manufactured in large volumes, its fine processing requirements and decorative finishing must have made the Derby factory’s fuel requirements per ton of ware relatively colossal. There

⁷⁰B. Watney, ‘A china painter writes to an earl’, *ECC Trans*, vol 11, pt1 (1981), pp48-9. William Browne writing to the Earl of Charlmont, 1772.

⁷¹DL82 9/8, 9/5 John Townsend bills to WD, 1770, for ‘wood cartage, ChaCoal, shooting and trimming’, plus oats.

⁷²DL82 7/19 pocket notebook, probably owned by Boyer of Chelsea, with entries March 22-Nov.28, 1772, but the only deliveries of coal are confined to Aug.14 -28.

⁷³DL82 9/86, 9/87, 9/171, 9/172 Chelsea accounts July 21-Aug.18, 1770 Boyer’s paid task was ‘laying zaffre’.

⁷⁴D.Holgate, *New Hall and its imitators* (1987 edition), p26; Whiter, *ibid*, pp21-22 Spode I ordered 908 tons of coal, paid for quarterly, Sept.1776-7, while £1.3s.6d. of cording was billed, Feb., 1777.

are no records of finished porcelain tonnage for Derby, but Billingsley’s calculations to fire a weekly kiln-load of teawares at Pinxton in 1795 make a useful comparison:

	<u>Total Cost in £</u>	<u>%</u>
Clay and glaze 70 teasets or 332 dozen of teaware @ 1s.5d.per dozen	£23.10s.6d.	70.0
Coals to Burn Bisket Kiln and Saggars. 4 t.10c. @ 10s.per ton	£2. 5s.0d.	6.5
Wood to Fire a Glaze Kiln 3 Chord @ 18s.per chord	£ 2.14s.0d.	7.5
Men necessary to Fire the Kilns and Labour per week	£ 4. 3s.0d.	12.0
Clay for saggars and Making per week	£ 1. 8s.0d.	4.0

Resulting in a weekly expenditure of about	£34. 8s. 0d	

The Pinxton china works needed 312 tons of coal per year to fire its biscuit and saggars; and 500 tons of wood for glazing, costing £156 and £140 respectively. However this would only have produced white ware; another £20 was estimated to decorate twenty, or one third, of the surviving sets in ‘Midling and Lowest stile’. Billingsley, in his attempts to equal Duesbury’s plainest useful ware, was to use 812 tons of fuel to fire the porcelain - not to process materials on site with heat-treatment, nor to burn decorative finishes. An extra £40 was allowed for coal to power the steam engine.

To the purchase price of the fuel must be added carriage. Billingsley’s original estimate neglected this, so although he did purchase cord wood in early 1796 for 10s.6d per cord, it cost him a further 4s. to 7s. a cord to transport it. Few records of coal deliveries appear to have survived at Pinxton; presumably this was easily bought from the Coke mines.⁷⁵ It was not unusual however, in the ceramic industry as a whole, to find that carriage of fuel more than doubled its final cost. Location, and improvements in the transport infrastructure in the later Georgian period, had considerable influence on such costs. Duesbury in the early 1780s was paying 13s.4d per ton for coal from the Derby Wharf; ten years later Denby coal could be bought at 2s.6d to 3s. per ton, but with a similar price on top for delivery to Derby. In 1820 Wedgwood was charged between 3d and 9d per ton for carriage, with coal priced between 3s 6d and 7s.6d per ton.⁷⁶

The Derby china works’ total requirements for fuel would always have been proportionately larger even than Billingsley’s ‘ideal’ factory, because of the finer degree of finishing, greater variety of ornamental and useful wares, and processing of

⁷⁵Exley,ibid, p42 .
⁷⁶Haggar, ibid (1972-3),p20.

raw materials. Evidence would suggest that a conservative estimate for the Derby factory's fuel requirements per year in the early 1790s would have been in the order of 350 tons of coal and 600 tons of cord wood.

Problems particularly associated with the acquisition of cord wood may well have necessitated a reappraisal of the use and quantities of fuel used at the Derby china works from the mid-1780s, but at a time when coal could be had in Derby increasingly cheaply.

Technological experiments and improvements at Derby, c. 1789-95

The improvements that were instigated by Duesbury II from 1789 covered the whole range of firing technology from sourcing new clays, building kilns to experimenting with fuels. The factory documents suggest few procedures were left untouched, for they were inextricably linked one to another.

Duesbury II's initial preoccupation seemed to have centred around the control of the kiln temperature. From the summer of 1789 he commissioned metal plates, screws and cylinders from the foundries of Richardson and Smith in Chesterfield, and Foulgham in Nottingham. Sketches of cylinders and tools incorporating such metal pieces, annotated with dimensions, survive from this period: one is marked 'pyromitor', another 'Cont.n. Machine'. In 1790 the kilnman Jacob Spooner and his son had to sign the first of a number of agreements promising not to divulge secrets relating to the 'machine invented by Duesbury ... intended to exhibit the contraction of earthen bodys when in the fire'. Early in 1796 John Musgrove was similarly sworn to secrecy relating to the biscuit trials, and smoked glass spectacles used to view the ware without letting air into the kiln.

Duesbury was asked by Vulliamy in the summer of 1792 if he had ever used a 'Wedgwood Therm.' or had compared his body with it.⁷⁷ The Derby ceramicist answered in the negative, but the following spring Lygo asked Duesbury if he wanted to purchase a Wedgwood thermometer from Lord Bute's sale.

By spring 1790 Lygo had been enlisted to track down a Lambeth fireman who was already setting up an artificial stone manufacture. Lygo also visited works at

⁷⁷Wedgwood had published his discoveries in the *Philosophical Transactions* in 1782-4, and manufactured 40 pyrometer sets between June 1786 and February 1787.

Vauxhall and Coadestone, where he was asked to obtain samples of modelling and artificial stone body clays.⁷⁸ The unnamed fireman, who was self-employed, eventually agreed in principle to come to Derby for a week or two 'for the building of kilns upon the same construction as his own'. Duesbury's aim was to 'biscuit our useful ware ... without smoaking it'. Derby clay was to be sent secretly to London to be made into cups and small test pieces, apparently at the Vauxhall manufactory, and some 'large hazardous things that would bear packing and carriage to London' were to follow to 'test of the value of the kiln and mode of firing'.⁷⁹ The first trial proved something of a failure for of the six pieces provided four were broken by the fireman on his way home, and the other two discoloured in firing.

Meanwhile Duesbury was making his own trials using wood, and 'small boy' figures. Records of these trials are unique, being the only surviving evidence for wood-firing in the British china industry. However only a fraction of Duesbury's original systematic record-taking has survived.⁸⁰ Duesbury observed the rather arbitrary manner in which his two kilnmen Musgrove and Spooner filled the kiln mouths 'round for round alternately' with wood. Problems with smoking were rectified by noting the burning qualities of different woods, or venting saggars with rolls of clay mixed with pipe clay and grog, discontinuing 'Smiths Clay'. Biscuit boy figures were variously dried and fired, and their weights recorded before and after firing. As well as preventing smoking Duesbury was also looking for more economic use of his wood, noting: 'I cannot help suspecting we apply our Fire as cautiously as the French - but they may be in possession of some peculiarly constructed Furnaces that require less Oak in the working which is a very desirable matter.'

Although the Derby factory acquired charcoal, there are very few references to its use. In 1792 Lygo was sent to spy on Tom Belfield's enamel kiln (probably Wedgwood's London decorating kiln) and the manner that he used charcoal.⁸¹ If Belfield seemed agreeable, Duesbury was to call himself and 'give him something handsome for the plan of his Enamel K.'

⁷⁸Lygo failed to get a sample of Coadestone or 'Lithodipyra', the strength to make large figures was derived from high proportion of grog mixed with kaolin, perhaps akin to Bradley's advised clay mix.

⁷⁹DLS old ref. 814. Letter WDII, Oct. 31-Nov.1, 1790.

⁸⁰E.g. DL82 6/95 Aug.22,1790, refers to 'boys' made from a variety of body recipes, all to be marked '471' presumably the trial number; DL82 6/126 'In vol 1, Tryal Bk. No (601) dated Nov 13-15, 1790. re. 'a sagger full of Boys (biscuited) in Glaze Kiln' using a number of different woods. Therefore within a ten week period Duesbury II appears to have made 130 trials. Also DL82 6/132 Nov 6,1790 records observations on the manner that wood was loaded into kiln mouths, and quantity of wood used; DL82 6/95 records variation in weight of 'boys'.

⁸¹DLS old ref. 221.

Preparation of enamel and gold

Cobalt

The Chelsea factory's own 'laying of zaffer', combined with Lygo's purchase of cobalt, would suggest that the finest porcelain factories processed their own cobalt. After 1770 the Duesburys produced little under-glaze blue wares.⁸² The majority of the cobalt was used for the popular 'Smith's blue' border patterns combined with gilt, and ground colour 'gros bleu'. A small amount was used as a 'whitening agent' in the china frit. Cobalt processing had been a highly specialised job until the 1780s, when expertise became widespread throughout the Potteries following Cookworthy's sale of his recipe for 'trifling sums, [of] £10 to £12'.⁸³ The raw material however remained expensive, being imported from Germany; Lygo's purchases suggest that prices of at least 'common' cobalt had dropped by mid-1792.

The real expansion of cobalt use post-dates 1807, and the discovery of a good cobalt vein in Redruth, followed in 1818 by one in North Wales. Cobalt refiners and smalt works soon appeared in Hanley, but also Ferrybridge.⁸⁴ Thomas Daniel's notebooks show that in a three-month period in 1808 he was processing nearly 300 lbs of common cobalt and over 250 lbs of the best sort for the ceramic trade. Daniel's customers for cobalt and enamels included local clients like Wedgwood and Byerley, Minton, Greatbach, Poulson, Mayer, and Ridgway, but also, further afield, Chamberlain at Worcester. The use of printed blue decoration shifts considerably to a more middle, and eventually lower, market following the fashion and easing of supplies and techniques by the late Georgian era. Blue and white transfer-printed pottery was to become the epitome of Staffordshire ware. The Derby factory under Bloor continued to use a blue ground colour, as part of the rococo revival, but then so did many other English porcelain factories.

Enamels

The Derby factory also prepared its own colours, along with gold. Elliot points out this aspect of ceramics was the most complex in the whole manufacturing process, requiring some considerable knowledge of chemistry; Duesbury I's expertise as an

⁸² Although in 1776 Duesbury had advertised for 'hands in the blue way'.

⁸³ Simeon Shaw (1829) quoted in Haggard, *ibid* (1972-3), p28

⁸⁴ H. Blakely, 'Fire insurance policies, 1793-1815', *NCS Journal*, vol 3 (1980).

enameller should not be underestimated.⁸⁵ It was a specialist industry, most frequently carried out by independent workshops, supporting the London luxury trades well into the nineteenth century. In the mid-1760s Staffordshire was poorly equipped with skilled colour makers and decorators, and Wedgwood was obliged to set up a London workshop. The Daniel family ran one of the largest enamelling firms in the Potteries, and from 1805 managed the Spode enamel shop.⁸⁶

Even at Derby the preparation of enamel and gold for factory use appears to have remained largely an independent section within the china works. In 1770 John Frost was at first apprenticed as a porcelain painter to Edward Phillips, not to Duesbury I; similarly three years later William Smith was initially apprenticed to his father, Constantine, 'in that art or mystery of preparing colours, painting and enamelling Porcelain'. Ex-Derby decorator John Hancock in Hanley supplied prepared pigments for further processing.

Smith's 1790 contract obliged him to work on the recipes, preparation and composition of enamels, taking particular care to provide Duesbury with the results of any experiment or observation. He was to be subject to a punitive £500 fine if he disclosed any of these secrets, had to give six months' notice to quit, and faced a penalty of £100 if he entered into anybody else's business. Factory records show that gold was being processed by Smith in 1790 in a manner suggesting he was largely self-regulated. Kean astutely pointed out that although William was 'nominally overlooker of the painters, he also made colours and prepared the gold - he did not properly execute the office of overlooker, as he was but little in the factory, having his own business to attend to, & he made colours and prepared gold in a private room, and without his processes being known to his employer'.

The quality of the decoration on surviving Derby porcelain is a testament to the enamel shop's ability, particularly in the development and improvement in the variety and depth of ground colour. Many of Derby's eighteenth-century decorative schemes were copies of Vincennes and Sèvres; nevertheless between 1770 and c. 1800, no other British, nor many continental, porcelain factories were capable of matching its colours or gilding. The enamel shop at Derby served as a more general laboratory for experimental glazes and bodies, too.

⁸⁵G.Elliott, 'Wedgwood and De Milly Compared', *ECC Trans*, vol 16, pt 2(1997),p226.

⁸⁶Whiter, *ibid*,pp38-59.

Mechanised decoration and transfer-printing

Holdgate posed the question 'How could a factory function successfully during the period 1781-1835 without taking advantage of the repetitive techniques which increased the speed and economy of reproducing a given design?'⁸⁷ In Derby's case the answer must be by the deliberate choice to remain within the luxury market. Duesbury I briefly produced transfer-printed designs c. 1765-69, at a time when they were still rarely used by any ceramic firm, being largely confined to the china wares of Bow and Worcester, and pottery and tiles used by the Liverpool printers, notably Sadler and Green. Tyneside potteries took to the technique at the end of the 1760s, and a few North Staffordshire firms were using the process by the close of the next decade. As such, transfer-printing was still a novelty, and could easily incorporate fashionable or topical themes into a design. Worcester porcelain successfully adopted this option, as did Wedgwood. Yet the Derby management deliberately chose not to continue with printing. Neither Kean nor Bloor readopted transfer-printing despite considerable improvements in the attendant processes and the popularity of such designs from the 1820s.

Subsequently all forms of mechanical aid in the decoration department were frowned upon well into the 1790s, not just by the management but by the artists themselves. It was in their interest to preserve the impression that 'free-hand decoration' was superior, thus commanding the better wages for their expertise, and keeping out the cheap labour supplied at other factories by women and children. Apprenticed c. 1785, Samuel Keys recorded: 'all circles, lines, and edges were done by hand. Painters resisted the wheel being used in any other way, one workman who was trying to match some red lines on a pattern, attempted to use a wheel but they were rubbed out, and the head of the wheel taken out and hid. In the end he was allowed to do them, by proving how much better and more true the lines were. Privately after that, some gold circles, etc. were done, and the use of the wheel became more general and useful.'⁸⁸ By the Bloor period some cheaper female painters were employed.

⁸⁷Holdgate, *ibid*, p56.

⁸⁸Samuel Keys, June 21st, 1837 recollections of the Derby factory largely under Duesbury II, in Twitchett, *ibid*, p46.

Gilding on porcelain

Surprisingly little contemporary evidence records the nature and development of gilding on eighteenth-century English porcelain.⁸⁹ Mid-century, most were using unfired gold leaf stuck on with some form of sizing medium. The Chelsea accounts mention 'gum for the gold ... 3d'; however these works were also capable of producing a more durable fired gilding, as recorded by Wedgwood in 1765.⁹⁰

Meanwhile on the continent Meissen and Sèvres developed their own methods of gilding appropriate to their hard and soft pastes. At Meissen from the 1730s a 'ferrous sulphate' precipitated gold was used, while the French soft-paste factories in the 1750s created their own technique of 'honey gilding'. The latter was thick and dull, but allowed decorative tooled and chased effects. Honey-gilding was used at Chelsea post-1758, Dr Wall's Worcester, and Chelsea-Derby. When Sèvres introduced their own hard-paste porcelains in the early 1770s they too used the Meissen precipitate technique, but found it costly and developed a similar method using mercurous oxide. 'Mercury gilding' allowed far more elaborate and finely detailed designs in the gilt decoration, which are very characteristic of porcelain in general of the first decade of the nineteenth century. It was widely adopted by the Parisian factories following the relaxing of gilding prohibition. Hunt suggested that John Flight introduced the Dihl factory's recipe to Worcester following his visit to Paris c. 1789. Honey-gilding was still in use at Chamberlains of Worcester in 1797.

Gilding at Derby

The use of gilding at Derby illustrates Duesbury's dilemma as to whether he was to make the finest luxury porcelain, or a more commercial ware that looked the part yet could be sold at a competitive price. It was to Wedgwood's advantage to all but abandon gilding after 1770, but gilding is what differentiated Derby from the common monochrome porcelains from the East, and even the majority of the production of the Flight and Salopian works. The Derby management was aware of variation in purity, and quality was differentiated, Lygo for example having previously 'sorted out indifferent gold'.

⁸⁹See L.R.Hunt, 'Gold in the pottery industry', *Gold Bulletin*, vol 12, no3 (July 1979), pp116-127, and P.Bradshaw, 'The gilding of European ceramics', *NCS Journal*, vol 14 (1997), pp81-6.

⁹⁰D.Towner, 'A miscellany of pieces', *ECC Trans*, vol 4, pt 4 (1959), p8 quoting from a JW letter.

In mid-1784 samples of silver were also ordered from the verditer as trials.⁹¹ Adding silver would considerably reduce the cost of gilding, and other metals could also have been considered. The director of Sèvres, Brongniart, in the next century commented that traces of copper were added to the gilding by some manufacturers in imitation of honey-gilded antique Sèvres, while at Meissen admixtures to the gold could create various tones from 'old Ducat Venetian', whitish or greenish gilding.⁹² From the later 1780s Sèvres produced metal-effect finished wares imitating bronze and burnt steel, the latter created with platinum; it is likely that the Smith workshop experimented with these effects. One dessert pattern with wide gilt floral border, datable to early 1792, certainly suggests a non-mechanical tonal range to the gilding; 'bronzed' gilding is apparent on slightly later pieces.⁹³ However the first recorded use of platinum in this country to create steel lustres is attributed to John Hancock in 1805.⁹⁴

Experimentation was being carried out from late 1788. Lygo had been quizzed about the nature of the gilding, but replied 'I have not noticed any particular difference in the gilding lately, but the number of the hand the ware is gilt by is very often omitted'.⁹⁵ Eighteen months later Lygo had been sent two gilded trial patterns for evaluation; the showroom manager thought 'The pure gold is much the finest ... & as we have got a good name for gilding I would ever wish to keep it; but you might try a few pieces of each'.⁹⁶ However the 'less pure' was preferred by Egan. Years later, in 1837, when Keys was recounting his short history of the eighteenth-century Derby works, he made specific reference to 'Thomas Soar and Joseph Stables, the only men who used gold, and that genuine brown gold', implying at least two different sorts of gilding were simultaneously used at Derby at the close of the century.⁹⁷

The most obvious development in Derby gilding occurred from February 1791. Mr Johnes of Hafod, one of the works' more influential clients, had asked for a saucer

⁹¹DL82 1/4 Aug.2, 1784.

⁹²G. Sterba, *Meissen Domestic Porcelain* (1991), pp23-4.

⁹³A number of pieces of dessert ware of the botanical pattern '115', mentioned in Lygo's letters May 1792, in Derby Museum have noticeably thick gilding with the harebells 'shading' from pale gold to copper-bronze- a considerable visual difference from the thin 'flat' mercury(?) gilding on the same pattern but c.1815. While a pair of Derby plates c.1800, with figures subjects, have highly ambitious decorative borders of dark bronze and gilt.

⁹⁴At Daniels, Nov.1805. Platinum was dissolved in mixture of hydrochloric and nitric acid (aqua regia)- a method also used for creating gold precipitate, although it is known to have consumed a large quantity of gold.

⁹⁵Lygo, Dec.25, 1788.

⁹⁶Lygo, June 17th, 1790.

⁹⁷Twitchett, *ibid*, p45. There seems to be confusion as to exactly what 'brown gold' was, Hunt, *ibid*, believes it to be the gold precipitated from the ferrous sulphate method, while Haslem, *ibid*, p126, gives a mercury recipe.

‘as a pattern gilt all over in the inside to imitate gold’, and a gilded figure of Ariadne. Within three weeks a trial piece of the former had been returned to London, and although it had some imperfections it exceeded the customer’s expectations. Johnes wanted an estimate for gold-ground table plates, and Lygo had queried ‘will it bear knives and forks’ or would a blue middle be more durable? While the trial pieces were being made Lygo discovered that one of the usual gold suppliers had raised the price of gold by 3d per ounce to £4.5s.3d. The day after Johnes’s visit Lygo sent 2 lb. of quicksilver to Derby at a cost of 8s.4d, with 3d for the bottle. ‘Some red stuff for glossing gold’, presumably jeweller’s rouge, followed. By late the next year even the nature of the gold supplied had clearly changed: bar gold had replaced the grain. Lygo suggested: ‘no doubt but it will be kept a secret from any other trade, the sort you use’.⁹⁸ Mercury continued to be provided.

The quantity of gold used by the factory since the beginning of Duesbury II’s management had gradually increased, but in 1792 the amount of gold purchased in London by Lygo rose by 25%; the following year this had increased by 50%. Lygo was clearly concerned by this dramatic rise and asked Duesbury: ‘Have you noticed the large quantity of gold that has been used lately and the small quantity goods sent here’; and at this point hoped this was due to a large sale in the country. Nearly £1,000-worth of gold was being sent to Derby while less than £5,500-worth of finished enamelled wares was being returned.

The capital’s manager continued to complain of the discrepancy, being at ‘distress to think how it all consumed, for since I made my first remarks there is still a quarter increase in consumption’. Similar sentiments were forthcoming in May 1795, and that at a time when fewer finished goods were being sent to London. Although there were a few patterns akin to Johnes’s produced with gold grounds in 1794-5, like cabinet cup ‘351’, there was not a conspicuous increase in gold wares. In fact sales of totally undecorated ornamental biscuit had risen in this period. In mid-1793 a single seven-ounce order from the reputable and often-used firm of Plank was said to be underweight. Protracted arguing and testing of scales ensued, but the loss was never solved. Either the gold was being pilfered, or being lost in experiment and preparation of gilding, or both. Duesbury and William Smith may not have created the mercurous oxide method of precipitating gold, but the true mercury amalgam used by gilders of metal. This involved dissolving gold in purified mercury, evaporating the excess quicksilver and separating the amalgam with nitric acid to leave a fine gold powder. The process was costly and dangerous. In 1797 Billingsley

⁹⁸Lygo, Nov.5, 1792.

at Pinxton commenced ordering mercury along with 'aqua fortis' or nitric acid. Although Sandon suggests that 'it is still not clear whether any factory in the eighteenth century actually used the alleged true amalgam made by dissolving gold, either leaf or powder, in liquid mercury',⁹⁹ it would appear that in the last decade of the century this was indeed the technique used at Derby, and later at Pinxton. Certainly Kean-era porcelain shows the popularity and development of the gilding, incorporating large areas of gilt ground or deep scrolling borders, as well as tooled-effect multi-toned 'gilded' pieces.

By the Bloor period, gold decoration is disappointingly flat and thin. A visitor to the Bloor factory in 1818 remarked: 'the gold with which it is splendidly ornamented is reduced to a liquid previously to its being placed upon the different articles to which it is applied; they are then committed to the fire when the gold reassumes a solid form and is afterward brilliantly burnished'.¹⁰⁰ By 1832 Bloor's works employed 18 decorators, 41 gilders and 32 burnishers - such was the ease and cost of gilding itself, but it still required considerable finishing. Modern 'liquid bright gold' which needed no burnishing was developed at Meissen in the mid-1830s.

Derby secrets divulged

The relative decline of the Derby porcelain factory can in part be explained not by any deterioration in its products, but by the increasing abilities of others in achieving wares of similar and consistent qualities. Within a short period at the turn of the eighteenth to the nineteenth century, a number of 'inventions' are attributed to Staffordshire producers that would appear to have had their roots in the Derby China Works of the 1790s. For a brief period, c. 1796-7, both Duesbury II and Kean lost many of their key workmen across all branches of the business.

Billingsley having set up at Pinxton was soon joined by the kilnmen Jacob Spooner and John Musgrove, who were closely involved in Duesbury II's secretive kiln trials. Kean replaced William Smith with Thomas Soar as overlooker, and Haslem suggests that Smith may have left the factory to set up an independent decorating shop in Derby.¹⁰¹ By the close of 1796 a 'Smith' was paid by Billingsley at Pinxton for gold, with 'prepared gold', mercury, aqua fortis, borax et al. following on the next year, while a 'Derby man' was paid for grinding colours. It seems likely that William

⁹⁹H. Sandon, *Flight and Barr Worcester Porcelain* (1978), p182.

¹⁰⁰Twitchett, *ibid*, pp63-4.

¹⁰¹A William Smith is listed in the *Universal Trade Directory* (1791) as 'painter and potter'.

Smith provided such raw materials and advice relating to fine decorating methods, although Jewitt suggests George Hancock was employed there for a time.

In 1819 the Duesbury-Kean receiver issued receipts for '4 books of colours ... 2 books receipts for china compositions the original given Mr. K by WD for making useful and ornamental Brick useful, & ornamental Bodies & useful Glaze'.¹⁰²

Whether any of these recipes were sold to Bloor in 1811 is unknown, but Barrett and Thorpe detail a number of frit, body and glaze recipes reputedly used 'at the Derby factory during the last thirty years of its existence'. Recipes are attributed to Hancock, with three dated to 1836-7. However the raw materials and methods differ little from those described in documents relating to the factory under Duesbury II. 'John Hancock's New Body' for 1836 includes 4% by part of barytes. Could these recipes be not so much new, as reworkings or even copies of earlier Duesbury ones? What happened to these important books between c. 1796 and 1819?

Having got rid of William Smith, Kean would have had to find a processor and supplier of enamels and gold, and Hancock, then still apparently an independent supplier, would have been well known to him. Perhaps Derby recipes were given to Hancock; significantly, a number of metal-lustre discoveries are attributed to him, including platinum lustre.¹⁰³ Henry Daniel's contemporary workshop notebooks confirm an established relationship with Derby, and the provision of 'blue as made by Bageley for Derby china manufactory to gild upon. Hancock's blue the same'.¹⁰⁴ But as Simon Shaw wrote: 'It has been asserted that [Hancock] only introduced the practice of what had been some time before invented at Derby',¹⁰⁵ although adding 'but the total silence of Derby tradition discourages the assumption'; no one was left at Derby who knew Duesbury II's secrets. Daniel tried to hide the steel lustre recipe from Spode. In 1811 and on the winding-down of the Kean enterprise, Hancock was still owed a guinea, although others also had outstanding bills for similar services: Booth at nearly £30 for enamels, and one untraced enameller, Haydon, was owed £663.¹⁰⁶

Later, in an attempt to cut his losses, it is possible that Kean may also have offered Duesbury's recipes for bodies and glazes around the Staffordshire potteries.

¹⁰²BM.BP.f1511.

¹⁰³E.g. Within three months of arriving at Daniel's workshops at Spode in 1805, Hancock had added recipes for 'pale gold' combining silver with gold: 'half an ounce of prepared gold to 12 grammes of prepared silver', or 14 parts gold to 12 of silver.

¹⁰⁴Whiter, *ibid*, p55.

¹⁰⁵Simeon Shaw *History of the Potteries* (1829), quoted in Haslem, *The Old Derby China Factory*, pp126-7; in 1846 Hancock had written to the *Staffordshire Mercury* claiming the invention of lustre.

¹⁰⁶BM.BP.f2129.

Something akin to Duesbury II's ornamental biscuit technique appears in a number of Staffordshire potteries at the close of the eighteenth century. This innovatory procedure is usually credited to Cheatham and Woolley of Lane End, who 'created a new kind of pottery, a dry body, or without glaze or smear ... very fine in grain ... delicate whiteness ... the name it bears of Pearl, from Mr J. Spode'. Turner and Adams became leading exponents of 'pearl'. The Cheatham and Woolley recipe was later acquired by the Riley family: included were directions for a smear glaze 'to be placed in glost saggars washed every time they are used in the biscuit oven, with cream colour glaze'.¹⁰⁷ A further link to 'pearl' production at Derby is a jug, once owned by John Haslem, and attributed by him to Kean's earthenware production at the New Works, c. 1797-8.¹⁰⁸

Later John Mountford, an ex-Derby figure-maker, working for Copeland, tried to re-discover the Derby ornamental body, and in the process produced Parian ware.¹⁰⁹ From 1820 feldspar itself, mined from the lead mine on the Wales-Shropshire border, was being exploited by Spode, Ridgway, Minton and others to create greatly improved china glazes and bodies. Bone china was then marketed under the name of 'feldspar porcelain'.

The Hancock connection with Derby continues into the next generation. Haslem claimed that Hancock junior introduced to Derby c. 1819 an innovatory method of 'dusting finely ground dry colours on a surface previously oiled ... the mode ... at first kept a profound secret'. This description bears a remarkable resemblance to Hancock senior's work for Duesbury II in 1790, when he recalled: 'I smear'd the glass vere thin wit Oil before the [?] gleu was power'd on'. Such techniques were in fact practised at Sèvres before the Revolution, and would have been recognised by Duesbury and Lygo. Deep-coloured 'dusted' enamel grounds and varying shades of 'gilding' can be seen on Derby pieces from the later 1780s, and, admittedly small, quantities of the associated raw materials are recorded in the East Midlands' factory accounts. It may not be coincidental that the Hancock family returned to work at the

¹⁰⁷D.Hollens, 'Some researches into the makers of dry bodies', *ECC Trans.*, vol.11, pt.3 (1983), p222. quotes from Shaw (1829), and p225.

¹⁰⁸Derby Museum, Haslem Bequest, acc.no.1884-166/32. The original handwritten Haslem label stuck to the base of the jug reads: 'Derby Creamware? one of the pieces alluded/ to in my book in the Old/Derby Factory- then in the / possession of J.B.Robinson/ J.H'. See Haslem, *ibid*, p32. The '?' quite rightly indicates the piece is not creamware, but a dry-bodied biscuit. In private correspondence (Sept.29,1997) the present curator, Anneke Bambury, has confirmed the jug has 'a bright orange translucency, and appears to be biscuit china'.

¹⁰⁹A.Fay-Halle and B.Mundt, *Nineteenth-century European Porcelain* (1983), p165. The success of Parian was assured by Benjamin Cheverton's invention, c.1844, of a machine capable of reproducing sculptural figures to a reduced scale.

Derby factory in 1819, the same year that Kean officially returned the books to the Duesburys' receiver.

Bone China

Spode has been credited with developing bone china 'in quality superior to any previously made in England, and in imitation of that made at Sèvres, which it equalled if it did not surpass, in transparency'.¹¹⁰ Simeon Shaw was 'not aware of the person by whom was made the first [bone china]'. The difference between a phosphatic porcelain containing a high proportion of bone, and true 'bone china' lies in the combination of other ingredients, largely china clay and china stone, and smaller amounts of quartz, whether derived from flint or sand. Although Chelsea-Derby wares contain up to 45% of bone ash, quartz was of greater proportion than kaolin, and this early recipe lacked the feldspar content found in china stone. An insufficient number of Derby porcelain items c. 1770-1800 have been scientifically analysed, to confirm whether something approaching a 'useful' bone china body was ever produced at Derby, pre-Bloor.¹¹¹ However, from the nature of 'clays' and 'stones' the Duesburys used or tested pre-1796, it is highly likely that a body within the 'bone china' range was made, perhaps suitable to 'stand sudden heat better', or to be coal-fired.

Recipes for 'bone china' certainly proliferate in the Staffordshire ceramic industry from about 1805, and this would be expected following the end of Champion's patent on the use of china clay and stone in 1796. The Wedgwood company, which under the management of Josiah had steadfastly refused to manufacture porcelain, produced its own trial china body in 1811.¹¹² Abner Wedgwood's recipe book interestingly records the variation and problems even this established pottery had in creating suitable bone china throughout the 1820s. One body was 'too soft ... for our present fire', while experimental bodies were made to stand 'our hardest fire' or for 'vases and large pieces'. Wedgwood appears to have ceased commercial production of bone china c. 1822. Its bone content was in the region of 25%, with not a vastly dissimilar proportion of flint quartz, but this was 10% to 25% less bone than that of Spode, Mason or Herculaneum china bodies. Admittedly the great ceramicist Josiah

¹¹⁰ Shaw(1829) in Whiter,ibid, p55 and 25.

¹¹¹J.V.Owen and R.Barkla, 'Compositional characteristics of eighteenth-century Derby Porcelains: recipe changes, phase transformations and melt fertility', *Journal of Archaeological Science*, vol 24(1997), p136, table 7, shows a single bone china sherd, a coronation figure of Victoria, to have a composition of 40.6% bone, 34.3% kaolin, 21.6% quartz and 3.5% calcite.

¹¹²R. Haggard,ibid (1972-3).

Wedgwood had died in January 1795, but it is surprising that neither he nor his chemical assistants had anticipated the commercial use of bone china, if its 'discovery' was so easy. This makes Spode's 'invention' seem less probable.

In August 1797, on the death of his father, Spode II was a self-made London ceramic merchant with a 'great Aptitude for Business', yet he had inherited a Staffordshire pottery producing 'middling' wares.¹¹³ Spode II's appearance as a ceramic manufacturer at this time was most opportune, and he was a likely contender to take on a new venture: the commercialization of a 'tried-and-tested' porcelain body. The Derby china works was realistically the only firm that could have trialed and created such a paste, although the Duesbury recipe might have been divulged from any number of sources. Spode could have easily adapted the body to use the plentiful supplies of Carloggas Moor china clay and stone deposits, that ironically Kean had failed to obtain in 1799. The Staffordshire firm continued to improve the porcelain; Daniel recorded in his notebook in 1817: 'Mr Spode's New China Body ... as good as French'.

¹¹³John Ward in Whiter, *ibid*, p19.

Conclusion

The location of the Derby China Works was clearly important to the factory's initial success: an early regional centre of gentility, the town benefited from early turnpikes and river navigation. Other advantages over North Staffordshire included the opportunity for water-powered milling, a great variety of local raw materials (including 'a very pure stone found in Derbyshire'), and significant supplies of wood for porcelain-firing. At a day's ride, the Potteries were close enough to keep in contact with the trade, for example in the person of Hancock.

Some seasonal resourcing had been built into the cycle of production at both Derby and Chelsea; the result under Duesbury I was an efficient balance between the capital outlay on materials and return of funds from sales. The Duesburys exploited the potential of the armed mail coach that provided safe 20-hour deliveries of a whole range of materials and finished goods. Lygo would have found it impossible at times to buy specialist raw materials, such as yellow enamel, in anything but small and regular quantities, but such acquisition had its advantages: limiting the need for large capital payments, neither allowing extended credit to accumulate, nor fixing suppliers. As such the Derby management was able to pursue an eighteenth-century 'just-in-time' policy. The Derby China Works benefited comparatively little from the economies that the Trent and Mersey Canal gave to North Staffordshire manufacturers; although there may have been benefits from the completed Derby canal system, with a wharf adjacent to the works, after 1796, evidence is limited to more cheaply available coal.

Although a survey of acquisition and processing of porcelain materials provides a chronology for the 'modernisation' of the Derby china works, the only external influence in this sphere that may have contributed to some change in practice was the problem of obtaining wood, combined with the comparative ease of obtaining coal. In the 1790s coal prices in Derby fell by half. But on the factory's estimated consumption of coal such savings were only in the region of £100 year, at a time when the factory spent at least eight times this figure on gold alone, and in the order of £35 per week on wages. Duesbury II reluctantly turned from wood to coal for biscuit firing, due to access to his preferred fuel, wood and charcoal, becoming more problematic. The factory proprietors no longer had control over the wood resources, as they demonstrably had in the 1770s. Charcoaled wood was carted from 30 miles away, and becoming increasingly expensive on turnpiked roads. Furthermore the processing of wood was also labour-

intensive and thus costly. Efforts were made to make wood-firing considerably more efficient, and it does appear that in 1790 the biscuiting of ornamental wares was successfully achieved with half the previous quantity of timber (in contrast with many British coal-fired industries which were wasteful of their cheaply available fuels). But any change to coal was only partial. Some other factor must have driven the need to improve the porcelain body, glazes, enamelling and gilding so dramatically at the close of the 1780s. Initially the spur was the highly decorative Sèvres pieces that came to Britain privately, but after 1787 flooded the fashionable market, but this was compounded after the French Revolution with the marked appearance of the robust yet fashionable Parisian hard-paste tablewares.

Duesbury II strove to perfect his biscuit porcelain, chiefly as a result of Vulliamy's influence, but in doing so created havoc with Lygo's commercial orders, disrupting the production of figures for Williams to export to Holland, and Daguesant to Cadiz. Duesbury instigated practical improvements to find a composition that would stand hot liquids, or even just the heat transferred from a hot roast joint in late 1790, followed within a few months by experiments to produce a durable gilt. But from the chronology of the Duesbury papers this was something of secondary importance to perfecting the ornamental biscuit body, and the direct result of customer complaint. There is no evidence that the technological changes increased output, nor substantially lowered the cost of production (save perhaps for fuel); such commercial considerations were of low priority. Duesbury II was reacting to external influences, primarily aesthetic competition from fine French wares, and secondly the technical superiority of the imported hard-paste useful wares. Perhaps because Derby porcelain was still based in the luxury sector, change was controversially demand-led into the existing but growing market.¹

Whereas Lygo had scoured London for suppliers, and Derby processed its own materials, these all became readily and consistently available by the turn of the century as more specialised suppliers, like cobalt processors or colour makers, were established. Many specialist producers swarmed together in the Potteries, taking advantage of shared resources and experience, while the following generations learned the skills unconsciously. Lygo's hands-on involvement in the bulk buying of flint and bone ash in

¹J.Mokyr, ed, *The British Industrial Revolution*(1993), p60-2, believes technological change takes place as demand for it arises is fallacious; D.E.C.Eversley, 'The home market and economic growth in England, 1750-80', in E.L.Jones and G.E.Mingay, eds, *Land, Labour and Population in the Industrial Revolution* (1967),p211, suggests innovation allows undercutting etc. into the existing market.

the late 1780s is unexpected; in the case of bone ash the trade appears not to have had sufficient capacity to produce any quantity of consistently fine material. Aesthetic competition rather than commercial practice was Duesbury II's driving force for change.

The Duesburys were innovative in British porcelain manufacture; although largely inspired by continental products, they controlled processing, adapting recipes to meet their markets. At least four basic body changes were made c. 1756-95, yet tried and tested wares of 'twenty years practice' were not just abandoned. Duesbury II was not unfamiliar with current scientific knowledge, but worked independently compared with Josiah Wedgwood, too aware that his ingredients and methods should 'be kept a secret from any other trade'. Unfortunately, post-1796, circumstantial evidence would suggest that these secrets had been divulged and used.

PART 5. HUMAN RESOURCES AND FACTORY FINANCES

Chapter 12. A modern factory: employees and discipline

Porcelain production under the Duesburys falls between the 'traditional' and 'modern' patterns of industrial development.¹ The diminished Chelsea works in the early 1770s functioned as little more than a craft workshop, with a few employees working in specific branches: modelling and repairing, painting, and clay and kiln work, and with workers doubling-up as supervisors. Even when thriving under Sprimont a decade earlier, the work patterns were probably similar: irregular, labour-intensive and seasonal - a traditional luxury craft industry.

The Derby factory, however, appears to have been more 'modern', although in common with the vast majority of the British ceramic industry it used little mechanisation. Porcelain production was intentionally labour-intensive, with, for example, the cessation of printing techniques by 1770. However this was far from a 'simple pot-bank', but an organised and hierarchical factory with trained and specialist workers. For over fourteen years, Duesbury I and his staff successfully managed four separate sites within the porcelain business: the main Derby factory, the mill over the Derwent, the Chelsea works, and the Covent Garden showroom, in addition to various tenancies.

The nature and size of the eighteenth-century Derby workforce

A nucleus of skilled London-trained porcelain hands may have joined the Derby works mid-century from the capital, including George Holmes the repairer, and Constantine Smith the enameller,² while Duesbury would have added to the firm's initial expertise. Heath and Duesbury built up their skills base with formal training from at least 1760. 'Boys of 13 to 15 age [were] bound apprentice to a branch of the business'; most recruits of the 1760s and the 1770s were local, sons of labourers, small-scale craftsmen or widows, whose families had no ceramic connections.³

¹J. Mokyr, *The British Industrial Revolution: an Economic Perspective* (1993), pp1-13; M. Berg and P. Hudson, 'Rehabilitating the Industrial Revolution', *EHR*, vol 45 (1992), pp25-50.

²J. Twitchett, *Derby Porcelain* (1980), p266.

³Apprenticeship indentures: John Winrow, son of Duffield innkeeper, painter (1765); George Bradbury, son of a Little Chester labourer, repairer (1765); trainee painters included Joseph Bullock, son of a Derby frameknitter (1765), Thomas Southwall son of Derby pincher (1772), John Porter of Spondon son of widow and William Cooper son of a Derby widow (1777), Benjamin Brocklesby, a Derby labourer's son (1783) Repairers and throwers included John Morlidge son of a hatter of Derby

William Smith and William Copper appear to be notable exceptions, although later dynasties of decorators like the Keys and Hancocks owed their origins to Duesbury I's apprenticeship system. Legal agreements were not limited to apprenticeships, but included journeymen in specific named branches such as fireman, mould maker, 'handle and presser of china', and painter. The training, combined with specialist skills and division of labour of the early Derby porcelain works employees, predates Wedgwood's attempts 'to make Artists [of] mere men' or 'machines of the Men'.⁴ The Wedgwood archives contain few hiring agreements, or apprenticeships, related to the Staffordshire manufacturing processes during the 1760s or 1770s. Recruitment outside the ceramic industry may have worked to Duesbury's advantage, for Wedgwood's ambitions to produce fine pottery were hampered by some of his employees' bad habits, picked up in the local coarseware manufactories. Duesbury initially utilised the highly specialist skills of London model and plaster workshops, like the Deares', but increasingly commissioned models or moulds.⁵ Duesbury paid John Bacon £102 0s.8d for 'modells' provided over twelve months commencing from October 1769; in the same year Wedgwood paid this modeller £9.15s.⁶ The potter had already observed that 'thoroughly clever' modellers were unlikely to settle 150 miles from the artistic hub of London. This may have been part of the attraction of the Chelsea works, for Duesbury I successfully employed the likes of Gauron and Stephan there, before the latter worked at Derby. London-based sculptors such as Webber or Rossi produced models for Duesbury II, but Spangler and Coffee were employed at the factory.

Duesbury's wage bills indicate seasonal employment in the early 1770s, with weekly payments totalling over £47 in March 1771, declining from mid-June by £12, before increasing in the autumn.⁷ It is unknown whether these figures were solely for the Derby factory, or included Chelsea. Only eight named workers were regularly paid at Chelsea at this time; some variation in expenses resulted from overtime, notably for Boreman, one of the most expensive employees at 3s.6d per day.⁸ Derby accounts covering December 1783, a year of bad harvests and depression, would indicate rates of employment had lowered, with wage bills lessening to £25-30 per week, while the

(1777).

⁴N.McKendrick, 'Josiah Wedgwood and factory discipline', *The Historical Journal*, vol IV, pt 1 (1961) p30-55. Quotes from Wedgwood's letters of 1769-73 in his argument about the division of labour; by 1790 his staff had specific jobs.

⁵The 'sculptural' aspect of Duesbury's works have been studied and published in detail, see T.Clifford (various) and his extensive bibliographical notes, and B.Bricknell, *Derby Modellers 1786-96: Extracts from Original Documents* (1995).

⁶KUL. Wedg. Acc. L1-37

⁷DL82 7/17 and 7/2

⁸DL82 9/69-178. Boreman was the best paid in 1772; in 1773 Gauron received 8s. 9d. a week

following August they were £20-29. The Derby works appears to have closed down for a fortnight over Christmas into the New Year,⁹ yet over this period Duesbury employed an ex-Chelsea decorator, Richard Roberts, for two months every year, having got special release from the Royal Chelsea Hospital.¹⁰ By 1788 the seasonal trend is not so marked, although summer months were slacker, with the yearly wage range between £28 and £34 per week.

There are no management statistics for the size of the Derby workforce pre-1792, although at the close of the Duesbury I era a number of contemporary writers suggested about 70-72 people were employed, the size of the Old Works being a limiting factor.¹¹ However, visiting early in 1785 de la Rochefoucauld recorded 300 worked at the site.¹² Surely this was an exaggeration, perhaps based on a worker's boast; fourteen years earlier, Lady Shelburne had been told that 600 were employed at the Worcester china works, instead of the more likely '160 persons' including 'a vast number of ... very little boys'. By comparison, Bow 'employed about 300 Persons, about 90 Painters, and about 200 Turners, &c ... under one roof'. Lowestoft in 1784 had between 90 and 100 hands.¹³ These three factories were more commercially based than post-1770 Chelsea-Derby, producing more middling wares with less skilled labour. In 1769 Etruria employed 30 hands to make vases; in 1779 200 were employed there.¹⁴

In 1792, Lygo, giving evidence to the Privy Council for Trade, claimed 'in Derby the number of persons employed is from 130 to 140'.¹⁵ Flight indicated nearly 150 worked at the Worcester factory, 'besides painters and burnishers in London'. The account of Mr Shaw, one of the proprietors of the Salopian China Manufacture, might more fairly indicate the variation and casual employment within the porcelain sector: 'Salopian [employed] 107 exclusive of painters. In the month of June last, when I was at the manufactory last, the above number were on the Books within the building paid weekly, others included might make the number upwards of 240 besides Workmen in London'. Salopian, again a more commercial producer of

⁹DLS Dec.12,1783 letter WDSnr to WDJnr in London, the Prince of Wales' china glazed was ready to be decorated after 'the holidays is over which will last a fortnight'. Wedgwood promised his workers long Christmas holidays in return for their limited disruption during wakes.

¹⁰DL82 7/34 , 7/35. Roberts was paid £2.12s. for each season, 1778-81.

¹¹J. Haslem, *The Old Derby China Works* (1876),p34 suggests the limitations of size.

¹²See Twitchett,ibid, pp 49, 52 & 54, for contemporary quotes.

¹³J.V.G.Mallet, 'Lady Shelburne's visit to Worcester in 1770', *ECC Trans*,vol' 11, pt2(1982) p109-111.

¹⁴Weatherill, ibid, p181; N.Valpy,'Extracts from the Journals of Peter Oliver', *ECC Trans*,vol 14, pt2(1991), p211.

¹⁵PRO BT5.7. Privy Council for Trade Responsibilities Minutes, March 13, 1792.

common goods than Derby, appeared to employ only 40% of its potential workforce on any permanent basis, suggesting there was a large pool of casual labour.

The variations in the value of the Duesburys' wages must relate to the number of hands employed on a weekly basis at the factory, or as outworkers. The trained hands were on more-or-less fixed contracts, and their total pay was unlikely to vary greatly.¹⁶ In the early 1780s a nucleus of 27 experienced Derby workers was being paid a total of £15.6s.6d a week, an average of 11s.4d per workman.¹⁷ The remaining £15-plus spent on wages at this time could easily equate with another 30 to 60 hands, paid between 9s. and 5s. a week. Most ceramic factories added cheap labour to the workforce with the employment of women and children. Wedgwood trained women for simple bordering work, and apprenticed twelve-year-old boys to his painting school. By the early 1790s nearly 25% of Wedgwood's workers were apprentices, many of them girls; they received only 1s. or 2s. a week. If the Duesburys had employed a cheap labour force of women and children too, the unaccounted-for extra £15 wage bill could have added a further 100 to the workforce. Whereas an American visitor to Duesbury's factory in 1776 described 'A number of Painters, Men, Women, Boys & Girls imployed in painting the Vessels',¹⁸ there are no records of women working within the Duesburys' factory, save for the traditional rôle of Duesbury I's womenfolk acting as book-keepers.¹⁹ Boys of twelve were apprenticed, but the account books only recorded 'men's wages', not individual workers'. Under Duesbury II women were not employed in any of the light skilled trades, for the workmen themselves kept them out, protecting their own jobs and high pay. The Derby decorators signed a petition announcing:

From the many injuries done to the trade by employing Women in Painting of China & Particularly not being employ'd in London in any Painting or Gilding Shop whatsoever, we hope you will not withstand granting up the favour of their not being employed here.²⁰

¹⁶ DLS. Draft standard agreement April 1793 re. painters to work 63 hours, or 10½ hours a day for 6 days, at 3s. 6d. per day, with piece work as necessary, and £100 penalty clause not to work for others. A few of the best decorators, like Boreman and Billingsley, had private arrangements that gave them less specific hours, others like Askew had piece work.

¹⁷ DLS. Undated, solitary work payment sheet with named employees, probably dating to c1781-3. Six decorators/gilders each received 1 guinea (or 3s. 6d. a day).

¹⁸ N. Valpy, *ibid*, 1991, p211.

¹⁹ Salle (WD I's wife) was receipting invoices in 1774; Ann the daughter was acting as book-keeper c. 1783, perhaps taking over on her mother's death in 1780.

²⁰ DL82 6/25.

Their fears probably resulted from Bernice Banford being allowed to decorate 51 plates, for which she was paid 3d each in March 1790. Before her marriage Bernice Glisson had been employed at Wedgwood's London enamelling shop; she was seeking additional employment to help support her family because her skilled decorator husband James was in debt, frequently drunk and incapable of work.²¹ The foreman John Duesbury would have given her more decorating work but the workmen, save the two painters Complin and Billingsley, behaved in a 'very unbecoming manner', threatening violence.

With the closure of the Chelsea factory and the increasing power of Duesbury II, the Derby factory site developed,²² and by 1789-94 an expensive artistic élite was being added. A 1795 advertisement for an overlooker for the Derby works required management of about 40 painters.²³ But what proportion of employees would be classed as painters? If about 70 were employed then the proportion of painters would have been c. 60%; even allowing for Lygo's higher 1792 estimate, the decorators still accounted for 30% of the workforce. The rest would have had to include clay and kiln men, repairers, mould-makers, throwers, casters, lathe-turners, and the more general packers, clerks and labourers. In June 1795 John Duesbury, then in charge of the decorating section, indicated hold-ups in production were due to lack of sufficient white-ware in hand. Six throwers had been replaced by one, and the kilns were less frequently fired. Although there were 11 gilders, they were supported by eight burnishers; for complicated patterns this should have been a ratio of one to one.²⁴ Kean, writing with hindsight in 1818, similarly believed Duesbury's staff structure was top-heavy, with insufficient ware produced to keep the decorators efficiently occupied. However, at least initially, Kean also recruited artists of the calibre of the Brewer brothers, Robertson and Hill. Some reductions of Duesbury II's permanent staff levels may have resulted from improvements in, for example, kiln technology. The number of firemen had been reduced: nine firemen were contracted in 1772, later there appear to be four. Other staff reductions may reflect a shift from highly experienced staff to the employment of less skilled and casual staff.²⁵

²¹DL82 8/36, Letter B.Banford to WD, March 3, 1790, and 8/62 (undated).

²² DLS. A factory notice dated Nov.23, 1787 suggests permanent staff had risen to: 14 kiln/clay men, 11 modellers/mould-makers, and 12 decorators.

²³ DLS undated draft advertisement for 'Man of 28 to 40 years to manage about 40 painters in enamel etc.' replies to Swan Inn Hanley; an identical add appeared in the *Daily Advertiser*, Sept.21, 1795. This would have included gilders, apprentices and perhaps burnishers.

²⁴DL 82 8/ 294, Letter from John Duesbury, presumably to WD, June 25, 1795.

²⁵L.Jewitt, *Ceramic Art of Great Britain* (1878), vol.2, p112, 114. Two labourers, were employed in 1794-5: John Wells, and John Rockley; an advertisement in the *Derby Mercury*, May 31, 1798 called for '2-3 stout young lads from 16-18 years of age to work in the Derby China Manufactory'.

In common with the fine ceramic industry at large Duesbury II's expenses for labour accounted for about half of the total cost of production in 1793.²⁶ However although the yearly wage bill had remained relatively static from 1783 into the 1790s, the proportionate value against one commodity alone, gold, shifted considerably during this period, distorting these ratios. Allowing for more moderate use of gold, labour costs would have represented nearer 60-65% of total production.

Even with the erection of the New Works by 1799, the average weekly bill had only slightly increased to £35-40, despite the extra space.²⁷ It seems highly probable that an increasing number of 'cheap' hands were employed, and the proportionate costs of labour were reduced. Haslem dismissed the writers who had suggested that between 300 and 400 were employed at the china works c. 1810-33, believing the figure barely rose above 200, sometimes 'considerably less'. The largest number were employed about 1817, and a little after this two rooms from the old works, and two kilns, were again brought into service. He cites a 1832 subscription list containing 132 names, although perhaps a further 40 or 50 boys were also employed. Notable about this list is the number of women employed as 'paintresses' and burnishers, accounting for over 35% of the adult workforce. Nine female painters equalled the number of males, but amongst the 41 gilders, who were also the 'japan painters', none were women. Of the 32 burnishers, at least 24 were women.²⁸

Staff discipline, timekeeping and costing

The Duesburys' employment contracts were legally enforceable, and some apprentices are only known through the records of their absconding and the efforts to secure their return.²⁹ Duesbury senior must have been a strict, but fair, disciplinarian, for many of his early workers were still at the factory decades later, while others like Hancock in the Potteries or Phillips in London remained in friendly contact. Apprenticeship rates had risen during Duesbury I's regime: in the late 1760s weekly

²⁶Weatherill, *ibid* (1986) p422-3. In 1790 Wedgwood paid £6,348 for labour, equivalent to about 53% of production costs, reducing to 40% by 1800. Herculaneum (Liverpool) in 1806-18 paid out 38-47%. Wedgwood's were proportionately higher due to the ornamental dept., and cheaper costs of clay etc. See appendix 8 re. Derby c.1793.

²⁷BM.BP. f2023 April 13, 1799 'mens wages' put down as £69.17s. 9 1/2d. but had been queried by Strutt as only having been £39.3s.3d. the previous week.

²⁸Haslem, *ibid*, pp34-7.

²⁹E.g. *Derby Mercury* March 8-15, 1765, p4, c3 Caulton and Greenwood runaways; DL82 6/51 Askew and Lawrence draft advert for Birmingham press, June 16, 1772; BM.BP. f 1323 Dodd, from Creswell, Notts, apprenticed Oct. 1780, absconded July 1784; DL82 6/107. Instructions for the Constables of Boro. of Derby, endorsed for the County of Staffordshire related to runaway apprentice Thomas Simes, Dec 6, 1792.

rates started at 1s.6d rising to 6s after seven years, a generation later wages commenced at 2s.6d per week, rising a halfpence every week thereafter to 17s.8d, with 'frequent prizes to encourage industry and improvement'.

Strengthened disciplinary procedures appear to have been implemented from late 1787, perhaps as workers tested the young proprietor.³⁰ But this also represents the period when increasing numbers of influential non-locals were employed at the Derby site, including ex-Chelsea hands.

Duesbury I had maintained a factory clock.³¹ His son implemented clocking-in and time-and-motion procedures, commissioning some form of 'clocking-in' device from a London maker: a wooden clock incorporated a piece of paper linked to the hour-hand, on which his men were to write their names within a three-minute period.³² In 1790 Martin Stevens, the gatekeeper, was contracted to time employees for 10 minutes at their work; and later Thomas Mason became a secret timekeeper. Mason's time-and-motion studies particularly related to the throwing, pressing and turning of useful wares. Stevens had been called up, but in June 1794 Duesbury went to some trouble to get him returned to the factory, and by the autumn he was again engaged there.³³

As Duesbury II produced an increasing number of highly decorated French-style tablewares, Lygo recorded how a variety of London-based artists made a timed 'trial on white' to work at Derby. Some were in the capital's decorating trade: Complin had been an enameller at Battersea, though more recently had been working at Horwood's with Withers and Hillyard; and Banford, an ex-Bristol apprentice, enamelled for 'one Brown'.³⁴ By 1795 some applicants were artists in their own right: for example, John Brewer a watercolourist, and Mullins a portrait copyist. Similarly Lygo records negotiations with a host of modellers, including Spangler, Rossi, Coffee, Sartine and Webber. Of the accomplished London decorators who suited, and moved to Derby, many, like Banford, Complin, Withers and later Brewer, were concerned about supporting their families, and expected guaranteed

³⁰DLS. Nov 23, 1787 and Sept. 24, 1788 (old ref. 831). Two similar notices announcing 'persons of one branch of the manufactory were not to go into the premises of the other unless they had real business their relative to their particular occupation', on penalty of a 5s. fine, the latter notice stated the fine was 'positively' to be forfeit.

³¹E.g. Bill from W. Cooper for 'cleaning and setting up a time piece', Oct. 14, 1783.

³²Lygo, Sept. 1788. The clock was to cost about 26s. to 28s. E.P. Thompson, 'Time, work, discipline and industrial capitalism', in J. Hoppit and R.E.A. Wrigley, eds, *The Industrial Revolution*, vol 2 (1994), pp448-520 records Wedgwood's clocking in from 'more than 30 years back'. The American Bundy is credited with developing the first printed time recorders in 1885.

³³DLS old ref. 487; DL82 6/116; 6/103; 6/105; 6/108; 6/118; 6/120; 6/137.

³⁴Probably William Brown, see Valpy, 'Extracts', *ECC Trans.*, vol 12, pt1 (1984), pp79-82.

employment combined with a cheaper cost of living. They were in debt to Duesbury from the outset as soon as they borrowed money to travel north: Withers owed seven guineas, and Banford £3.19s. As a group these incomers added considerably to the artistic range of the Derby works after 1789, but into the mid-1790s they were often disruptive: waivering, arguing about pay and negotiating advantageous contracts. Some failed to work, drunk like Banford, or disappeared back to London. Stables recorded how Spangler, 'the German is now got to work ... Mason never can speak with patience of him'.³⁵

In common with the throwers, painters too were not immune from costings procedures. A set-pattern's value was estimated by giving two or more of the fastest painters a large quantity of china to decorate, their finishing-times recorded to the quarter-of-a-minute, and results averaged-out per piece.³⁶ Some of the teawares and plates in the Derby Pattern Books are annotated with such costings for painting and gilding. These figures appear to have been added in the early 1790s, and represent an era when the prices paid were beginning to be reduced. One undated factory document, possibly from late 1794, shows the extent to which many of the prices for gilding and painting set-pattern pieces were adjusted downwards, some as much as 33%.³⁷ Not surprisingly, the decorators drew up a joint complaint for reducing their payment for certain patterns without consultation.

In common with most eighteenth-century ceramic manufacturers the Duesbury papers provide relatively little information on the actual cost of ceramic production, akin to those of Wedgwood in the early 1770s.³⁸ Billingsley's Pinxton costings of 1795 did not differentiate between those for raw materials and labour, neither did they make allowance for repairs and equipment. Weatherill suggests that as a whole the pottery industry adjusted prices downwards in the Napoleonic period due to increased competition in the home market, despite the rising overhead costs of raw materials, carriage and labour.³⁹ Kean, writing in 1818, was able to break down the various costs associated with the manufacture and London sale of ornamental wares,

³⁵DLS Letter J.Stables to London, Jan.24,1789.

³⁶E.g. 'Cooper and Jn. Yates' worked 27.5 and 23.5 hours respectively to decorate 42.5 teasetts or 170 pieces, with 'a border of sprigs of different colours and brown edge' equal to 4d. per piece. While 8 decorators were timed on July 10,1792, re pattern 208; Cooper, Keys, Longdon and Soar were the fastest, and subsequently the price of gilding fixed at 2d.; DL82 6/16 undated. 2s. per hour was the expected cost of decorating 'saucers to icepails'.

³⁷DLS old ref. 836.

³⁸ KUL.Wedg.Acc. E-25 -18384 Aug.5,1772, production accounts including fixed overheads in the ornamental dept., drawn-up due to mounting debts and the need to free capital tied up in stock..

³⁹Weatherill,ibid (1986), pp417-8. The Manufacturers of Earthenware resolved the problem in 1814 by raising prices. The Wedgwood Archives show the range of price increases for e.g. ground flint (1814), white lead (1802)

including wear and tear and interest owed on capital, but it is far from clear that Duesbury either worked out exactly how much an item cost to produce in Derby or sell in London, with all the extra overheads of taxes, carriage, damage and so on. Kean implied that Duesbury's clerk of the works, responsible for the accounts, was negligent, and his employer never really knew the true state of the business. Lygo often priced wares on their appearance, like Bentley, rather than on logistical information supplied from the factory. Bentley's appraisal added pounds to Wedgwood's earthenware vases, but the prestigious Frog service was probably produced at a loss if managerial time was computed into its final cost. Profit margins on Derby porcelain fine useful wares may have been similarly small.⁴⁰

Factory unrest and mismanagement

Although Duesbury I appears to have worked in the capital for considerable periods, at least in the early 1780s, he was well deputised for by his clerk of works William Clarke. On Clarke's death c. 1784, Joseph Stables successfully took over this rôle possibly until late 1791.⁴¹ Charles King had been appointed by the close of that year, but Lygo's first letter of 1792 foretells of problems to come with poor communication.⁴² Kean later recorded that King, a former watchmaker, 'had almost the total control of the manufactory and Books in Derby - he was offended at any investigations or interference, he had caused universal discontent, did not understand the business and left imperfect and irregular books'. Lygo's letters provide a similar impression of a manager who neglected orders, and, perhaps worse, misappropriated gold. From about 1790 William Smith was 'nominally overlooker of the painters', but had spent little time on the factory floor; it was in this department that the discontent was most vociferous.⁴³ From 1792 there was considerable staff unrest; this and the following year were times of harvest failure and attendant high prices. Duesbury commented: 'there is now 4 gone' from the factory including Brocklesby; Spangler, having fell on 'hard times', also absconded.⁴⁴ Early in 1794 Banford was

⁴⁰Wedgwood's 1772 costings show three procedures added significantly to the final price of production: gilding, models and moulds and losses. Such aspects would have been common to the Duesburys' overall porcelain production not just ornamental wares.

⁴¹A John Stables agreed to become Wedgwood's book-keeper at Etruria in 1791 (KUL.Wedg.Acc. L94-17430/2), while a draft advertisement (DLS Sept.1791) called for a clerk of '30 to 40 years,..50 gs/year, 120 miles from London, knowledge of French and drawing'.

⁴²Lygo, Jan 1, 1792; Lygo, June 20 asked WD if he 'had quite made up his mind to part with Mr. K.' - presumably King, although he remained till 1796-7.

⁴³The decorators were probably the most educated group, and wrote down their grievances. But there was general despondency throughout the works, with for example complaints about the smell of turps.

⁴⁴DL82 8/221; DL82 6/102 Duesbury lent Spangler '4gs. on his watch'. By late summer Spangler was on bail (DL82 3/34 and /23), and agreeing to pay of his debts (BM.BP. f1356-8)

complaining about his 'optic nerves to be strained for 18s. pr. week less' than Boreman, while working ten hours a day.

Lygo had hoped that Boreman might have exerted his abilities and taken up the post of overlooker, but he was already in London, 'not now with the least thought of returning with the idea of doing landscapes at 1s.6d each'.⁴⁵ By February 1795, Lygo 'was sorry to find there is any dispute among the painters just at this time when there is so many things wanted'. As the year progressed orders were neglected, and workmen left. Banford gave in his notice because of debts, querying 'How can you think that five people can live seven days on eleven shillings?' Reliable artists like Withers were drawn into dispute over pay, but worst of all Billingsley threatened to leave in August 1795. Billingsley, apprenticed at the factory 21 years earlier, had been a versatile and quick decorator. Lygo recognised his importance and wrote 'I hope you will be able to make a bargain with Billingsley for him to continue with you for it will be a great losse to loose such a hand & not only that but his going into another factory will put them in the way of doing flowers in the same way which they are at present intirely ignorant in'.⁴⁶ Even King appears to have realised that although peace had returned to the factory in the summer of 1795 it was 'not with that propriety and dispatch which a good overlooker might be the means of'.⁴⁷ By the autumn the Pinxton China works was being erected; Jacob Spooner and his son, Duesbury's entrusted kiln men, soon joined Billingsley.

The staff establishment at the new Pinxton china works makes an interesting comparison with that in Derby; of note are the number of 'women, juniors [and] children' employed between 1797 and 1799, mainly as china decorators.⁴⁸ The total workforce of 28 had been paid £29 at the close of the first working year; three of the women were paid 8d per day, the rest, including children, 5d to 4d. By the end of 1798, 50 employees were on the payroll.⁴⁹ The Pinxton factory supported family groups, including those of the ex-Derby kiln men. If Duesbury had not provided women and children with any paid employment during the depression years of the 1790s, it is perhaps not surprising that workmen left Derby to enable the family as a whole to earn a few extra shillings a week.

The Wedgwood archives similarly record disputes with the Etrurian and London showroom employees at the same period. Early nineteenth-century documents would

⁴⁵Lygo, Jan.30,1795

⁴⁶Lygo, Aug.1,1795.

⁴⁷DLS. Letter Charles King to WD, Aug.1795.

⁴⁸C.L. Exley, *The Pinxton China Factory* (1963),appendix II,pp48-57

⁴⁹C.L.Exley,ibid,appendix I,pp38-47

suggest that following Josiah's death, overmanning, lack of security, malicious damage and general neglect and blunders were all common practice, and nearly ruined the firm.⁵⁰ Duesbury II's greatest failure seems to have been his inability to manage people; this may have been his new partner's rôle.⁵¹ Kean quickly replaced his line managers, hoping for 'faithful and able overlookers, honest and experienced firemen, and good accountants and salesmen'.⁵² The only Duesbury manager that remained was Thomas Soare, whom Kean promoted to overseer of the painters, and 'who for many years gave me his best and constant assistance in the most faithful and zealous mannner', yet by 1809, as Kean put the works up for sale, he had left the factory, and was offering his services to Wedgwood and Byerley.⁵³

Pilfering, visitors and spies

In the eighteenth century another worry in staff recruitment was the security of ware, and manufacturing secrets. The only labourer known from Duesbury I's works is recorded because he was a thief. In 1772 'Jean Chardine, a Frenchman, charged with robbing the Porcelain Manufactory in this Town (where he worked as a Labourer) of large Quantities of China', was 'transported to some of his Majesty's Plantations abroad, for the term of seven years'.⁵⁴ Having bought the Chelsea works the Duesburys were involved in drawn-out legal proceedings involving the embezzlement of porcelain from Sprimont.⁵⁵ The clerk of works once reported the sighting of Derby china teaware at Alfreton market, and the sale of white ware in London, apparently because they had been sold illicitly. Compared with the losses endured by the Staffordshire potteries, the Duesburys' losses appear contained prior to the early 1790s. Wedgwood learnt the consequences of financial mismanagement early, when swindled by his showroom clerk, Mather, who may have taken up to a £1,000-worth of receipts from cash sales c. 1773.⁵⁶ Up to half this value in gold bar may have been stolen under Duesbury's nose at Derby in the early 1790s (despite Lygo's persistent warnings), probably within the factory.⁵⁷

⁵⁰KUL.Wedg.Acc.e.g E36-27715 to27717A warnings from several middle-managers.

⁵¹J.Anderson, 'The Duesbury Papers', *DPIS Journal* 2 (1991),p1-8

⁵²BM f425-428 See appendix 4.

⁵³G.Pendred, 'Thomas Soare of Derby- master gilder', *DPIS Journal* 4 (2000), pp116-121.

⁵⁴*Derby Mercury*, May 15,1772, p4 c2 re. Chardine's committal; Aug.16, 1772, p4 c3, re. the sentence of 'John Cardine'.

⁵⁵BMf1443-4, f1306-7.

⁵⁶R.Reilly, *Josiah Wedgwood* (1992)

⁵⁷Kean hinted at such impropriety in 1818, but had to be careful not to slander Duesbury II. Having been sacked it would appear King sold off porcelain at his home in Nun's Green, Derby (*Derby Mercury* auction advertisement in the name of 'C.King', March,1797). The property is referred to as new, and the porcelain to be 'sold at very low rate' would appear to be too grand for a 50 guinea-a-

Wedgwood was very conscious that other ceramicists' cast-off employees were potential 'rotten sheep': when the modeller Holmes turned up in 1775, after 18 years at the Derby factory, he suspected 'he is sent to learn something'. Following their dismissal from Worcester many of the 20 painters had gone to Derby seeking work, but were none were taken in, and some went on to Staffordshire. Duesbury rarely advertised jobs,⁵⁸ but used his trade connections and network of trusted friends to recommend workers. This included informal character references, and even spying on potential employees. Lygo had made enquiries of Mullins, and thought him 'not respectable for situation required'.⁵⁹ Hancock in 'the land of crockery' provided help supplying hands common to the Staffordshire pottery industry: a repairer and modeller, and thrower;⁶⁰ and help to find a 'capital hand to replace Jonathon (not likely to last the spring)'.⁶¹ Hancock reported a 'foreigner just come from abroad ... excellent workman from France [who] ... turn'd and handled own work'.⁶² The following year it was Lygo who was investigating the foreigner, Spangler; he had been working for Wedgwood, and Vulliamy thought highly of his skills.⁶³ Duesbury wrote directly to Chas. Sheen in Shelton, New Hall, for a thrower in the pressing line, to be told he had 'no man to suit'; neither had Worcester because 'Wm. Chamberlain and Billy Williams both had dropsy'.⁶⁴ Duesbury's friend Mr Gould recommended George Davis who 'will be free in 2 months if want enameller';⁶⁵ he went to Worcester. Even shop assistants were sought from approved sources, like Mr Turner.⁶⁶

Derby was a popular stop both for foreigners and natives touring Britain: here they would visit a silk mill and the china works, before travelling on to Kedleston and the Peak District. Duesbury found these attentions disruptive.⁶⁷ Visitors often expected someone to give them an instructive tour: de la Rochefoucauld's party appears to have been put out by the lack of a factory guide, but went on to Mr Swift's mill. The

year clerk.

⁵⁸E.g. *Daily Advertiser*, Dec 16, 1776 and Sept. 21, 1795.

⁵⁹Lygo, Jan. 30, 1795

⁶⁰DLS (old ref. 532) Hancock to WD, May 17, 1789

⁶¹WD to Hancock, March 4, 1790. Probably the repairer Jonathon Boot, who dated a frill vase in 1765, or, but less likely Wedgwood. The new man was to receive 5 gs.

⁶²DLS (old ref. 627) Hancock to WD, July 21, 1789.

⁶³Lygo, July 1, 14, 1790

⁶⁴DLS (old ref. 570), Jan 14, 1791.

⁶⁵DLS (old ref. 706) March 17, 1788.

⁶⁶DL82 21/36-37 WD asking for a shop assistant for Bath 1790

⁶⁷DL82 6/31

Duesbury papers contain various letters of introduction of foreign noblemen and diplomats, indicating the popularity of the porcelain factory.⁶⁸

Although most factory visits would have been for sightseeing or education, others may have had a more sinister intention involving espionage. Those who courted aristocratic favour had gladly shown potential patrons and their escorts around their works; Alexander Lind accompanied the Duke of Argyll around Bow and Chelsea, taking the unique 'opportunity of examining everything pretty minutely', including the furnaces and materials.⁶⁹ In 1775 Richard Champion was writing to the Marquis of Rockingham, claiming Wedgwood 'did clandestinely get into my works', since the potter 'declares that he will produce china next year';⁷⁰ if this were true then Wedgwood would equally have had connections in neighbouring Derbyshire who could have informed him of Duesbury's progress and his secret ingredients. The Derby works was not impregnable, as shown by the labourer Chardine, or Belanger's annotated sketches of Derby ceramic kilns, c. 1775, which smack of French espionage.⁷¹ 'The foreign agent' Ljungberg, who had spent 16 years in England amassing various factory plans and samples before his capture as he returned to Denmark in the summer of 1789, included in his contraband cargo Wedgwood and 'Chelsea retorts'.⁷² By 1792 Wedgwood was trying to limit the access of foreign visitors, even with a written introduction; further viewing restrictions were added at the close of the Napoleonic era, related to the machinery.⁷³ Duesbury II certainly believed he had technological as well as artistic secrets he wished to preserve,⁷⁴ however he offered bribes to others, no doubt similar to those used to tempt his own workmen. Monetary gifts went to Wedgwood's men and Mr Belfield in reference to 1790s kiln technology.

Even in London, over 120 miles away, Lygo recorded potential espionage. The Staffordshire potters Turner and Abbot had been snooping around Vulliamy's

⁶⁸Letters of introduction :DL82 8/117 June 6,1788 the Italian Le Chavalier Landriane;.DL82 8/146 Sept.14,1789 His Excellency Don Domingo de Jonza, minister at the Court of Denmark; DL82 8/145 Sept 14,1789 Le Chavalier D'Arango, envoy to the Hague, and his secretary Mon.r de Britto.

⁶⁹R.J.Charleston and J.V.G.Mallet, 'A problematic group of eighteenth-century porcelains, *ECC Trans*, vol VIII, part I (1971), pp114-5.

⁷⁰G.Blake-Roberts, 'Mr.Wedgwood and the porcelain trade', *ECC Trans*, vol 12,pt2 (1985),pp 93-108.

⁷¹K.Woodbridge, 'Belanger en Angleterre: son carnet de voyage', *Journal of Society of Architectural Historians*, vol 25(1982), pp8-19. The Derby sketches probably date to c.1765-70.

⁷²J.R.Harris, *Industrial Espionage and Technology Transfer: Britain and France in the Eighteenth Century* (1998), p478-85. R.Charlesworth 'Lundberg and Ljungberg, give and take in the ceramic industry in the eighteenth century' in *Opuscula in Honorem C.Hernmarck* (1967),p39-54.

⁷³KUL Wedg. Acc., restrictions dated 1792 (E49-29826) and 1814 (E36-27758)

⁷⁴E.g. Lygo, Nov.5,1792 and the sort of gold used in gilding; BM.BP.fl 133-39 Drafts between WD and Jacob Spooner and John Musgrove, re.firing secrets; Lygo, Aug.1,1795, and Billingsley's floral painting methods.

workshop, eyeing the Derby biscuit, while a 'Dr. De Valangin would be very much obliged to you for 3 or 4 lbs. of your china clay to try a Medical experiment with'.⁷⁵ Although Wedgwood had alerted Bentley to selling single items to those possibly intending to use them for copying, such pieces went to Derby supplied courtesy of impeccable sources - Mr. Fogg, the royal china dealer, and Lady Spencer. Further afield both Duesburys welcomed foreign workers, like the painter Duvivier, but notably modellers with their continental expertise, like Stephan and Spangler.

The Duesburys' employment contracts and their stringent enforcement were no doubt designed to keep Derby craftsmen and their knowledge and expertise at the factory. The number and manner in which they were used was no doubt a legacy of the Heaths' expertise as scriveners. Until the closing decade of the century, many workers must have been reasonably content with their wages and 'job for life', and were rewarded with various 'extras'. It is noticeably the foreigners who had wanderlust, and never settled whether at Derby, Wedgwood or another factory. Few Duesbury employees appear to have been made redundant; Withers the flower painter is said to have left Derby as floral subjects lost popularity when the neoclassical vogue grew, but he returned in 1789 to paint in Billingsley's French style.⁷⁶

The Derby factory was vulnerable to the poaching of staff, particularly by Worcester after they had received the Royal Warrant in 1790. The Flights did not expend money to employ the best artists, unlike Duesbury who was 'in possession of superior hands in every branch of the business', and they were trying to entice workmen away, especially a fireman. Towards the close of the century the *Derby Mercury* had an increasing number of job advertisements within the ceramic industry, including in 1799 an appeal by the Chamberlains of Worcester for gilders and decorators.

Both Kean and Bloor continued with apprenticeships, producing highly skilled workers. However, particularly with his retrenchment, Bloor made a number of his apprentice-trained decorators redundant in 1821. The landscape artist Mountford, and flower painters Brentnall, Cresswell, Hall and Farnsworth left, eventually to benefit Coalport.⁷⁷ A number of decorators set themselves up as artists to varying degrees, teaching locally, or headed to London with grander ambitions. By the close of the

⁷⁵Lygo, March 26, 1794.

⁷⁶S. Keys recollections 'soon after Mr. Duesbury's death flower painting was at a very low ebb. Withers was then looked upon as the best flower painter on china in England', quoted in Twitchett, *ibid*, pp284-5.

⁷⁷Twitchett, *ibid*, p209.

Napoleonic era there was considerable choice of employer for the skilled porcelain decorator or modeller who wished to remain in the business. Newly arrived to porcelain production, and about to go more up-market, Daniels junior wrote to his father in 1823 that he had already enough work to occupy his three decorators for six months, and now wanted 'some good flower painters if possible', advising his father to 'take no more common painters or gilders, we must have the very best only'.⁷⁸ Over the following decades, Derby-trained artists came to dominate artistic production in all the major British china factories and decorating shops.

⁷⁸M.Berthould, *H. and R. Daniel, 1822-1846* (1980), p146. Wm.Pegg junior, a Derby trained apprentice from c.1810-17, was already one of his flower painters.

Chapter 13. Partnerships, capital and finances in the Derby Porcelain Works, c. 1750-1848

Heath & Company

The evidence relating to the very earliest porcelain manufacture in Derby, under Andrew Planché, is limited.¹ Significantly even in the early 1750s production was hardly provincial, and wares were reaching the capital, whether to be sold via Duesbury's workshop, or for auction. In late 1755 plans were afoot to develop the Derby china works. William Duesbury, who for the previous two years had been a decorator at the Longton Hall factory, made an agreement with his father in September, effectively to look after his parent for term in return for the proceedings from the sale of his possessions.² As he was a currier by trade these were probably not considerable; nevertheless it displays something of the confidence and determination of the thirty-year-old to establish himself. A business partnership followed between John Heath, 'gentleman' of Derby, Andrew Planché, 'china maker' of the same place, and William Duesbury, 'enamellor' of Longton, Staffordshire, related to the 'buying and selling all sorts of wares' and making china.³ The partnership was to have lasted ten years, but Planché seems to have removed himself from Derby perhaps by the late summer of 1756. Heath was to invest £1,000, and therefore had something of the upper hand, being allowed to request that 'New Articles shall be made'. Initially Heath & Co. had occupied freehold property near St Mary's Bridge consisting of seven houses and a barn, leased at £10 a year. However it was not this site that Heath appears to have acquired later in 1756, but a nearby leasehold site. There is no obvious break in production of the Dresden-style ornamental and useful wares; on the contrary, there was active metropolitan promotion. This contrasts with the expansion of the Chelsea china factory in 1749, when sales were suspended for a year to allow for reorganisation and re-establishment in the larger premises; it seems that in Derby the original works continued production until the new site was ready.

The early 1760s witnessed a remarkable shift in intended production at the Derby china factory. In 1762 the proprietors expressed a greater commitment to the

¹R. and R. Barkla, 'Some clarifications of the site and history of the early manufacture of porcelain in Derby', *DPIS Journal* 3 (1996), p64-69, and in G. Bradley, 'Derby Porcelain 1750-98' (1989); J.V.G. Mallet, 'Early Derby Porcelain and some disputed attributions', *DPIS Journal* 2 (1991), pp9-20.

²J. Twitchett, 'A Man of Achievement', *Ceramics*, vol.1 (August 1987), pp76-7 transcribes the agreement Sept.27, 1755 between WD of Cannock and WD of Longton Hall.

³The manuscript dated Jan.1st, 1756, is unsigned, but here is no reason to believe the agreement did not commence.

manufacture of more utilitarian 'blue and white wares', followed two years later by the introduction of Holdship's soapstone body and transfer-printing techniques.⁴ These were commercial wares directly competing with the huge quantity of Chinese porcelain imports, with other contemporary English manufacturers including Bow and Worcester, and with more provincial concerns like Lowestoft. To compete on this level capital improvements, with attendant revenue consequences, must have been made at Derby. Jewitt states that Holdship was initially paid £100, followed by a yearly sum of £30 as long as the transfer-printing processes continued to be used. In return Holdship was to provide his recipes, access to soapstone at fair prices, and the actual printing of wares.⁵ Archaeological evidence indicates that some of these resources, combined with moulds, were 'shared' between the china and pot works. Whether Holdship engraved copper plates in Derby is uncertain, but separate workshop areas would have been required to protect his 'secret process'.⁶ Yet Holdship complained that little work was directed to him; Duesbury may have secured his services to prevent his competitors accessing them. In 1765 Duesbury acquired a mill to help with the processing of the raw materials.

Jewitt claimed that alongside this expansion 'Mr Duesbury ... became the purchaser of [works at] Chelsea, Bow, Vauxhall and Kentish Town', and James Giles's decorating establishment.⁷ While the 1760s saw the bankruptcy, death or failing health of a number of Duesbury's 'rivals', there is no evidence, save for the Chelsea works and Giles's workshop, that these ailing concerns were bought up by the Derby proprietors;⁸ although it is possible that some tools and equipment were acquired on the disposal of these factories' assets, and sent north. By August 1769 the Derby business arranged to buy the diminished but prestigious Chelsea porcelain works.⁹ This second site continued to be managed from Derby for some fifteen years and until the termination of the lease when the works were demolished; this coincided with Duesbury I's own debilitating stroke(s). The Duesburys' relationship with Giles and his estate was more complex, as discussed more fully later. Duesbury was not an

⁴ Although ornamental production continued; Mallet, *ibid*, pp9-14 discusses a rare dated figure of 1762 as a transitional piece, showing the rapid development at the factory.

⁵ L. Jewitt, *Ceramic Art in Great Britain* (1883), p341-2. Jewitt's detailed source cannot be traced.

⁶ L. Jewitt, *Ceramic Art in Great Britain* (1878), vol 2, p89; 1765 fire policies indicate Holdship 'printer' leased a tenement valued at £100, within 6 months the 'china painter' was in a house valued at £300.

⁷ Jewitt, *ibid*, p68 and p202; see A. Ledger, *DPIS Newsletter* no 31 (April 1994), p4-5.

⁸ L. Weatherill, *The Growth of the Pottery Industry in England, 1660-1815* (1986), pp273-298.

Bankruptcies in general had apparently peaked 1758-9, declining in the early 1760s, with a 'bad' year in 1764 and becoming increasingly problematic until 1773.

⁹ Jewitt, *ibid* (1883), p336 states the arrangements were made Aug. 17, 1769, but the Lawrence St. property was not transferred from James Cox to Duesbury and Heath until Feb 9, 1770 (BM.BP f1301-2); BM.BP.f1309-10 Further 'messuage and ground' adjoining added, March 1, 1773.

asset-stripper, but an astute businessman recognising potential gaps in the market, even though his actions may have been to deliberately control or thwart any competitor. By 1770 Duesbury effectively controlled the production of fine porcelain in the country, and a few years later he was manufacturer to the King.

W. Duesbury & Company

Duesbury I had begun the acquisition of a number of London leases, to include the Covent Garden showroom and Lambeth wharf access. Similarly, properties within Derby were acquired, some of which were then rented to factory employees. In August 1780 following Heath's bankruptcy, the Derby site lease was transferred to Duesbury at a cost of £3,000, plus interest.¹⁰ The china works proprietor is traditionally said to have sold much of the remaining Cockpit Hill pottery in Ireland to pay off this massive debt; no evidence of this can be found. There was no obvious change in direction following Heath's departure, and Heath had probably become little more than a sleeping partner by the later 1770s. Two other adjacent plots appear to have been added to extend the Derby factory site within the next five years.¹¹ With his declining health in July 1785 Duesbury senior transferred half his property assets to his son, and made him his partner, for a nominal sum; he died 15 months later.¹² Although Duesbury I left a will there is no probate record of the company's value. Duesbury II inherited the business and the remainder 'half part of all the messuages, lands and tenements etc.', while he had to find the £2,500 left to his three siblings. This was in part paid off in instalments;¹³ Dorothea seems to have allowed her fortune to be reinvested in the business.¹⁴ Within three months of his father's death, William II married the heavily pregnant Elizabeth Edwards, daughter of a Derby solicitor. It is unknown if any dowry was forthcoming, but the Edwards were not conspicuously wealthy. Payments of £50-130 are recorded to Elizabeth's brother, Nathaniel, perhaps representing loans.¹⁵

¹⁰BM.BP.f1315-6.

¹¹Derby Cooperative Society conveyance of site dated Nov 20, 1840, shows the original 1000-year lease transferred to WD on Aug.1, 1780, but with additional releases from Robt. Clarke, yeoman, Dec.20-21, 1781; and Tatlow, mercer, and two Pitmans, surgeon and painter, April 1-2, 1785.

¹²BM.BP.f42 and f1279.

¹³PROB 11/1152. On the death of WDI the estate had to pay Ann £700 (a £100 had already been received), Dorothea £800, both to be paid in equal instalments over the following four years; James inherited £1000 over 6 years. Plus two annuities of £20 and £30 were to be paid.

¹⁴BM.BP.f2037. Although her widower was receiving interest and some capital in 1808.

¹⁵E.g. Lygo, Nov. 28, 1793 reminds WD that Edwards will be due his £128 on Dec.5.

Duesbury II's management was marked by his attempts to improve his business. However it was the adjoining Calver Close that had prime potential as a development site following the parliamentary permission in May 1793 to build the Derby Canal. The site was bounded on the south by the Derby-Nottingham Turnpike, beyond which were to be two new canal wharves. Duesbury was himself served with notice to quit possession of the Liversage Trust land in September 1796. This would have resulted in some diminution of factory storage space.

The Duesbury and Kean Partnership

Although the acquisition of a partner at this time, to provide capital and to lighten the load of reorganisation, is not in itself surprising, Duesbury's choice was: Michael Kean, a Dublin miniature-painter, who had worked in London since 1784. Kean appears to have met the Duesburys in the Spring of 1795 when given the commission to paint portraits of William and Elizabeth. Unmarried, and two years older than Duesbury, he became quickly and strongly attached to the Duesbury and Edwards family, accompanying them on holiday to the Lake District that summer.¹⁶ There was some suggestion of a 'romantic attachment' between Kean and Elizabeth, even before Duesbury's death.¹⁷ Kean was taken into partnership in mid-November 1795.¹⁸ However even at this time Kean was concerned about Duesbury's mental health. The two friends having so disagreed, Kean asked Duesbury's physician to visit his patient 'with a view to ascertain whether his mind was deranged'.¹⁹ Apologies followed, with Kean admitting to a 'natural temper', but Duesbury is known to have had similar angry outbursts during this period that had upset others, notably Billingsley. A month later Duesbury advised his brother-in-law Edwards to 'take care of him [Kean], he is a worthy man ... difficult to find his equal'.²⁰

The partnership was to have lasted nine years, and would have allowed any of Duesbury II's sons to be 'acquainted' with the trade. Duesbury III would have been nearly 18 years old at the partnership's conclusion in 1804. Kean was to buy into the existing business, apparently from his third share of the company's profits. But the business was never properly valued, which led to considerable problems twenty years later. On paper the new partnership had an input of £12,000 capital: Duesbury

¹⁶G.Pendred 'Micheal Kean and the Duesbury miniatures', *DPIS Journal* 3 (1996), pp9-19.

¹⁷DL82 13/105.

¹⁸BM.BP.f1470-74.

¹⁹BM.BP.1055-58, f1059-60 dated Nov 23, 24, 1795

²⁰DLS untraced. Letter WD to Edwards Dec. 1795. WD was very ill, his 'fingers hurt till rested my mind'

was to put up £4,000 and Kean £8,000. Duesbury appears to have lent Kean £4,000 capital, to be repaid with 5% interest from his share of the annual profits.²¹ In reality much of the value of the London assets, as estimated by Lygo at a little over £15,300, was unsold porcelain and book debts, although on top of this was the value of the 'buildings of the Manufactory ... with freehold estate worth a considerable sum'. 'Mr D.' also had a 'sum of money on mortgage at Derby besides the Canal shares'.²²

Kean was much later to write: 'I did not understand the manufacture and became partner with Mr D. on a general representation of advantages, and a partial representation of the disadvantages - but I would ... disdain all intention of charging Mr D. with unfair motives, I think he did not know the state of the concern correctly'.²³ Kean's statement was generous to Duesbury, for prior to the partnership Lygo had in fact queried whether the business could afford the extra mortgage repayments. Duesbury's expansion also began during a period of successive national financial crises.

Building improvements within the existing factory had begun soon after the partnership commenced, and by early the following year large outgoing payments included 'tiles for new Glaze Room' and various bills for bricklaying and mortar.²⁴ Duesbury may well have been privy to the intentions of the Liversage Charitable Trust which owned the adjacent Calver Close land, and was anticipating the reorganisation of the factory to incorporate the next-door plot. Duesbury II died in October 1796, a month after the Trust had served notice to quit Calver Close, but before the partnership was able to make any legal commitment to the new site, Duesbury died intestate, and powers of administratrix passed to Elizabeth the widow. Attempts were made to obtain a manager, as a representative for the Duesburys, to be paid £200-400 per year, but these had failed. Suggestions to cancel the partnership also appear to have been discussed. Kean was appointed sole manager in February 1797, later marrying Elizabeth in October the following year. With Kean's 'extra' rôle as manager, he claimed a controversial £150 salary and an increased share of the partnership. Judging from Duesbury's high opinion of Kean as a worthy man, it is likely that what followed was in fact the dead partner's desire for expansion and to build a new factory adjacent to the old works, as had been successfully achieved some fifty years earlier.

²¹BM.BP.f121.

²²BM.BP.f1476. The Duesbury-Kean partnership continued to pay instalments on 9 Derby Canal shares, costing a total of £1,260, which were sold for £1,151.15s. 3d. in (?)1808.

²³BM.BPf425-428, see appendix 4.

²⁴BM.BP. f2105-2148. £7.4s paid for Tiles, March 9, 1796; £39.10s.9d. paid for bricklaying, Sept 15, 1796.

The Liversage Trust Lands and the New Works

John Heath first rented pasture land adjoining the china works in Calver Close in mid-1764 from the Liversage Charitable Trust. The 3½-acre plot cost £9.10s. per annum to rent, but had a penalty of £10 per acre 'to be paid to convert into tillage' by ploughing.²⁵ By 1766 'Heath and Duesbury' were paying the rent, perhaps providing grass or hay to feed the horse at the newly acquired mill, or straw for packing. Two years after Heath's bankruptcy, Messrs Duesbury & Co. extended the original 21-year lease. By 1796 part of the land nearest the works had become a 'wood yard and garden, with several erections', including a croft.²⁶ Meanwhile the Liversage Charitable Trust, a large local landowner, itself became more dynamic, with new trustees sitting by October 1795. An assessment exercise of the Trust's land and rents followed, and some tenants, including Duesbury, were given notice to quit.²⁷ On 6 February 1797, a meeting was held to dispose of the seven leases for plots in Calver Close; those who attended heard the conditions of bidding for the 60-year leases. Lot one to the west was the largest at 3840 sq. yds, and closest to the china works, 'the tenant to be obliged within three years to erect and during the term of the lease to maintain buildings or other works upon this lot so as to make the promise of being always of the clear yearly value of £20, and the building etc. to be left on the promise in good repair at the expiration of the lease'.²⁸ Michael Kean signed the contract to lease this lot immediately that night; next day he was appointed sole manager by Elizabeth Duesbury.

Kean's earthenware production

Within seven months the New Works appear to have been built sufficiently to warrant a rise in rent according to the Trust agreement,²⁹ and manufacturing must have commenced by the next spring. The works did not make porcelain but earthenware; after about 18 months the earthenware production ceased, and the porcelain manufactory moved into the new premises, abandoning the earlier works. The Duesbury family later argued that its erection and manufacture of earthenware

²⁵DCRO Liversage Trust D1955/2/125.

²⁶DCRO Liversage Trust D1955ZG/E6.

²⁷DCRO Liversage Trust D1955/2/2 , 2/6, 2/460-62 . Improvements were carried out by the Trust over subsequent decades, including making the Markeaton and Morledge Brooks navigable, and road widening projects. Small plots were rented to more minor industrialists, such as a millwright and saddler, and merchants.

²⁸DCRO Liversage Trust D1955 F/E280.

²⁹BM.BP.£2015. Mr Dwight paid £55.17s for bricks, July 22, 1798; £1380 'Kean's new building for the Pottery: Sept. 1797-Dec. '98 £433'; with a further £81 for Jan. 1799 - March 1800.

was an infringement of the original partnership agreement because 'no separate trade should be carried out [and] all transactions should be of mutual advantage'. But it seems highly improbable that a non-ceramicist like Kean could have created such a factory so quickly if it was not at least in part to an existing plan. The Blake-Roberts suggest that the young John Rose, who had been apprenticed as potter, on creating the Coalport factory in 1795 similarly initially manufactured cheaper earthenware, rather than porcelain, to provide some immediate income at a time when finances were strained.³⁰ Utilitarian earthenware had a ready local market, and did not need to be traded through the large metropolitan centres. However there is little contemporary evidence to suggest what sort of pottery Kean actually made. Haslem recorded seeing 'creamware ... scarcely inferior ... to Wedgwood's'. This would have been somewhat old-fashioned and provincial; yet the extant jug which he claimed to be Kean's ware, is a sophisticated dry-bodied piece rivalling the products of fashionable potters like Turner and Adams. No Derby pottery appears to have been sold through the London showroom or Bath shop, yet Kean did advertise in the *Derby Mercury* during July 1798 that the 'proprietors of the Derby Porcelain Manufactory having erected works for the manufacture of earthenware ... acquaint dealers that a warehouse is opened for orders and sale'. The sale of earthenware had ceased by January 1800.³¹

In June 1801 Kean increased the plot to include the adjoining one of the coal merchant John Coke, and soon extended the total lease to a period of 90 years.³² The receiver's accounts indicate a further £1,740 was made in 'payments to workmen supposed on account of New Manufactory' to build and equip the factory.³³ Despite Kean's improvements, and further loan of £2,000, the business was threatened by 1806 with the failure of his marriage.³⁴ Duesbury III reached his majority the following year and married Anabella Sheffield.³⁵ By 1809 the business was up for sale, but not sold until two years later. In 1814 Kean's marriage had broken down irretrievably, and thus began six years of complicated legal wrangling, to determine

³⁰D. & G. Blake Roberts, 'The result of recent excavations in Coalport, Shropshire', *ECC Trans*, vol 11, pt1 (1981), pp71-83. Porcelain was being made by late August 1796.

³¹*Derby Mercury*, Nov. 11, 1799; and BM.BP f615 - last day of sale Jan. 6, 1800.

³²DCRO Liversage Trust D1955/144 and /145: 2570 sq.yds added.

³³BM.BP.f2036, section dated Jan. 1805-Dec. 1810, but an early entry.

³⁴BM.BP f2020, f2033, f2027-30, show repayments of interest for various Kean loans, 1797-1807.

³⁵Jewitt, *ibid*, p339. Annabella was the daughter of William E. Sheffield Esq, of the Polygon, Somers Town, London; the Sheffield family name also features in Church Broughton parish registers mid-century. Jewitt claims the business was run for a short period as 'Duesbury and Sheffield'; F. Hurlbutt in *Old Derby Porcelain and its Artist Workmen* (1927) claimed 'Duesbury(III) was unfitted by temperament, Sheffield by age and antecedents' to run the china works; no other proof of this business relationship can be found. DL82 7/11 1813 bill refers to John Spencer 'At the Red Lead Mill burning lead for a Mr Sheffield'.

the value of Duesbury II's personal estate, and subsequently the inheritance due to the surviving Duesburys, and the value of the Kean entitlement to the business assets. Josiah Strutt was appointed as official receiver, and went through the factory accounts with a fine tooth-comb.

Kean continued to pay for the leases on the combined plots until April 1823, the year he died. The Liversage Trust's redevelopment of Calver Close appears to have had limited success. By 1830 only two of the original seven plots lay with the original Liversage lessees; while at least 30 houses had been built across the Close, including a public house with its brewery, no other large commercial building had been erected on the prime development land, save the New China Works. The receiver's queries would suggest that some of these houses on Nottingham Road may in fact have been erected by Kean, associated with the New Works.³⁶ Crossick records of 1830s Derby that the small shopkeeper and proprietor 'invest their money in running up rows of little tenements, the rents of which they rigidly collect every Monday'.³⁷

Robert Bloor

In mid-June 1809, and for four successive weeks, the Derby manufactory and London warehouse were advertised for sale in the *Derby Mercury*. Two years later a Stephen Wilson had discussed going into partnership with Duesbury III, and possibly a third party, to take over the manufactory. Wilson apparently was considering a capital commitment of £20,000 to £30,000.³⁸ However by the close of 1811 Robert Bloor, the works 'clerk and salesman', was to acquire the New Works in Derby.³⁹ He was to pay the 'reduced' price of £5,000,⁴⁰ with a further £11,000 to be paid for associated stock; while Thomas Tatem, the current warehouse manager, was to pay nearly £8,000 for the ware at the Bond Street showroom. Neither man had the capital to buy their concerns outright, and instalments with interest were expected, in the region of £1300 and £1000 annually, respectively. Bloor's father, John, a farmer from Church Gresley, helped raise a mortgage for £5,000 in June 1813, to pay for

³⁶BM.BP. f2028. f2041 Sept 28, 1812 bill for labour for Nottingham Road houses £342

³⁷G.Crossick, 'The petite bourgeoisie in nineteenth-century Britain: the urban and liberal case', in G.Crossick and H.-G. Haupt, eds., *Shopkeepers and Master Artisans in C19th Europe* (1984), pp62-94.

³⁸BM.BP. f987-8. Stephen Wilson is an unknown; Wilsons were partners in the Coleorton Pottery established in 1835; a Mr. Wilson was Coke of Pinxton's solicitor, c.1802; while a Margaret Wilson late of Nottingham had been left a £30 annuity in WD I's 1785 will - £10 more than his sister.

³⁹Jewitt, *ibid* (1883), p339, claims Bloor was Duesbury II's clerk and had carried on the business during Duesbury III's minority. March 1807 is the earliest documentary evidence for his employment.

⁴⁰BM, BP. f2050 Mr Crayne, the builder's valuation for shell and fixtures £6,378; f613-4 Wilson's valuation of £5,800-6000.

'certain parcels of ground with buildings, fixtures, utensils used as [the] porcelain manufactory', and residual 79 years on the lease.⁴¹ By late 1814 John Spencer had provided a bond of surety for Tatem's business.⁴² Haslem suggested that Bloor increased the factory turnover effectively by introducing 'showy' cheaper patterns, alongside the more artistic creations, and by decorating old accumulated seconds for sale at auction. However 'this rapid method of converting large stocks of china into ready money was a temptation too great to be resisted' and appears to have been part of Kean's strategy, rather than specifically Bloor's.⁴³ Yet at the close of 1822 Bloor paid his last instalment of a little over £3,544 on the 1811 deal, and commenced the payment of rent for the New Works in Michaelmas 1824 following Kean's death.

From June 1815 Bloor also rented the Old China Works from Duesbury III, which was supposed to have been emptied by Kean when production was transferred to the new factory. Unaccountably, Duesbury III continued paying bills in 1813 for ceramic equipment, particularly relating to saggar-making, and repairs including those to the mill.⁴⁴ Robert Bloor, and a John Goodale, as assignees, took over the site of the Old Works following the declaration of Duesbury III's bankruptcy in late 1826.

Duesbury III's writings suggest that Bloor was 'tolerably tipsy' on a regular basis even before his purchase of the business, and actual ownership proved too much for him; in 1828 he suffered a mental breakdown. James Thomason became the manager on behalf of the Bloor family. He had joined the factory thirteen years previously as a cashier, and had worked as a travelling salesman for Davenport. Sadly, Thomason was lazy, and absented himself from his responsibilities for months at a time and 'took no trouble to keep up with improvements which were made daily in the Staffordshire china works. He allowed several old hands to be decoyed from Derby and to carry with them many valuable hints which were, of course, used to the detriment of the manufactory'.⁴⁵ By the mid-1840s 'the factory [was] in a thoroughly disorganised state - the wages paid at the time were enormously out of proportion to the quality of the goods turned out, and there was little prospect of improvement'.⁴⁶

⁴¹BM.BP.f406-415.

⁴²BM.BP.f529-30, Spencer's bond to Kean as surety to Tatem, Old Bond St., dated Dec.6,1814. By March 1816 the Bloor and Tatem accounts were in fact being renegotiated, BM.BP.f432-3.

⁴³J.Haslem,'The Old Derby China Factory'(1876),p29, re. the Derby warehouse sale over 3 to 4 weeks in Sept.1822, but see chapter 8 re.Kean's auctions.

⁴⁴DL82 7/110 1813. Perhaps the 'Duesbury and Sheffield' concern in the Old Works.

⁴⁵DRO D4945 Alfred Wallis's hand-written notes added to his copy of A.Wallis and W.Bemrose, *The Pottery and Porcelain of Derbyshire* (1870).

⁴⁶The printed text in Wallis and Bemrose,ibid, p20-1, was equally damning without mentioning Thomason's name, but the authors were obliged to issue an apology in the Derby Mercury.

Following Bloor's death in 1846, the New Works site was again offered for sale in local newspapers, supposedly with a 'steady and extensive, as well as improving trade'. Details of the 6,340 sq. yds site and property included: 'three slip ovens, two biscuit kilns, three glaze kilns, three enamel kilns, two hard kilns, and one large bone kiln; engine house, extensive and convenient potting, painting, printing, stove, store and packing rooms; a large and handsome show-room, 90 feet long; counting house, private counting house ... with ample space for the erection of additional buildings'.⁴⁷ It seems highly probable, considering Bloor's initial impoverished state, combined with the later disinterested management, that this was largely the factory as erected by Kean some forty years or so earlier.

Proprietorship of the Derby China Works

Neither the combination of two porcelain manufacturing sites nor the London warehouse was ever controlled by a partnership of more than three individuals, if that. As such the Derby enterprise was strikingly different from many contemporary porcelain manufactories.

Worcester was established in 1751 with 15 subscribers raising £4,500; three years later this had risen to 23 separate shareholders. The Worcester factory was not owned by one family until 1783, when the company's London agent Thomas Flight bought the whole concern for £3,000; the Barrs became partners after 1793. The china works at Bow (1749), Lowestoft (1765) and Longton Hall (1758) each had four owners; the two Liverpool factories of Reid (1755), and Gilbody (1749), seven and six partners respectively. Such joint ventures were not new in the ceramic industry, for since the establishment of the delft sector at the end of the previous century, groups of merchants had invested in such metropolitan concerns.⁴⁸ Weatherill has shown that the plant and materials used in the production of the finest wares necessitated a large capital commitment. While on the continent porcelain manufacture had been aided by royal patronage, in Britain a widely based commercial porcelain industry was allowed to develop, attracting a diverse range of practitioners and entrepreneurs. Protagonists included chemists like Frye, Dr Wall and Cookworthy, jewellers and goldsmiths such as Sprimont, Planché and Gouyn, ceramic dealers including Weatherby and Crowther, potters such as Littler and Baddeley, artists and printers, and a host of financial speculators. Many of these partners had high expectations of

⁴⁷*Staffordshire Advertiser* Nov.28,1846, p1c3; July 3, 1847,p1c3; July 31,1847,p1c1. These advertisements provide greater detail than contemporary ones in the *Derby Mercury*.

⁴⁸L. Weatherill, *ibid* (1986), p132-8, describes Baddeley of Shelton, c.1760.

gain; but declining values of investments, or even bankruptcy, were plainly a feature of the early porcelain industry. Few firms, including Derby in 1779, were not touched by an associate's financial failure. Maximising the potential capital yet spreading the risk, with a company of four or more partners, appears to have been the norm in the eighteenth-century British porcelain industry.

Amongst the rapidly expanding fine earthenware potteries another route was chosen to diversify the capital input by creating discrete partnerships within the separate spheres of processing, manufacture and sale.⁴⁹ Wedgwood took on separate partnerships for the utilitarian and ornamental trade; in 1825 Davenport divided his extensive empire into three partnerships. It should be noted that both Wedgwood's and Davenport's finances benefited from marrying women of considerable fortune.

The porcelain factory at Derby appears to have been the most successful in Britain c. 1769-95, yet its capital funding appears atypical of the fine ceramic trade in general. Derby's limited partnerships are more comparable with Chelsea than, say, Worcester or Longton Hall. However, ownership by a single family should not necessarily be regarded as an archaic extension of the master-craftsman's workshop. Crouzet's 'industrialists par excellence',⁵⁰ admittedly in the context of textile mills, ran a single unit with one proprietor or two or three partners. Even with four separate sites (the Derby and Chelsea factories, the Derby mill and London showroom), proprietorship was restricted. It worked under Duesbury I because he apparently divided his time between the capital and East Midlands, yet could depend on efficient and loyal local management. To a certain extent the seasonal cycle of production and sale, so obvious at the earlier Chelsea factory, still prevailed. But by the mid-1780s the pattern of trade began to shift. In reality the £6,000-or-so turnover each year might well have given the Duesburys a comfortable lifestyle and position in Derby,⁵¹ but may not have been sufficient similarly to provide for a co-partner's family. Duesbury I's will endorsed the concept of sole proprietorship; while a decade later Kean, as a single man, had considerable advantages as a potential partner.

Duesbury II's trust in Kean is striking in its own right. In a period when many partners were chosen from within a network of kinship, Duesbury had learnt that his own male relations were poorly equipped for business, and looked elsewhere. It is

⁴⁹L. Weatherill, 'Capital and credit in the pottery industry before 1770', *Business History*, vol 24, no3 (1982), pp243-258.

⁵⁰F. Crouzet, *The First Industrialists: the Problem of Origins* (1985), p17.

⁵¹Something of the Duesburys' social status can be derived from the personal accounts - the acquisition of unusual foodstuffs or fashionable consumer goods from London, and tax paid on a phaeton and a male servant.

ironic to discover that 'Mr William Edwards, solicitor, of Derby', Duesbury II's brother-in-law, set himself up as a potter near Burton on Trent in 1832: his ventures included the failed production of china and 'artificial marble' figures.⁵²

The Heath brothers, who invested widely and speculatively, may be more typical of Crouzet's primitive trait of 'versatility'.⁵³ It is not known whether a failure in a particular aspect of their businesses caused their bankruptcy, or if it was caused by general overstretching in the financial crises of the late 1770s. Some of their speculation was typical of local entrepreneurs: shares in the Derbyshire lead mines had initially attracted merchants and landowners, followed mid-century by yeomen farmers and small businessmen.⁵⁴ The larger investors meanwhile moved into financing major related capital projects in drainage soughs and smelting. However, losses in 1775, combined with dramatically falling prices early in the following century, helped shift this capital into the infant cotton industry, creating a space for more middling investors.⁵⁵ How much either Duesbury invested outside his immediate sphere of production activity is open to debate. Both bought up property leases in London and Derby beyond their immediate requirements for manufacture or sales; but such houses provided accommodation for workmen, while in the capital rents of extra rooms covered the warehouse overheads. Property also provided an attractive security to raise money by mortgage. Ownership of the Sucstone lead mine may have been an investment after the 1775 failure, but it might also have been bought to provide experimental raw materials for the china works, and a wider trade in enamel pigments.

In the early 1780s, Derby accounts feature four names in particular: Richard Brown, Thomas Brentnall, William Hadley and Messrs Tatlow, apparently paying large sums into the firm.⁵⁶ Brown's business relationship with Duesbury was centred at least in part around the spar trade, and may be connected with commission on sales through the Covent Garden showroom. Brentnall had provided Duesbury with wine, but he had been supplied with Derby porcelain on occasions, presumably acting as an occasional retailer. A Tatlow and Yerbury feature in a contemporary trade directory as linen drapers, but at the turn of the century Joseph Tatlow and his brother Thomas were both porcelain decorators at the factory.⁵⁷ The Brentnall and Tatlow payments

⁵²L.Jewitt, *ibid* (1883), p375,p378.

⁵³*Derby Mercury* Oct.27,1780, p4 c4. Advertisement of the sale of the Heaths' assets eg.as scriveners , with shares in lead mines, turnpike trust securities, pot works, etc.

⁵⁴R.Burt, *The Lead Industry of England and Wales, 1700-1880*, p106: 'A list of investors in lead mines reads like a local trades directory until well into the second half of the eighteenth century.'

⁵⁵K.Honeyman, *Origins of Enterprise* (1982).

⁵⁶DL82 7/9c.

⁵⁷Haslem,*ibid*, pp195-6. In the 1840s conveyancing of the factory site Jos. Tatlow is referred to as a

are remarkable in their frequency and regular size, at £25 and £35-plus weekly, suggesting some of the monies were servicing a loan or rent, or both, rather than reflecting 'country trade' in porcelain.

Banking, investment, credit and debt

Under Duesbury I's regime the majority of payments for wares, whether received at the factory or showroom, were processed in Derby. In the early 1780s, weekly amounts generally of between £30 to £60 were being remitted to the London manager. However during the summer months bills of exchange for far greater sums were also returned south, to be paid on London banks like Boldero and Co. The Heath brothers, prior to their bankruptcy in 1779, served as scrivener-bankers, and provided the expertise to deal with most of the porcelain business's financial requirements: dealing with drafts, inland bills of exchange, discounting and mortgages. Derby banking does however appear to have disadvantaged the original showroom manager, Wood, who was forced to obtain cash by requesting discounts from other dealers, like the London goldsmith, Woodnorth.⁵⁸ After Heath's withdrawal from the enterprise, London-centred banking had become increasingly more attractive to Duesbury, and by mid-decade the financial rôle of the factory and showroom had reversed, with Lygo largely responsible for the banking procedures. Thus for example Lygo's accounts in April 1789 show weekly 'remitted to Derby £40', which by the following year had crept up to £45.⁵⁹ Such sums were returned north largely as small denomination part bank notes and bills of exchange, and gold. The factory appears to have had difficulty reassigning the higher value bills generated from invoices of the London dealers or better private customers;⁶⁰ while Lygo's accounts suggest that bills were not regularly discounted, but kept months until maturity. Meanwhile much of the more expensive or regular supplies of equipment or raw materials came through Lygo, and was thus paid for in London; most notable being the steadily increasing supplies of gold. Conversely the factory's only regular financial need was for coinage or low value notes, to the value of about £35, to pay the weekly wage bill. Although such dynamic shifts could be explained as the result of changes within the internal proprietorship, they also correspond with an important external influence: the introduction of the fast armed mail coach.

mercier in 1785; in 1820 T. Tatlow was already referred to as former owner of the Seven Stars Public House, while J. Tatlow had finished his apprenticeship and joined Billingsley at Manfield, c. 1801.

⁵⁸DLS Wood to WD, Nov 13, 1776.

⁵⁹DL82 14/39-40.

⁶⁰Lygo, Oct 31, 1787 'forgotten till too late you wished for small bills.'

Although the release of money by discounting may have initially proved attractive to maintain and plough back into the growing business, by the later 1780s something of a surplus is apparent. A major advantage of London banking included improved mobilisation of capital. Lygo, aided by his contacts in the City, was well located to make suitable short-term investment with the seasonal input of monies accumulated after the summer invoices had been paid. In common with many London businessmen, the popular Three Per Cent Consols were purchased as being the least risky, most quickly transferable financial asset available'.⁶¹ Thus in September 1788 Lygo wrote he had 'been with Mr Elin to bank, and bought £1500 3% stock - cost £1116.17s.6d - his commission £1.7s.6d. There will be a half years interest of £1500 at 3% Xmas next'.⁶² However within two months Lygo asked Duesbury whether he should sell some stocks, because the warehouse cash supplies were low.⁶³ During the late summers and early autumns of 1788 to 1790, Lygo's letters record such investment activity, and report on the fluctuations in stock prices, suggesting when stock should perhaps be sold, or bought if money was available. Towards the close of 1788, for example, although the stocks had gained 1%, it was 'generally thought they would be lower if King continued ill - in case of his Death they would be much lower'.⁶⁴ Within a matter of days in August 1790 the Consols had risen from 75.5% to 89.5%, because there was not to be war with Spain. During this two-year period a number of tranches of £500-worth of Consols appear to have been traded.

Chapman found that discounting and short-term credit were the major functions of other East Midlands banks to the cotton spinners Strutt and Arkwright, who used, respectively, the 'old Derby bank' of Samuel Crompton in the 1770s, and Wright's Nottingham bank (a decade earlier).⁶⁵ Although the utilisation of London bankers was not unknown by East Midlands industrialists, twelve of the local cotton spinners and other textile entrepreneurs had developed particular links with Smith's bank in Nottingham in the closing decades of the eighteenth century.⁶⁶ Duesbury II occasionally used Walter Evans to discount bills, but even locally-based loans appear to have been serviced through London.⁶⁷

⁶¹L. Neal, 'The finance of business during the Industrial Revolution', in R.Floyd and D.McCloskey,eds, *The Economic History of Britain since 1700*, vol 1 (1994), p173 .

⁶²Lygo,Sept.16,1788.

⁶³Lygo, Nov.3,1788.

⁶⁴Lygo, Nov 7, 1788.

⁶⁵S.Chapman, *The Early Factory Masters; the Transition of the Factory in the Midlands Textile Industry* (1967),pp137-38.

⁶⁶Chapman,ibid, p141. London banks were also used by Arkwright Jnr. and Benjamin Wilson.

⁶⁷DL82 7/99 close of 1795 Evans had been paid 6s. 8d. to discount a £90 bill.

Another common investment device used by the Derby management was the appropriation of property and leases within both London and Derby. Some, like the factory or showroom sites, were long-term fixed capital investments, although the latter also provided revenue income as rent.⁶⁸ However leases were also used as short-term securities, as 'equitable' or conditional mortgages. In the summer of 1790 Lygo recorded how a £200 loan was given to Pearson, the Bond Street ceramic dealer, on the security of his lease worth £500.⁶⁹ A number of indentures and assignments for leases on Derbyshire properties survive for 1791.⁷⁰ Similarly that year Egan paid off his debtors using his lease on his King Street premises as collateral security for his brother-in-law for payment on a bond of £830 plus interest.⁷¹

James Giles and his estate

This relatively common device of loaning money against a lease may be the root of one of the most controversial connections in eighteenth-century British porcelain history: the relationships of the Duesburys to James Giles, and Bow. Giles was the leading independent London decorator in the rococo style, and had worked particularly on white Worcester. In 1771 he had moved to new premises in Cockspur Street and raised a partnership for £650 with John Higgons. Higgons, a mercer from St Paul's Parish, Covent Garden, had a similar existing, but longer-standing, relationship with Weatherby of the Bow warehouse. Higgons however soon died, creating financial havoc with both Weatherby's and Giles's businesses. Attempts at raising money followed, including debt-collecting, and with a series of auctions culminating in a sale of Giles's porcelain at Mr Squibbs's salerooms in spring 1776. Relatively little money was made, and Giles appears to have assigned his share of the business over to Higgons's executors.⁷² From the mid-1770s until his own death in late 1779, Giles grew to rely on Duesbury for porcelain to sell or decorate, and for small personal loans of cash. Meanwhile Higgons's main executor, William Randall, had also died. At some point after 1779, Duesbury gained the responsibility for Giles's Cockspur Street lease, with sitting tenants. By 1786 Duesbury was certainly paying the £55 half-year's rent 'to Mr Stubbs for Cannon Coffee House', and was

⁶⁸ As well as the London rents of Field, Albrecht, Till etc., between 1796-1804 7 factory workers had paid £66.16s.7d rent in Derby.

⁶⁹ Lygo, July 8, and Aug 12, 1790.

⁷⁰ E.g. BM.BP.f1071-78, Feb.23,1791 re. land at Hilton, f1064-69 June 3,1791 re. land on Hease Common.

⁷¹ DL82 21/29.

⁷² G. Coke, *In Search of James Giles (1718-80)* (1983).

receiving the larger sub-rent on behalf of the estate. Jewitt claimed: 'ultimately Mr Duesbury on the failure of Giles, took his stock and entire concern, and the original accounts etc. connected with this are in my possession'.⁷³

It seems likely that Giles remained in debt to Duesbury I, although he was never declared bankrupt. The surviving Giles ledgers suggest a balance of £770 was owing during the last few years of his life.⁷⁴ The Derby businessman may well have gained possession of Giles's lease as some form of security until suitably recompensed. Duesbury may also have aided the various executors in the later 1770s in exchange for various securities or stock, but this cannot be proven. However, a more complex financial story is told in the post-1780 Derby manuscripts, suggesting that the younger Duesbury inherited the responsibility of executor to the Giles estate, and was performing similar debt-collection duties to Randall two decades previously. Squibbs the auctioneer had become bankrupt having kept the sales receipts, and in 1784 Lygo was still trying to get the fair share of the assets.⁷⁵

The Duesburys, having collected Giles's debts and rents over the previous decade, were, by late 1794, faced with substantial outgoings to pay off the late Giles's creditors. There are no precise figures for the value of Giles's estate, but Lygo wrote in this context of hoping to have £1,000-plus by Christmas. Throughout the following year Lygo's letters record his desperation in trying to get payment from customers, and Egan's debt repayments.⁷⁶ In mid-November 1795, three days before the partnership agreement with Kean was signed, Lygo received an unspecified mortgage payment to pay Mr Marshall for the Giles's estate. A further payment to Marshall is recorded in the receiver's accounts of 1795-1804: '£200 ... as dividends on Giles Estate for Mr. D. the assignee'.⁷⁷

Duesbury II's debts, loans and mortgages

By 1794 increasingly large sums appear to have been borrowed (and were therefore being serviced) from the bankers Joseph Smith and Co., Mr. Agard, and, less regularly, the Edwards family.⁷⁸ In April Lygo recorded the weekly payments 'to

⁷³Jewitt, *ibid*, vol 1, p215, also see vol 2, p68. Some papers are now lost.

⁷⁴Giles' Ledgers, 1771-76, owned by the English Ceramic Circle are currently lodged in the Ceramics Dept, Victoria and Albert Museum.

⁷⁵Lygo, Sept 17, 1784.

⁷⁶Lygo, Nov. 17, 1794; March 17, April 17, May 1, May 25, May 30, Sept 5, Sept 25, Sept 29, Nov 12, 1795.

⁷⁷BM.BP.f2011-58

⁷⁸DL82 14/200-202. Jan 4 -18, 1794. The total of these three was £330

Messrs Smith for account of Mr. Agard of Derby', and queried whether the business was capable of paying all this. Duesbury must have renegotiated the loan, for within a few weeks Lygo was pleased to hear that the Agard account had been stopped at Derby. In fact huge sums were to follow, paid as lump payments instead; in June Agard received £1,050, with over £657 two months later.⁷⁹ By the early autumn, fortnightly to weekly payments of £50 to £60 were commonly paid to Joseph Smith and Co. Subsequently Lygo had to explain that the showroom was short of cash, and he could not pay Smith's Agard account, for Mr Edwards's £96 was to have priority.⁸⁰

The weekly £50 payments to Joseph Smith and Co. continued into 1795.⁸¹ These figures were specifically queried by the later receiver, who was informed 'Jos. Smith and Co ... London bankers ... lending money for use in manufactory ... therefore not in Derby records'; similarly, 'several entries of this sort' of payments of £50 to Mr Agard were questioned.⁸²

No doubt the Derby enterprise appeared a sound investment, even during war years, for unlike many manufacturers, including the Staffordshire potteries, the business had relatively little involvement with the risky export markets. Most of Duesbury's stock on hand and credit owing was based in Britain, and a loan with 5% interest offered better returns than government securities. It was probably Francis Agard junior, rather than senior, who funded Duesbury's mortgage loan. After 1792 he had become an entrepreneur in Derby in his own right, exploiting the newly released improvement land behind Friargate, and developing the Cuckstool Mills. His family owned corn and iron mills in Borrowash. Meanwhile his uncle and cousin, Richard and William Bourne, were founding a dynasty of stoneware potters based around Eastwood and Belper, and later Denby, utilising the potential of the newly created Erewash Valley canals. Jewitt intriguingly recorded that he had in his possession letters written between the Bournes and Duesbury relating to 'business transactions'.⁸³

⁷⁹DL82 14/204-6, 14/214-5 Lygo's weekly accounts from June-Aug., 1794.

⁸⁰ Lygo, Nov.14,1794 .

⁸¹DLS Parcel 17x. Dec.1794 - Jan.1795; BM.BP.f1703-26, vol 4, accounts Jan.- Sept. 1795.

⁸²BM.BP.f2013, f2019.

⁸³Jewitt,ibid (1883), p354. Unknown today.

Use of business assets for home and family

The documents show how inseparable the Duesburys' business resources were from the family's own expenditure and housekeeping. Weekly house expenses, often in the order of only £2 to £3 per week, were allowed in the Derby accounts in the early 1780s, although these occasionally rose to over £10.⁸⁴ Wine, tea and 'pocket money' all came out of the business. The showroom manager served as a general agent to all the extended family, whether buying household goods or arranging employment and the payments of debt for the wayward James Duesbury. Although the bankrupt Egan performed errands in London before being helped to set up as a china-man in Bath, he became increasingly in debt to his brother-in-law. In 1790 a summer debt of £20 had risen to £200 by the close of the year; on his death in 1797 over £1,500 had accrued.⁸⁵

Trade credit and book debts

As the century progressed the discrepancy between credit due to the porcelain business and monies owed increased, to the considerable disadvantage of the china works proprietors. In general goods or services obtained locally were billed months, or even years, after supply, but most were small sums often under £2, the largest single documented bill under Duesbury I's Derby regime being £40 in part payment for wood. As Lygo bought more raw materials through the showroom these London bills were paid relatively promptly - perhaps necessarily to obtain the more specialised materials that were clearly of varying quality and in short supply. Cash was paid, for example to save on the cost of gold, but such payments also gave anonymity.

This variation in the length of the credit is significant. Kent believed the rural trades compared with metropolitan ones worked on extended credit,⁸⁶ while Alexander suggested that upper classes were also given longer-term retail credit.⁸⁷ Of the few provincial invoices to survive from the Derby China Works, the impression is of delayed invoicing and tardy payment. 'Jno. Mundy Musters Esq.', who had various porcelain consignments totalling over £67, from Derby and via London from April 1777 to May 1778, did not pay his bill until May 1782; similarly a Samuel Luscombe

⁸⁴DL82 7/9a,b.

⁸⁵BM.BP.f2042r.

⁸⁶D.A.Kent, 'Small businessmen and their credit transactions in early nineteenth-century Britain', *Business History*, vol 36 (April 1994), p52.

⁸⁷D.Alexander, *Retailing in England During the Industrial Revolution* (1970), p182.

of Exeter, who had bought £6.8s.-worth of china at the factory in February 1782, had not paid his bill until August 1786. Such four-year delays may have prompted Duesbury to establish his London headquarters as a debt and bill-paying agency. Into the mid-1790s, the Season appears to have created a natural cycle for purchasing and paying for goods; the Prince of Wales's comptroller indicated that he expected to pay bills within two months of receiving orders.⁸⁸ Lygo had kept the details of personal accounts and billed at least his private customers direct, although this was not the expected business etiquette.⁸⁹ By the summer of 1793 this arrangement might have changed, as Lygo complained of the difficulty in obtaining such information from Mr King in Derby.⁹⁰

Special prices were available to cash buyers, particularly on old or damaged stock, but as a rule no form of discount was available to private customers.⁹¹ One lady had asked Lygo for 5% discount if she paid promptly, as her other tradesmen allowed, but Lygo was loath to make the practice common. Even prompt payment did not guarantee Duesbury ready access to money: Mrs Gordon, née Whitbread, paid £47.7s. for her china in November 1789, the day after she had received it, but by 'a draft at sixty days'. Rather than have these drafts discounted, they were generally allowed to mature.⁹²

Traders in the mid-1780s were given three months' credit, although at their trade sales in 1784 and 1786 this was extended to four months. Within a decade it had been increased to six months; Billingsley similarly allowed six months' credit at Pinxton. Egan, prior to his brother-in-law's death, had been given indefinite credit; without restriction, his debts, not surprisingly, had grown. Kean insisted credit was reduced to the usual six-month period. In 1791, the Leghorn merchant, Micali, had negotiated eight months' credit.

Lygo's letters from early summer 1795 indicate that financial hardship was spread across the range of the Derby customers over the preceeding months: he had never 'recollect[ed] money to come in so slowly at this time of year'.⁹³ Vulliamy and Lord Courtney had gone off to the country without paying any of their longstanding accounts, amounting to over £250. Three china-men, whom Lygo had 'not trusted ...

⁸⁸Lygo, May 21, 1795. DLS old no. 873 letter from Egan in Bath to WDII, c. 1793-5 in contrast had found 'people and all ranks here are so difficult to get a settlement with'.

⁸⁹Lygo, Sept. 28, 1789.

⁹⁰Lygo, July 4 and 16, 1793; July 1, and 20, 1795.

⁹¹A 2½ % discount had been available to all at the 1785 auction to those paying with 'ready money'.

⁹²Discounts are rarely recorded eg Parcel 17x April 20, 1787, 'Messrs Boldero were paid £1.3s.2d for bills discounted 28 Dec. last'

⁹³Lygo, June 2, 1795.

for some time', were stalling payment, while a Mrs Archdale's £60 bills were not being honoured by her bank, and she was to be charged 5% interest. Lygo meanwhile had attended a commission investigating the Prince of Wales's debts, and in January 1796 he was pressing for a reply from Duesbury as to whether he would accept a 10% reduction in the bill.

As the business entered the long period of extended war, Derby porcelain was not losing its clientele, but there seemed to be a greater reluctance to pay bills. Mr Johnes of Hafod had refused to pay £26 as one year's interest on his bills, and Lygo was reluctant to give offence by pressing the matter; however at the same time Johnes was allowed to order a well-executed 20-guinea dejeuner set. Lygo hoped that future good orders would be for cash. By Duesbury II's death, book debts may well have been equal to about two-thirds of the value of yearly production (see table).

Table 3. Lygo's estimate of business value, September 1796*

	Pounds	Percentage
Capital in trade	8,000	52.0
Book debts in London	4,000	26.0
.. .. Derby	400	2.6
Egan's debts	c.1,295	8.5
Pearson's mortgage	212	1.5
Pedlar's Acre	300	2.0
Bedford Lease	1,100	7.0

Total (not including Derby buildings)	£15,307	

* BM.BP. f1476

By the close of the Napoleonic period, as the Duesbury-Kean parnership was winding up, London debts had reduced to nearly £1,700, but the Derby ones had risen to £820.⁹⁴ Barker further differentiated the debts in 1816, believing nearly a third of the London debts would remain unpaid while the proportion of provincial bad debts, of smaller monetary value, stood considerably higher (see table).

⁹⁴BM.BP.f2138. Kent, *ibid*, suggests insolvents, who must have pressed for payment, often had less than 20% of their accounts unpaid, and believes the norm was between 25-50%. Kean knowing that his partnership was ending may similarly have minimised the debts.

Table 4. Barker's estimate of book debts at London and Derby, 1816#

	supposed good £	supposed bad £	% Total book debts
London:	1300.11s.6d		52.0
		880.10s.3½d.	34.0
Derby :	104.7s.10d		4.0
		237.2s.3d	10.0
totals good	1404.19s.4d.		56.0
bad		1117.12s.6½d	44.0

#BM.BP.f2050 Jan. 1816

Alexander believed that in general wholesalers had tightened up their informal arrangements of payment by the 1820s, but private customers and small retailers were less disciplined.⁹⁵ The majority of the Derby factory debtors c. 1811-1819 appear to be private customers, suggesting that the management had been better able to regulate trade sales, but the traditional titled buyers of luxury porcelain had become the least controllable, and were no longer the 'safe people' of some thirty years earlier.

⁹⁵Alexander, *ibid* pp219-21.

Conclusion

Duesbury I's factory system falls in a 'grey area' between the craft-tradition of the luxury workshop and the modern factory typified by Wedgwood's purpose-built Etruria (or even by the earlier Bow works).¹ In many ways Duesbury I's regime was old-fashioned, closely attuned to seasonal production and selling, labour-intensive with little use of technology, and using master-servant employment contracts that were a remnant of medieval law. Conversely, the factory had a concentrated workforce, where skilled employees (but only men) had each been trained to do a specific range of tasks, and had section overseers. Boys and labourers performed lesser jobs. Detailed contracts and regulations, together with fines and rewards, regulated the working week and the flow and consistency of production. Most of these modern influences were in place as, if not before, Wedgwood adopted them;² although within the luxury sector, Duesburys' works had problems in common with Etruria: disruption by visitors, espionage, theft and staff recruitment.

It is difficult to define the Duesburys' extended empire by size: perhaps until the mid-1780s only about 70 people were employed on the main Derby site; in 1780 the building and utensils/stock were insured for £500 each. This would place the factory in the upper-middle range of contemporary factory hierarchy.³ Duesbury I's partner, John Heath, may have been Crouzet's archaic 'versatile investor' who influenced the production of safe middling wares in the depressed and erratic years of the 1760s, but in the growth years of the following decade, until his own bankruptcy in 1779, he appears to have allowed Duesbury a free hand to develop the business.⁴ In the provincial setting of Derby, Duesbury I is characteristic of many an industrialist who expanded his factory up to a manageable threshold, with the family home remaining on site, providing employment for unmarried offspring, and spare money going into the purchase of local property or loans to small Derby tradesmen.⁵ However at the same time Duesbury owned a smaller works at Chelsea, and leased various London

¹M.Berg and P.Hudson, 'Rehabilitating the Industrial Revolution', *EHR*, vol 45 (1992), pp24-50. The writers suggest a blurring between the 'modern' and 'traditional' sector models favoured by McCloskey and Crafts.

²See A.Forty, *Objects of Desire* (1986) chapter 2, pp29-41.

³ Admittedly a debatable point, others have variously attributed factory size by number of employees (on site or outworkers), capital invested, insurance valuations, turn-over etc. Other non-local and Derbyshire industries show the enormous divergence of 'factory size' throughout the eighteenth century based on such categories; compared with the textile, iron and brewing industries ceramic factories remained relatively small and static, till the rise of the 'super-pottery' in the early nineteenth century.

⁴F.Crouzet, *The First Industrialists; the Problem of Origins* (1985), p17.

⁵The Turners of Lane End had left the site in the 1790s to become country gentlemen, in 1806 their fine earthenware business had gone bankrupt; the Minton proprietors returned to live on site in 1803.

premises including the Covent Garden warehouse. The capital value of the London property in the 1770s was in excess of £3,500, and porcelain stock over £2,000. These statistics qualify Duesbury as one of the shopkeeping élite in fashionable central London.⁶ (see table 5 for comparison with the valuations of other china works and shops, c. 1780-92.)

Duesbury I's proprietorship is characterised by adaptation, growth and considered risk-taking; periods of growth or retrenchment appear to coincide with general business cycles. Importantly, his wealth does appear to have been self-made, founded on the 1756 £1,000 partnership agreement and from the proceeds from the sale of his father's possessions; this is in contrast to Wedgwood or Boulton, whose wives each added over £20,000 to their coffers. In Duesbury I we see all the essentials of Pollard's successful entrepreneur who created industrial expansion.⁷ By and large the younger proprietor maintained or built on the various procedures he had inherited, but Duesbury II's ambitions lay in expansion. Planned growth was still within the luxury market: the amount of gold purchased to decorate porcelain almost doubled between 1784 and 1786. Throughout the life of the Derby China Works its small ownership or partnership base made it an unusual ceramic business. Notably in the eighteenth century, the Duesburys, effectively in solitary control, were both able to adapt production to the pursuit of their own aesthetic visions; commercial considerations being more important after 1796.

Ashton's assertion that it was the second generation of employers, rather than the first, who were more aware of production losses arising from irregularity or carelessness in part of the labour force, is not obvious in the case of the two Duesburys.⁸ Duesbury senior appears to have introduced rewards and disciplinary fines into his working practice, and employed a number of managers whom he entrusted to run his various sites in his absence. This appears to be less true of Duesbury junior. Supervisors were certainly running the separate branches, but by the 1790s with varying degrees of success. Clocking-in procedures and time-and-motion studies served to tighten factory practice. Disruption may have resulted from the recruitment of specialist staff from London, but also from the doubling of the labour force, including more casual workers. Duesbury II was noticeably absent from

⁶H.Mui and L. Mui, *Shops and Shopkeeping in Eighteenth Century England* (1987), p62, p74, p112.

⁷S.Pollard, *Genesis of Modern Management: a Study of the Industrial Revolution in Britain* (1965). Requirements: entrepreneurial drive, risk taking, capital accumulation, managerial skills to train and organise labour, commercial acumen, and technical knowledge.

⁸T.S.Ashton, *The Industrial Revolution, 1760-1830* (1948), p85. The organisation of labour under one roof, discipline and the factory system continues to be central argument to economic growth, see J. Mokyr, ed, *The British Industrial Revolution: an economic perspective* (1993), editor's introduction.

Table 5. Comparisons of China Works, Warehouses/shops and proprietors' worth, as conveyed by valuations in the surviving insurance policies, c1780-1792. (compiled from the Sun Fire Policies, see appendix 3, and E.Adams' and H.Blakey's studies in bibliography)

Business Concern	Duesbury, Derby works	Thos. Turner, Caughley works	Pennington & Part, Liverpool works	Neale & Bailey, Dealers	Turner, Abbott & Newbury, Dealers	Josiah Spode a)and c) Dealer;b) Potter
Dates of policy/ies	a) Aug.1780 b) Oct.20,1785 c) Oct. 29,1785 c) £200 c)£70 c)£30	Feb.1785	a)April 1785 b)Sept.1790 c)Nov.1792	a) April,1788 b) May 1789	Sept.1789	a) Oct,1789 b)June,1790 c)Aug.1790 d)April 1792
Proprietor's house						a)£100 a)£200
Possessions: apparel, household goods etc. other						
Factory: kilns working/store buildings utensils/stock	a) £500(all works) c)£200 c)£800 a) £500 c)£1,200		a) £250+ £50 b)£1500 c)£900			
Warehouse/shop: utensils/stock	Bedford St. b)£3,400	Portugal St £1,500		St.Paul's Churchyd. a) £8,400 b) £10,000	82,Fleet St. 6 houses £2,000	45, Fore St, Cripplegate a) £2,700 b) £1,500 c) £800 Moor Lane d) W.hse New Court, inc. inc.Brandy £800 a)£200 b) Moor Lane warehse.£300 d)£50 stock
other	b)household £100					

the warehouse compared to his father, and increasingly relied on Lygo, yet back in Derby the young proprietor was not a good personnel manager; his choice of Charles King as clerk of works was poor, and problems flagged up by Lygo's letters were not solved. This was probably Kean's intended rôle, and his solution was to get rid of all his managers, save one.

Unfortunately, details of Kean's management are severely limited; he clearly intended to create a more commercial but up-market venture, but in, for example, the creation of the New Works this may have been to Duesbury II's plan. Kean has been charged with being brutal to his workforce, but Haslem denies this, suggesting his conduct was gentlemanly but disciplined. The thrust of Kean's management appears to have changed c. 1806, when with a failed marriage, financial considerations were more pressing.⁹ Having joined the firm at this time, Bloor continued this commercial lead during his own proprietorship, rarely creating more than middle-class bone china wares.

⁹J. Haslem, *The Old Derby China Works* (1876), pp146-7, suggests the ornamental biscuit was discontinued when 'the china body...assumed a harder character' needing greater heat; while provincial auctions were at their height.

CONCLUSION

The Derby China Works on Nottingham Road survived for almost a hundred years up to 1848; considering the high failure rate of other porcelain producers, particularly in the 1760s and again c. 1800, this was itself remarkable. Between c. 1770-1790 the production of the two William Duesburys dominated the British manufacture of luxury china; they had both been granted Royal Appointments to George III. Their success was achieved with adaptation to changing artistic and decorating styles, on the decline of the rococo and growth of neoclassicism. Whereas in the second quarter of the eighteenth century porcelain had adorned rooms of the fashionable wealthy from 'top to toe', by the 1760s its ornamental use was being moderated and becoming subordinate to metalwares.¹ In Britain traditional luxury products, including porcelain, were also in increasing competition from manufactured 'alternative' consumer goods of neoclassical design.

During the Chelsea-Derby period, Duesbury I's fine porcelain output was clearly dominated by private male custom. In some degree the choice of these customers was intellectual and aesthetic, and met by the use of Caylus designs or Bacon's models. But its high cost also gave the porcelain additional status, making it suitable for masculine dining-room exhibition. Male customers' interests were shifting from status vases and desserts, to include table wares, at a time when display silver was out of vogue with the *bon ton*. Men's choice of porcelain 'tablewares for the second course' was a recent phenomenon, and interfered with their wives' rôles as housekeepers. The Derby client who approved the crested design himself, but was later to bring his wife to choose the shapes, was aware of the need for compromise. Women as housekeepers generally added to, replaced or repaired these Derby table services; but it is less certain how these fragile tablewares affected the dynamics of 'below stairs'. Women as hostesses bought teaware in their own right. Again, the declining importance of silver encouraged their purchase of complete tea sets; the 1784 Commutation Act gave a particular stimulus to the Duesburys' production with a five-fold increase in teawares by the close of the decade. Within these few years the proportion of private female purchasers doubled, although their average spend remained lower than that of their male counterparts. Duesbury II continued with the purchase of artistic design sources: of high culture after the antique, of the more popular but still intellectually inspired *picturesque* or botanic, but also of sentimental

¹Quoted from a French court lady who adoring Saxon china had used it unstintingly in G. Savage, *French Decorative Art, 1638-1793* (1969), p112.

contemporary prints perhaps suited to feminine sensitivities. Even by 1795 male aesthetics were the commanding influence over production, although the simpler patterned teawares were the 'bread and butter' of the Derby factory.

Also remarkable between 1785 and 1789 was the change in emphasis at the London warehouse as custom of the ratio 2:1, private to trade, was reversed.

The Derby management had anticipated a three-fold growth in demand for porcelain during the later 1780s. Duesbury II aimed at the luxury market, more than doubling the factory's use of gold between 1784-7, and establishing a group of talented artist-decorators and modellers at the Derby works. By 1792 he appears to have employed up to 140 staff, twice that of his father's Derby works. Such expansion can in part be explained by the shifting rôles of porcelain, particularly in the relative decline of silver in preference to china. But whether the limited luxury market really grew in the closing decades of the eighteenth century is a matter of continuing debate. The dramatic increase in Derby's teaware production suggests a new audience, other than the Season's élite, were also buying simple fine porcelain by the late 1780s. The warehouse accounts show an increasing number of provincial dealers and private customers, representing more middling consumption. Weatherill saw that the middling fine pottery market had stopped growing before 1790, believing it was 'better to see the luxury end of the [ceramic] market as having developed out of the middle rather than postulate downwards penetration'.² Did the universality of Wedgwood, or its copyists post-1775, in fact create a preference for something different, as Lygo claimed that 'jasper teasetts [were] very unsaleable'? The later ready adoption of French porcelains would suggest this to be true. This may be a largely female lead as McKendrick's study might suggest.³ Although upper middle-class males bought status services from the London warehouse, it is unclear whether provincial middling males traded up-market to porcelain display goods. A comparative study of private customers in the Derby and Wedgwood ledgers might provide such evidence, aiding the better understanding of gender rôles and consumer dynamics early in the Industrial Revolution.

²L. Weatherill, *The Growth of the Pottery Industry in England, 1660-1815* (1986), p312. Presumably middle classes starting on Wedgwood earthenware etc. would evolve into buyers of Derby porcelain.

³N. McKendrick, 'Home demand and economic growth: a new view of the role of women and children in the Industrial Revolution', in N. McKendrick, ed, *Historical Perspectives: Studies in English Thought and Society in Honour of J.H. Plumb* (1975), pp152-210. He stresses the high numbers of titled ladies in the Wedgwood London accounts, and even higher percentage of women customers in the provinces.

Incomplete accounts from Kean's enterprise, 1807-1811, would suggest private women's purchases of Derby porcelain had declined to pre-1785 levels. Had middle-class women ceased to buy stylish porcelain in the wake of inflationary processes? This is unlikely, for although during the Napoleonic period frenzied consumption was supposed to have moderated, polite ceramics ownership was universal, and the disruption of war hardly affected the minutiae of everyday life. Kean's 'very saleable new tea china' was probably distributed more nationwide, with warehouse retailing becoming less important. However, the provincial hostess did have considerably more choice than Derby porcelain, as English bone china competed in the home market, while *silver equipage* had returned to the tea table.

The London showroom accounts illustrate important alterations in the mid-1780s in the marketing of fine consumer goods, when there were 'no fundamental changes in the selling methods' in the ceramic industry as a whole.⁴ Provincial custom was rising, and although Derby and Wedgwood continued to use the London warehouse as an entrepôt for redistribution, the newly-established china works of New Hall and Chamberlain appear to have thrived without direct access to the metropolitan dealers, fitting into established country networks around Staffordshire and Worcester. The fine ceramic manufacturers' London warehouse was no longer a commercial necessity.⁵ Save for Kean who had moved premises in 1806, our newer luxury porcelain manufacturers tardily set up shop in the capital at the end of hostilities.

Weatherill's overview of the ceramic industry was unable to establish any influence of the independent growing network of dealers and the manufacturers. Yet Lygo records how the London chinamen were becoming increasingly powerful from the mid-1780s: their disagreements with the East India Company effectively terminated the bulk imports of Chinese porcelain, while their gentlemanly negotiations with Duesbury sealed the fate of the fashionable and trade auctions. Early the following century the dominant London china dealers demonstrated further influence by encouraging separate decorating shops using porcelain blanks; the Regency works of Coalport, Nantgarw and Swansea were obliged to support this trade, while others had to produce wares back-stamped with the retailer's name. The result was the diminution of the status and increase in the anonymity of the specialist porcelain producers. Derby does not appear to have produced white ware for such establishments, except perhaps seconds, nevertheless Bloor copied the styles of these decorating shops. Whereas in 1786 a royal porcelain commission would have been

⁴Weatherill, *ibid* (1986), p323.

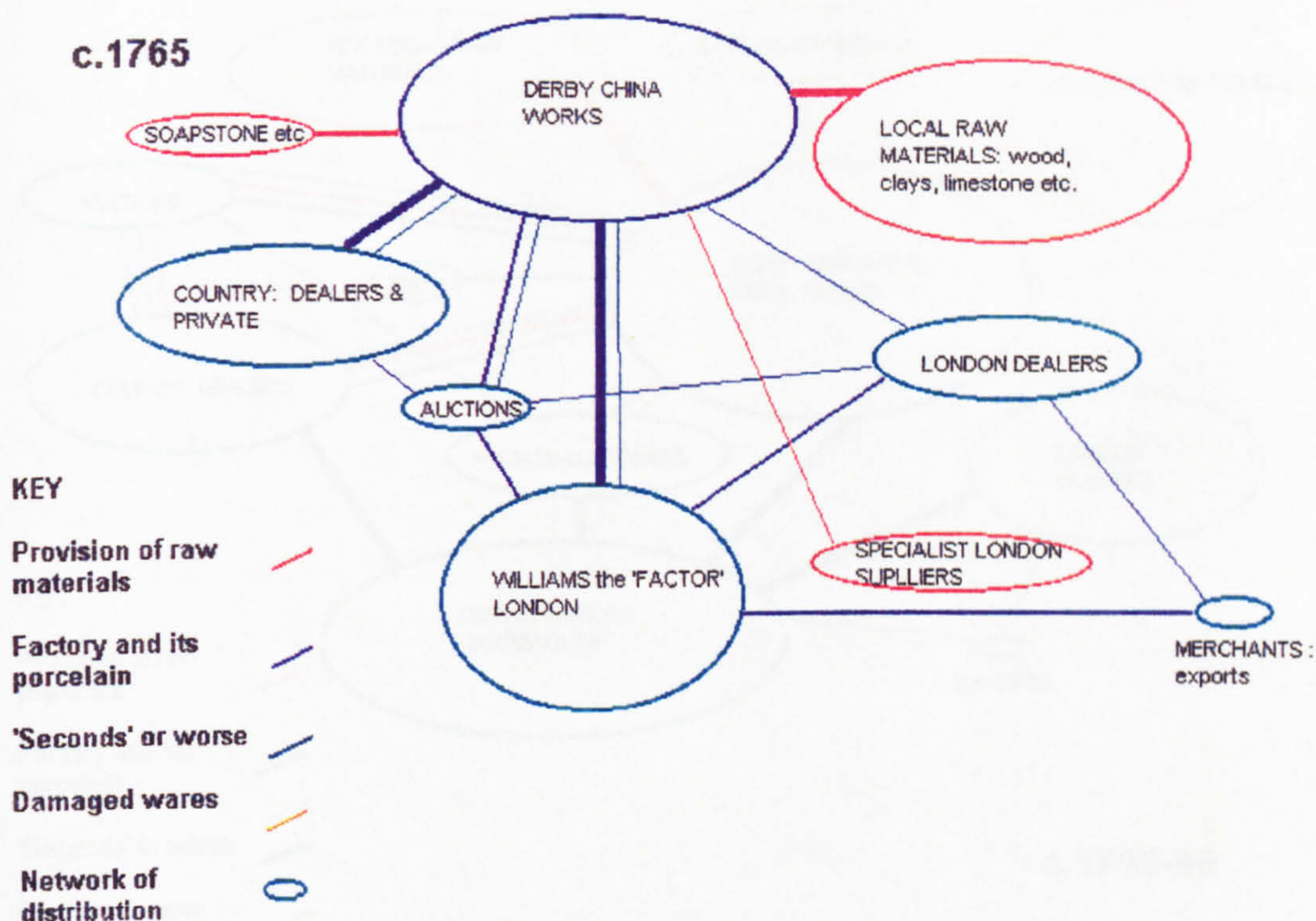
⁵Wedgwood saw c. 80% of its sales through London in 1790, declining to a third by the close of the Napoleonic period. KUL.Wedg.Acc. Ledger I (1790), Ledger E (1811-16).

Derby-made, thirty years later it was John Powell's London workshop that received the patronage of Princess Charlotte and Prince Leopold. Provincial dealers, too, could exercise power over the manufacturers: standardisation of shapes and set-patterns within the competing English fine ceramic industry allowed them to move their allegiance from one supplier to another without upsetting their own customers' wants.

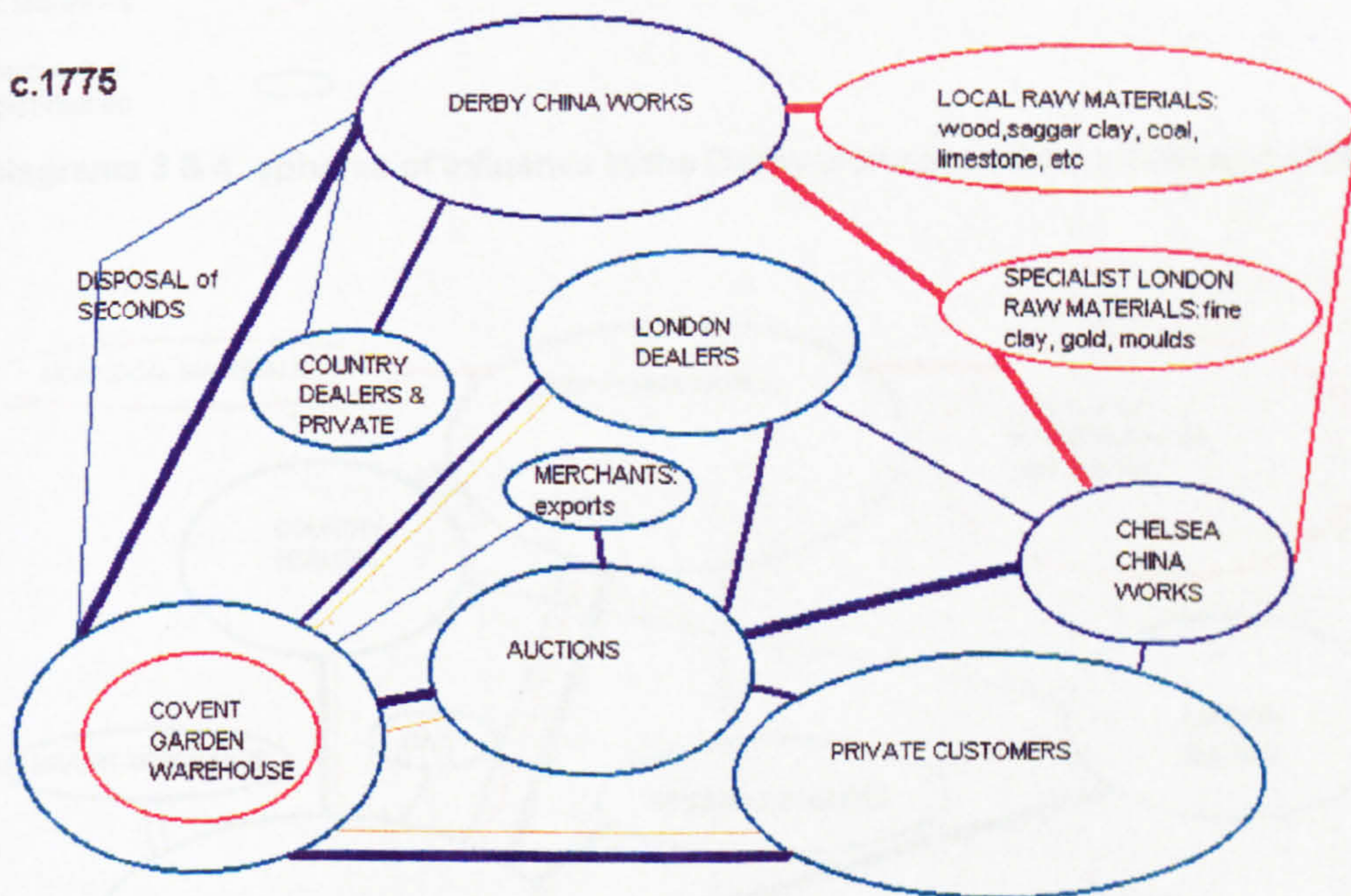
Any trends emerging in the home-based later eighteenth-century porcelain industry, and presumably other related luxury goods, were severely shaken by the impact of the 1786 French trade treaty. The initial importation of French porcelains worked to Duesbury's advantage, popularising French styles and shapes at a time when only his factory was capable of producing similar decorative quality, tailored to the customer's needs, but apparently more cheaply. However after the Revolution the ensuing flood of luxury consumer wares into Britain, looking for replacement markets at any price, caused a crisis in the fine porcelain industry. Forty years later the English specialist silk industry was destroyed by newly-allowed imports of fashionable French silks. The Salopian works reduced prices by 20%; the Derby factory had a brief 12% decline in takings, and cut wages, but more importantly did not manage the three-fold growth in demand that had been expected. Neither the war nor increasing trade tariffs prevented finely finished and blank wares entering the country in huge quantities. Meanwhile prohibitive trade restrictions had been placed on English pottery sales to France, and the manufacturers were seeking alternate markets at home and abroad. A host of china works grew up following the widespread adoption of the bone china body, presumably tapping into the market created by Derby and the French porcelains, although they were trying to establish themselves in a period of financial hardship. The most successful porcelain manufacturers were those who incorporated bone china alongside pottery production, sharing moulds, skilled labour and increasing technology with ease across a range of ceramic wares and markets: the super-potteries of Davenport, Spode and Minton, for example. This may have been Kean's intention, but in 1799 he failed to secure the Carloggas clay lease.

In common with the pottery trade the Duesburys sought an export market, but it has proven impossible to quantify the proportion or value of the Derby production that was exported; it is unlikely to have reached 10% by value of production even in boom years. Perhaps up to half of the factory's figures were sold abroad from the late 1780s, as Lygo had problems of 'very heavy stocks' in his London warehouse. Fine useful goods fared less well, in direct competition from continental or oriental hard-

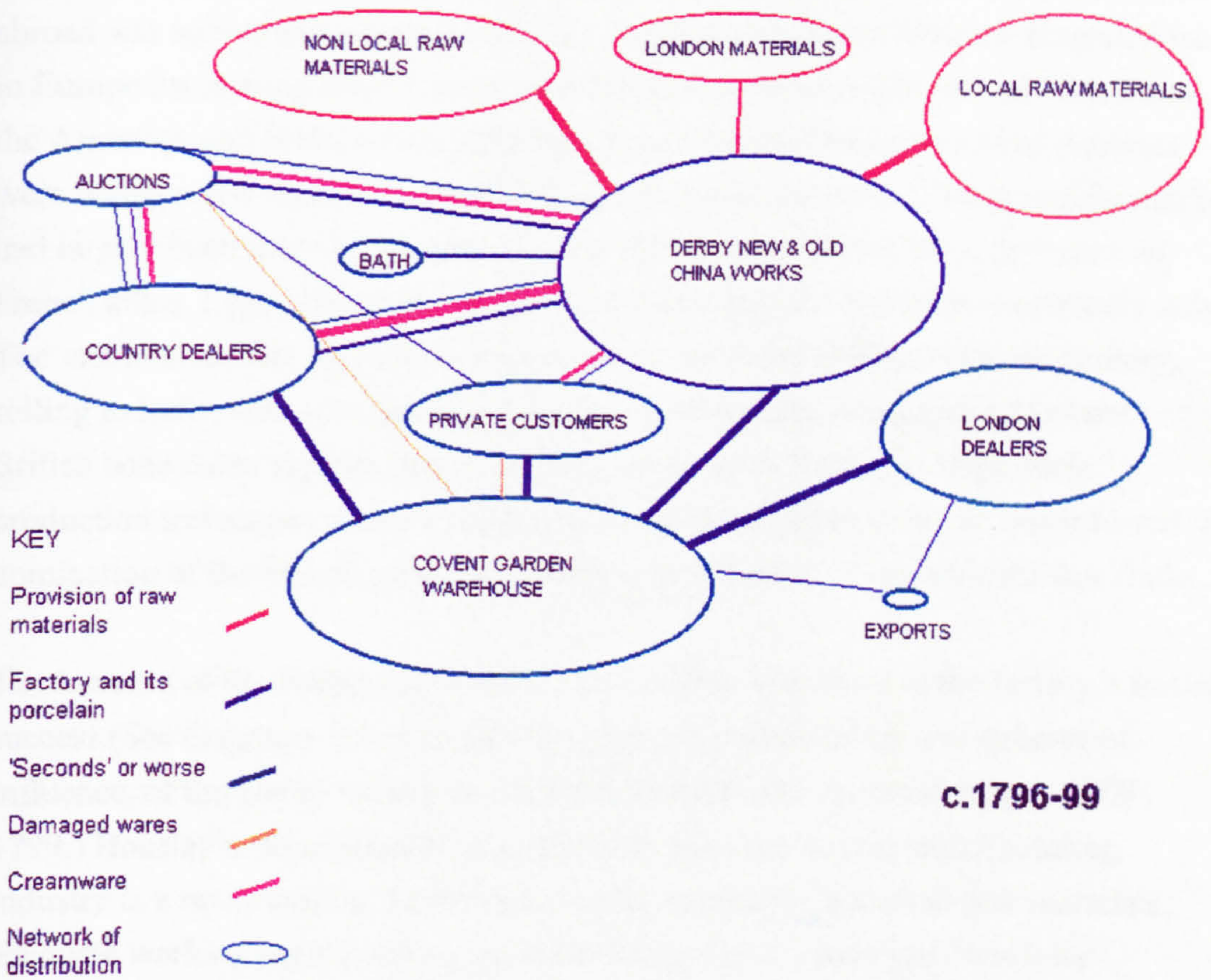
c.1765



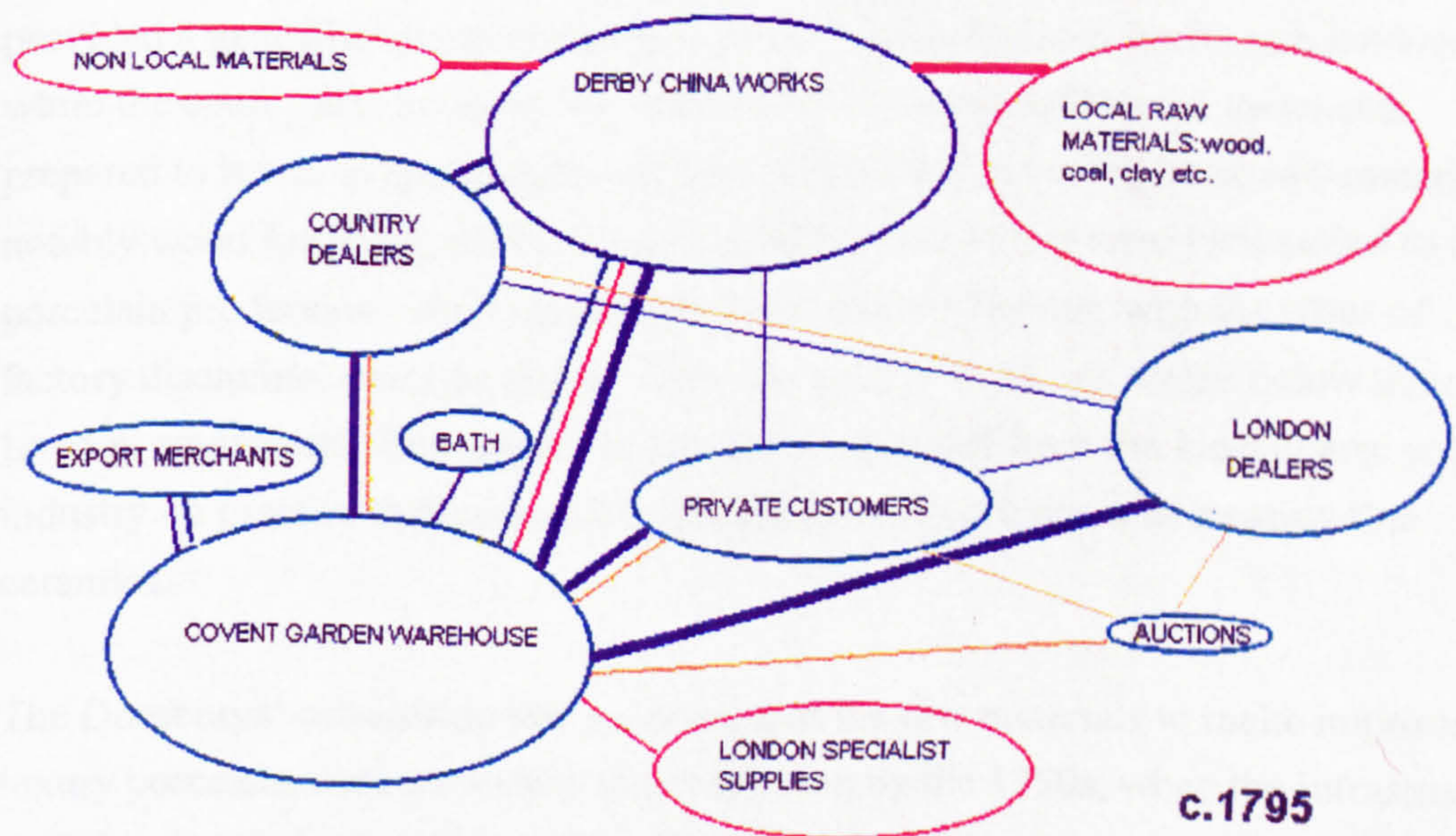
c.1775



DIAGRAMS 1 & 2: SPHERES OF INFLUENCE IN THE DERBY CHINA BUSINESS, c. 1765 and c. 1775



Diagrams 3 & 4: spheres of influence in the Derby china business, c.1795 and 1796-99



paste porcelains, and novelty creamwares, but seconds may have entered overseas trade. Except for a few sale-or-return commission deals, the majority of Derby sent abroad was sold to third-party merchants, rather than agents. With the extended war in Europe decimating the Potteries' exports, new overseas markets had been found in the Americas and Middle East. Although the eastern-sea board towns of America were barely a few months behind European fashions, the post-1784 porcelain market had largely been filled by cheaper oriental wares direct from China, or from their French allies. Lygo sold small quantities to a few specific American customers only. The colonial market for luxury was limited; even in the early nineteenth century, selling to India, with a burgeoning European community, was a risky business. British bone china exports started to boom in the early 1830s, as large-scale production techniques allowed relatively cheap, practical and stylish wares to end the domination of the French porcelain industry, in a climate of unrestricted free trade.

The location of the Derby China Works was clearly important to the factory's initial success. (See diagrams 1 to 4 to view the changing relationship, and spheres of influence, of the Derby factory as related to London and the provinces, c. 1765-1799.) Housley's 'four essential pre-requisites for a successful manufacturing industry ... a ready market for finished goods, reasonable access to raw materials, adequate working capital and an available labour force', were not 'woefully inadequate' nor 'deficient'.⁶ The infrastructure had considerable advantages over, for example, neighbouring Staffordshire. Early turnpiking and river transport provided comparatively good regional communications, and cheap access to London. Derby provided a gentrified centre for an area of the Midlands noted for its rich landowners; while the county and the town had early attracted industrialists and merchants prepared to invest in speculative ventures. The county provided basic raw materials, notably wood for firing, which combined with water-power were well-suited to fine porcelain production; while local employees, already familiar with the ethos of factory discipline, could be trained and were willing to accept wages below their London equivalents. Few appear to have been recruited from the local coarse pottery industry - a practice that caused Wedgwood so many problems in creating fine ceramics.

The Duesburys' acquisition and processing of the raw materials to make improved luxury porcelain were not easily achieved, even by the 1790s, when the infrastructure associated with the beginning of the Industrial Revolution was consolidating. The

⁶P.Housley, 'Derbyshire raw materials and their possible relationship to the manufacture of porcelian at Derby', *ECC Trans*, vol.XIV, pt 2(1991), pp126-43, and see chapter 9.

opening up of the iron- and coalfields in eastern and southern Derbyshire helped to create new canals, and cut coal prices, but such ventures diminished the woodland, and created local competition for timber. The impression from the Duesbury kiln trials is not that the conversion to coal was desirable in its own right, but that access to the preferred fuel, wood and charcoal, was becoming more problematic. The factory proprietors no longer had control over the wood resources, as they demonstrably had in the 1770s. Coal does not appear to have been used at the Derby China Works until 1783; although coal deliveries had nearly doubled by the close of the decade, the relatively small tonnage involved suggests its use was for processing. The first references to coal use in the context of porcelain production relate to 1790, with the erection of a new biscuit kiln, but this coincides with trials relating to the reduction in the quantity of wood required for firing. The glaze and enamel kilns burned wood and charcoal at least into Kean's period of management.

There are relatively few business papers surviving from the thirty years of the elder Duesbury's regime, c. 1756-85. Duesbury's partner, John Heath, may have been a 'versatile investor' who influenced the production of safe middling wares in the depressed and erratic years of the 1760s, but in the growth years of the following decade, until his own bankruptcy in 1779, he appears to have allowed Duesbury a free hand to develop the business. In the provincial setting of Derby, Duesbury I had moderate ambitions characteristic of many a small to medium industrialist who expanded his factory up to a manageable threshold, with the family home remaining on site, while investing in local property or business loans to small tradesmen.

However at the same time Duesbury owned a second works at Chelsea, and leased various London premises; the capital value of the Covent Garden property in the 1770s was in excess of £3,500, and porcelain stock over £2,000. These statistics qualify Duesbury as one of the shopkeeping élite in fashionable central London.⁷ Duesbury I's early confidence in the London trade is striking, and a contrast to Wedgwood and no doubt other provincial potters who were cautious of breaking directly into the metropolitan market. The Derby proprietor has even been credited with the take-over of a number of ailing ceramic factories: Chelsea, Bow, Vauxhall, Kentish Town and Longton Hall, and Giles's decorating shop. No documentary evidence survives to support these claims save for the Chelsea works, and the complicated financial agreements linked to Giles's property lease, but his dealings with Holdship might suggest that Duesbury I recognised the advantage of controlling potential competition, rather than allowing others access. Duesbury I's

⁷H.Mui and L.Mui, *Shops and Shopkeeping in Eighteenth Century England* (1987), p62, p74, p112.

entrepreneurship is characterised by adaptation, development and considered risk-taking; periods of growth or retrenchment appear to coincide with general business cycles. Within a fourteen-year period Duesbury I brought his provincial porcelain business, originally based on little more capital than Heath's original £1,000 together with the sale of his own father's possessions, into 'the mainstream of European ceramic fashion'.⁸

However the period 1783-6 brought considerable changes to the family business. A stroke had left Duesbury senior less able to manage the factory or warehouse, and the young William often deputised in his father's rôle. Duesbury junior was less cautious, and even during his ill-health his father tried to curb his son's alterations at the factory. The Chelsea works lease was not renewed, and there was a time of consolidation and improvements to the Derby factory. This coincided with an economic boom following the American War of Independence; in the East Midlands such optimism is reflected in the capital spent in the erection of new spinning mills. In general, the younger man maintained or built on the procedures he had inherited; however he visited London less frequently than his father. Lygo's salary was soon doubled, perhaps in recognition of his increased responsibilities. The dramatic difference that allowed the two distant sites to function efficiently was the establishment of the armed mail coach in 1784; concerned with small-scale but high value production, the Derby porcelain business was able to benefit from a modern-day delivery system. This minimised the capital tied up in specialised raw materials or finished goods. In London Lygo was able to provide all the fashionable details that kept the factory to the forefront, while Derby provided Duesbury II with 'Philosophical' stimulation.

While Duesbury's improvements of 1790-2 were driven by his desire to compete with the French porcelains, they too coincided with a period of growth in the local spinning industry and a canal boom, but these were followed by lows in 1794-6. The partnership of Duesbury and Kean appears to have been created to allow development perhaps with economies of scale, but the input of capital was largely only on paper, with Kean to buy into the venture on projected profits that were never realised. With Duesbury II's early death, and the dispersal of existing staff, it is impossible to judge Kean's management through various general financial panics, and the slump of 1799-1802. Kean's alterations were fundamental, and it is hard to believe the improvements were not part of Duesbury II's own plans for making a

⁸ J.V.G.Mallet, 'The contribution of Chelsea, 1770-84', in J.Murdoch and J.Twitchett, *Painters and the Derby China Works* (1987), p19.

wider-based commercial venture. Even having failed to secure the Carloggas china clay and stone and ceasing earthenware manufacture in 1799, Kean continued to extend the New Works. Greater commercialisation, c. 1806, may have been a prelude to the Kean-Duesbury families' disputes, but it may also have been a response to the continental blockade that allowed British porcelain manufacturers a period of respite. Speculative fever in the spring of 1809 may have seemed a rare opportunity for Kean to be rid of the factory, but it remained unsold through the crisis of the summer of 1810, finally to be bought at a reduced price by Bloor at the close of 1811. He too entered into a long period of economic uncertainty, instigating a whole range of more commercial and cost-cutting measures. The dismissal of apprentice-trained decorators in 1821 made the factory poorly placed to take advantage of the 1824-5 boom. Other English ceramicists however were prepared: in 1823 Minton had reintroduced bone china, while Daniels, employing ex-Derby hands, went up-market with fine hand-decorated porcelain wares.

Throughout the life of the Derby China Works its small ownership or partnership base made it an unusual ceramic business. Notably in the eighteenth century, the Duesburys, in solitary control, were both able to adapt production to the pursuit of their own aesthetic visions. Duesbury I's factory system combined elements of old-fashioned luxury craft production, with an up-to-date, regulated workforce. Many modernising influences were in place as, if not before, Wedgwood adopted them.⁹

Duesbury I's factory employed about 70 people on the main Derby site, while in 1780 the building and utensils/stock were insured for £500 each. This would place the factory in the upper-middle range of contemporary factory hierarchy. The mill, for minimum outlay, provided a valuable asset for processing not quantity but fine quality. Despite the claim that small to medium firms rarely organically evolved into large ones, this was not true of the Derby business.¹⁰ By 1792 Duesbury II employed 140 on the Derby site, and its valuation had doubled in 1785.

While Lygo's hours of effort seeking out small pieces of yellow enamel, or tracing a particular print, seem to have been unnecessarily time-consuming, they are symptomatic of Duesbury's supremacy in the ceramic industry. In the luxury sector consumers wanted choice, but rarity; the porcelain industry had created this with the

⁹See A. Forty, *Objects of Desire* (1986) chapter 2, p29-41.

¹⁰M. Berg, 'Small producer capitalism in eighteenth-century England', *Business Studies*, vol 35, no 1 (Jan. 1993), p35, also Clive Behagg, 'Masters and manufacturers: social values and the smaller unit of production in Birmingham, 1800-50', in G. Crossick and H.-G. Haupt, eds, *Shopkeepers and Masters in 19th Century Europe* (1984), pp135-55.

infinite variety of applied decoration on the blank white.¹¹ Wedgwood had copied the principle for his creamwares. But Duesbury II appears to have used it to considerable advantage in the 1780s as the neoclassical influence matured; earlier complex mouldings of rococo or Chelsea-Derby were replaced with simpler forms. In general such uniformity and standardisation of production is usually associated with technological innovation.¹² At Derby the various ribs and flutes that had been used to strengthen, for example, tea cups could be replaced by plain, thinly potted shapes as a stronger china body was developed. Whereas Lygo could call for no more yellow-ground wares with relatively little disruption to Derby's production line, this was not true of Wedgwood's body-coloured wares and Etruria could not 'leave off ... such staple articles abruptly'. The Duesburys' hand-decoration thus created few gluts or poor sellers, while potentially doubling the profits.¹³

The Duesburys' acquisition of most of their raw materials in regular but small quantities limited the need for large capital payments; nor did they allow the accumulation of extended credit. But were these advantages only possible in the luxury sector, or to a factory sited as Derby with good access to resources? It is suggested the contemporary Irish fine pottery industry was doomed to failure because limited capital obliged the potters to buy raw materials in 'uneconomically small quantities' without taking advantage of cheaper off-season bulk purchasing.¹⁴ Despite import duties Staffordshire wares were able to compete in this growing Irish middling market, and forces of economy of scale were already at work in the Potteries in the 1770s. Within a generation of Lygo's scouring London for suppliers of cobalt or bone, such specialist materials became readily and consistently available as more specialised processors, suppliers and potteries swarmed together in the Potteries in the early decades of the nineteenth century.

The Duesburys' business appears to have remained profitable into the early 1790s, providing the family with a moderate lifestyle and enough capital for expansion. However with the competition from French porcelain Duesbury II kept whittling down staff payments, presumably to keep the cost of his china competitive. Using

¹¹B.Lamire, *Fashion's Favourite: the Cotton Trade and Consumer in Britain, 1660-1800* (1991), p83 points out that 'choice did not await the introduction of mechanisation; variety and selection were forthcoming from the domestic system, with consumer demand a spur to further expansion of production'.

¹²D.S.Landes, 'Technological change and industrial development in Western Europe, 1750-1914', in J.Hoppit and E.A.Wrigley, eds, *The Industrial Revolution* (1994), pp108-143.

¹³C.L.Exley, *The Pinxton China Factory* (1963). Billingsley in July, 1795 mentioned decoration doubled profits in proportion to expenses. Charges from the Duesbury Accounts, 1751-3, and Worcester price list of 1760 confirm this general added value of decorating.

¹⁴M.Reynolds, 'Irish Fine-ceramic Potteries, 1769-96', *Post-medieval Archaeology*, vol 18 (1984), p257.

Kean's 1818 approach, and Billingsley's 1795 calculations for manufacture at Pinxton (see appendices 5 and 6), Derby's production could barely have been profitable by 1796 (appendix 8), but this was compounded by some customers' increasing failure to pay their bills, and misuse of gold. This was probably quite obvious, for late in 1797 Kean, on the pretext of creating new lines, raised many of the prices. He maintained the lower prices for teawares, but increased the upper range, while the sale price of newly introduced desserts was raised by 50%. The visual appearance of surviving Kean wares would also suggest that less than perfect pieces were finished as firsts, the popularity of the rich all-over decoration hiding blemishes. Kean also dismissed most of his managers. Very few potteries grew during the war years, and many established ceramicists failed.¹⁵

The economic historian, looking to find and explain the macro-economic 'modern growth between 1785 and 1802', will find it in the micro-economic study of the Duesbury and Kean factories.¹⁶ The Derby China Works provides a rare example of an eighteenth-century middle-sized manufactory with some record of the size of the production unit, capitalisation and employment structure. The long-term social changes that have contributed to the Industrial Revolution, including competition, trade regulation, markets and consumption, all affected the Derby business, as did the general economic cycles.¹⁷ The Duesbury papers reveal the developing, complex but successful relationship of the showroom and property in London to the provincial site, and in particular the importance of the armed mail coach and road transport to the industrialising economy. Had this study relied only on the economic historian's usually available tools - records covering tax, probate and fire insurance policies - then little of this dynamic would have been revealed.¹⁸

The original working title for this research had been 'Striving for excellence: a viable business strategy for the early English fine-ceramic industry? A study in Derby porcelain c. 1750-1830', and the query in this title is still apposite. The Duesburys' personal satisfaction in manufacturing the finest porcelain in Britain must have been considerable, and the business allowed the family to have a comfortable way of life in Derby. Unfortunately, the precarious balance involved in creating luxury wares at a profit had been tipped in the closing decade of the eighteenth century as

¹⁵Weatherill, *ibid* (1986), pp391-4. The firms of Spode, Mason and Davenport are said to have expanded post 1800, but there is little output data; Minton's production rose substantially 1796-8, 1802-3, 1810 and 1814 in line with the pattern of the business cycle.

¹⁶W.W.Rostow, *How it all began* (1975), p191 and p196.

¹⁷J.Mokyr, ed, *The British Industrial Revolution: an economic perspective* (1993), editor's introduction, pp6-8.

¹⁸M.Berg, 'Factories, workshops and industrial organisation' in R.Floud and D.McCloskey, eds, *The Economic History of Britain since 1700*, vol 1 (1994), p125.

Duesbury II put increasing resources into the finest materials and staff, at a time of strengthening competition and financial hardship. The exact intention of the commercial shift from 1796 is uncertain, but the management may have hoped to create one of the first large-scale combined porcelain-pottery works. Although the non-ceramicist Kean tried to modernise the factory, he did so against a background of dwindling receipts, and improvements within the ceramic industry as a whole. It was North Staffordshire in the second quarter of the nineteenth century, whose large-scale factories and swarm of specialist suppliers allowed comprehensive production shifts between bone china and pottery wares, that was able to exploit the English and foreign 'rococo revival' taste for porcelain; the assets or advantages Derby undoubtedly possessed under the Duesburys had long since diminished.

APPENDIX 1

Major published contributions to the history of the Derby China Works, c.1750-1848.

Old Derby China Factory, John Haslem (1876, with a facsimile reprint 1973)

Haslem's work is unique because he was apprenticed to the factory in 1822, leaving for London in 1835 to work as an artist. He returned to Derby in 1857 to live with his uncle James Thomason, who had been 'cashier and confidential manager' at the Bloor establishment from 1815-1845. Haslem writing as 'The Ghost of the Old China Factory' began to publish his memoirs in a series of letters in the *Derby Reporter*. He also began collecting Derby porcelain, of which a sizeable portion was given to the town a year before his death in 1884. His importance as a writer was his intimate and working knowledge of various aspects of the factory in the early to mid C19th, combined with some 'oral recording' of past colleagues, which enabled him to give for example 'potted histories' of workmen. Little pre 1770 history of the works is included, nor direct reference to original documents. His collection provides 'touch-stones' for artistic attribution. However his writing should also be viewed with some caution -perhaps being too personal, and protective of his beloved uncle's memory¹. There is very little indication as to why the factory failed to thrive, save for mention of Kean's quick temper and Bloor's insanity.

Ceramic Art of Great Britain, Llewellyn Jewitt (1878 two-volume edition, 1883 'slightly abridged' to one volume, and reproduced in this form in 1970).

Material within Jewitt's well-known encyclopaedic work actually first appeared over a twenty year period in 'The Art Journal' prior to its publication in 1878, and Haslem refers to Jewitt's research and these articles. The first edition only contains almost thirty pages in small print of research and direct quotes from original Derby factory documents. Many of these documents have been 'rediscovered' during the 1980s, but a few appear lost. Jewitt lived in Derbyshire and may well have had access to private papers, other than those of the Dueburys' descendant Henry Duesbury. His recording of known documents appears accurate, as do his resumes, but his style can be frustrating by the inclusion of 'throw away lines', as for example when referring to Kean post-1796 who 'from reasons into which it is needless to enter, withdrew hastily from the concern'. Unsubstantiated statements by Jewitt are likely to have some validity, but should be treated with some reserve.

Bow, Chelsea and Derby, William Bemrose (1898).

Bemrose, like Jewitt, wrote on a variety of subjects, but was particularly interested in Derby porcelain, amassing a large private collection himself.² In 1876 he had become chairman of the recently founded Derby Crown Porcelain Company. Bemrose

¹A copy of 'Pottery and Porcelain of Derbyshire' by Alfred Wallis (editor of the *Derby Mercury*) and Bemrose, 1870, formerly in the possession of Twitchett, has been annotated by the Wallis c1870-1910. Derbyshire Record Office D4945, f53v. He noted recollections of Thomason as 'a true idler, not vicious, but simply stupid' and consequently his mismanagement contributed to the factory's downfall.

²Unfortunately dispersed by auction in 1909, the year after his death; relatively few pieces have been traced to this provenance since. See Derby Museum Catalogue, 'Bemrose Collection', 1981.

obviously had access to many of the original documents used by Jewitt.³ But his 1898 book and the 1870 exhibition catalogue, co-written with Alfred Wallis, do include illustrative material not as yet traced today, such as the silhouette portrait of the elder Duesbury. Again although Bemrose's work is largely based on the selective use of documents, he obviously 'tidied up' the history of the factory. A visual example of this simplification can be seen in the often reproduced view of the 'Old China Works' taken from a sketch by Moses Webster. The original pencil drawing by Webster survives in Derby City Museum; it is a quick 'mental sketch' of the buildings before demolition. The juxtapositioning of the buildings and the actual number of kilns is far less precise than shown in the published Bemrose version.⁴ The actual sketch is annotated 'W. Bemrose remembers these works. Had tea in the house to the left many times - going with his father to call on Thomason'. Murdock, writing almost a hundred years later rightly queries 'whether Bemrose's eye for quality was as fallible as (we sometimes feel) his attributions may have been'.⁵ The Bemrose family's overall contribution to the story of Derby porcelain is immense, notably for the various documents eventually saved for later generations to interpret but his own writings are sometimes over reverend - helping to fuel the divisions between the Edwardian pro- and anti-Derby collectors.

Derby Porcelain, F. Barrett and A. Thorpe (1971).

This has proved to be a particularly important book in the study of the history of the Nottingham Road factory and its wares. No other single volume on 1750-1848 Derby porcelain was as widely available, with reprints of Jewitt and Haslem following within a few years. Franklin Barrett was an established author, better known for his interests in Worcester and Bristol porcelain,⁶ while Arthur Thorpe was as Curator of Derby Museum in charge of a diverse collection ranging from railway memorabilia to paintings by Wright of Derby. Thorpe had contributed two short chapters on Derby and Pinxton to *English Porcelain*, edited by Charleston, in 1965, as had Barrett on Worcester, Caughley and Coalport.

Barrett's and Thorpe's book, common to the other Faber monographs, was relatively cheap, and combined a 'good read' with a work of reference. Appendices of biographies, marks, extracts from well provenanced documents and sale catalogues and the Haslem Figure lists have made it one of the most useful and most quoted sources on Derby Porcelain. In addition to the text over 180 illustrations of varied pieces are added- some two thirds being of the City Museum's own collection. The latter was most significant for many previously illustrated pieces were privately owned and therefore inaccessible to the general public. However the book was still

³ The British Museum now houses a collection of some of these papers bequeathed by William Bemrose in 1908. The Duesbury Papers in the Derby Local Studies Library, and a few further items in the Derby City Museum may have been bought in 1914 by the town with a larger local history library originally owned by William's brother, Sir Henry Howe Bemrose (1827-1910), although records have not survived supporting this conclusion. Two volumes of china artists' drawings in the Derby Library appear to match two further albums given to the Royal Crown Derby Museum in the mid 1980s with a Bemrose provenance.

⁴ Stuck into Bemrose's copy of the 1870 book. Wallis, DRO D4945, f11v suggests Bemrose version was 'entirely imaginary'.

⁵ J. Murdock and J. Twitchett, 1987, 'Painters and the Derby China Works', p13.

⁶ Although Barrett had studied some of the 'Bemrose Papers' in the B.M. having written about the Nottingham Road site in an article for the *ECC Trans*, 1959, vol 4, part 5 p26-44.

aimed at the collector and very artifact and artist orientated, although references were included to the whereabouts of 'the Duesbury Collection of Manuscripts in the Derby Public Library', the 'Bemrose Collection of Documents at the British Museum'⁸ and the 'Victoria and Albert Museum Documents relating to the Derby China Factory'⁹. Referring to the Derby Library papers the authors wrote 'There are some 2,000 manuscript documents in the collection, and many are of a personal nature not concerned with the China Factory. Only a selection can be reproduced or summarised here.' How true! Although Barrett and Thorpe did produce clearly dated and accurate records of a selection of the original documents, and were therefore the first authors this century to add to the public knowledge of the workings of the eighteenth-century factory, their greatest disservice to the Duesburys and Kean, was to belittle the importance of the surviving documents.

The overall content of *Derby Porcelain* contrasts with their co-written forward to C.L. Exley's posthumous *The Pinxton China Factory* in 1963. When faced with the documentation from the Pinxton works they had been more prepared to pose a commercial question: "Was it inevitable that Pinxton should fail?" Later Thorpe was to comment that 'in striking contrast to the Derby works' the origins of the first Billingsley factory was well documented, and 'the Factory Book provides much interesting information concerning both the building and the running of the manufactory together with a list of the workpeople, etc.'¹⁰ Although similar types of information could be gleaned, with patience, from the Derby records c. 1775-1800 there was little assessment of the old Derby China Works as a commercial enterprise despite Barrett's and Thorpe's knowledge of the range of surviving documentation.¹¹

⁷Barrett and Thorpe, *ibid*, appendix V.A .p124-157.

⁸*ibid*, appendix V. B. p157.

⁹*ibid*, appendix V.C. p158.

¹⁰ Thorpe in Charleston, *ibid* (1965),p23. The Pinxton documents, including Billingsley's letters in the 'Duesbury Papers'(one p9 being incorrectly dated to Oct.14,1796 should be 1795) and the 'Factory Book' in private hands cover the period Aug.1795 to April 1799. They form a fascinating and relevant addition to the history of the Duesbury factory too, because it is highly likely that many of the facts/figures are based on the Derby management/techniques of the period.

¹¹Barrett's original research notes for *Derby Porcelain* are currently housed in the Ceramics Dept, Victoria and Albert Museum, dated Dec.1968.

APPENDIX 2

Detailed Inventories of Consumption

Calke Abbey household accounts kept by the Right Honourable Lady Caroline Harpur from 1750 to 1796. DCRO D2375/761/121-2.

The housekeeping accounts appear to record both 'male' and 'female' spending. Of an annual budget of £2,500, nearly half was spent on food and drink, £390 on carriages and horses, and about £175 on each of the following: clothing and linen, servants, and trips to London, Windsor and Scarborough. This was largely a 'maintenance budget'; the acquisition of household luxury goods was limited. No furniture or art work was purchased, although '281.17oz. plate' appears to have been added, without record of its craftsmanship or artistic value, or even use.¹ About £20 was spent on ceramics in total, less than 1% of the budget. Porcelain to the value of ten guineas and £6.16s. was purchased respectively from the 'Dutchess of Montrose' at an unnamed spa resort, and from 'the Smith'; a few shillings were invested in a raffle for china at the spa. Utilitarian 'crokery', along with glass, brooms and mops, and two guineas of 'Staffordshire Ware' was added.² Lady Caroline's largest china acquisition of 10 guineas was spent in person, within the context of a Season's visit.

Elizabeth Parker (1751-73), later Shackleton (1773-81), of Alkincoats, Lancs. LRO DBB/72 and 81.

With an income of c. £300 Elizabeth bought china through her London aunt, Ann Pellet, in 1754, who advised her: 'the nanquen sort is much the present taste and consequently the dearest, but tis only blue and white and will not be thought so fine. However you may have a good genteel, full set (that is 42 pieces) for about 5 or 6 guineas since the Beau Monde is chiefly for the ornamental china'.³ Elizabeth's diaries indicate that ceramics were bought to last, and used for many years - a broken china wash basin, for example, was to be repaired if possible despite fifteen years' use, rather than just replaced. She had married a poorer cousin who was unable to keep her 'in pomp and splendour'. However she maintained her social ties with her richer friends and went to considerable trouble to entertain them in appropriate style at home.

¹As a comparison, the Dunham Massey inventory, c. 1750, records two hallmarked (1741) trays weighing 202 oz. and 160 oz. respectively. The second Earl of Warrington had amassed over 1000 pieces of silver on his death in 1758.

²Few suppliers' names or locations are recorded; it would be tempting to suggest 'Smith' provided locally made Derby porcelain, but it is more likely to have been Chinese, or Bow. Even fewer specifics are recorded in the later eighteenth-century Calke accounts, although holidays and travel are more clearly defined by the 1790s.

³Pellet had moved within fashionable and wealthy circles, was the daughter of a merchant and widow of the president of the Royal College of Physicians.

Rev. Thomas Gresley, Seal Hall, near Burton-on-Trent, 1757-1777. DCRO.

Set up house in 1757. Bought hamper of glass and pottery from Haslam and Brooks, Irongate, Derby; £21 Whitehurst watch, £3.10s. on black marble chimney piece with Swithland slab, but bought spices and sperm oil from London. 1777 purchased water closet from New Bond St; 1775-6 Wedgwood dinner, tea, coffee wares in 'antique styles', £1.16s., and 'Queensware Royal Pattern' tableware £5.0s.1d directed from Etruria to 'Nethersay nr. Horninglow, Staffs'. 1777 bought Boulton and Fothergill silver coffee pot, salts, cutlery with 'mahogany knife case' £58.15s.0d. Awaited '3 waiters that needed hallmarking'. Married widow whose brother had just spent £56,000 buying Manor of Measham; 1777 bought 73 guineas of lace from London, perhaps for church rather than private use. Hired masquerade custom from London, bought confectioner's oranges, tea, chocolate; silver, hats, cloth from Birmingham, purchased clothing and jewellery in Bath, 1777.

Sir John Stanley, London Household Accounts, 1772-82. National Art Library, Victoria & Albert Museum, MSL 996-1960, 86B96.

Family from north Cheshire, refurbished a newly rented (£170 per half-year) house in Conduit St, London from top to bottom. Epitome of conspicuous consumer, for example commissioned a new coach costing £160. Purchases included three dining tables, two of which, 'made to join together', were each twelve foot long. Surprisingly little was spent on individual items of furniture; the pair of tables cost £7, a sideboard was 6 guineas, 11 guineas for a 'sofa à la reine', and over £24 for two elbow chairs. Small sums were invested in the fine arts; on a summer trip to Italy in 1772 four pictures were bought costing between £4.10s. and £5.8s. each, along with a pair of portrait intaglios at a little over £15. Crested silver and cutlery from Joffery included two fashioned teapots, 13 oz. weight each (£5.4s. to £5.6s.), and 26 oz. coffee pot (£13.0s.9d). The expenditure on ceramics by proportion was considerable: nearly £138 in porcelain alone, including the up-market source of Mr Williams (the Derby factor) where he bought a 'mazarine blue and gold desert service' for 24 persons, at £20.6s.6d, and a blue and white (?oriental) dinner service with 5 dozen plates for £13.15s. Mr Christie's saleroom provided further table china and a breakfast set (unspecified origin), for £10.6s.6d; £62-worth of china came from Bradley.⁴ The dealer Storer initially supplied £100-worth of utilitarian earthenware, along with smaller quantities from Greenhalgh; both these and Chamberlayne supplied further 'replacement' quantities to the value of a few pounds, along with household glass. Also, £19-worth of unspecified Wedgwood wares were bought, along with a variety of teapots, cups and mugs that totalled 6s.8d. Nearly £96 was spent on silver, mostly for the table, including crested cutlery and tea or coffee equipage. Entertainment was obviously important: bills included £19 for one Season's confectionery, an almost weekly consumption of a 16 lb. joint of beef, and an account

⁴Unknown, but a number of Bradleys are associated with the fine china industry; see O. Fairclough, 'London China Trade' p.206-7. The Duesburys were family friends of Bradleys with Derby connections c. 1765; by 1790 a family member was obviously in the ceramic business in London. A Joseph Bradley was a chinaman in Carnaby St. in 1795 while a John Bradley established a Pall Mall decorating shop in 1812.

for £80 from Twinings for tea. This massive consumption was limited to a period of less than three years; from 1774 onwards the accounts would suggest that having equipped the house, garden and stables, housekeeping settled down to maintenance level and no substantial additions were made, although hospitality continued. 'Sir J. Stanley' owed Kean £3.9s.10d for unspecified porcelain in 1811.⁵

Whatman family of Kent. Housekeeping, Account Book, Letters, c. 1776 - c. 1811.

James Whatman: gentry family, with total income c. 1780 of about £6,000 per year (of which £4,750 from paper mills), but only spending c. £1,500. Used £300 for furniture bought from his mother during his first marriage; married Susannah, daughter of merchant and banker, in 1776. Bought an existing estate, Vinters, in 1782, remodelled/furnished it for £5,000 over 6 years; 1797, paid Repton 50 guineas for survey of Vinters. Consumer luxuries bought: £164 on silver to add to 400 oz. of existing plate; 25 guineas on French clock, £17 piano, Romney portraits. Susannah received an allowance of £105; children's expenses were £89, James's £143.

Petworth House Archives. West Sussex CRO. (Lords Egremont, with houses in London, Petworth and Brighton, c. 1750-1837.)

One of the richest families in Britain; income mid-eighteenth century, over £50,000, twice this by turn of the century. The family's taste, connoisseurship and prestige were reflected in the heavy investment in pictures, tapestries and antique sculpture, particularly acquired by the second earl, who built Egremont House. As 'foreign secretary' he used his town house for social and political assemblies that proceeded through the rooms.⁶ His wife, the Countess, commissioned the furniture, pictures and frames and occasionally procured art; her dressing-room contained 55 paintings by 1764. Any porcelain acquired appears to be of high quality; its public display at Petworth lost favour mid-century, when it subsequently played a more functional rôle compared to fine art.⁷ High-quality china tea and breakfast wares, suitable for 6 people, were bought to the value of £9.16s. from the noted London dealer, Thomas Morgan. The third duke on a visit to France in 1774 purchased Sèvres porcelain, spending £123 on dessert and tablewares for 18 diners, and a further £42 on a pair of vases. But no record survives of the acquisition of any English fine china. More utilitarian pottery, along with table glass, was regularly supplied to Egremont by William Storer and Wedgwood. The latter provided simple creamwares, including two vases priced at 12s. and 7s. respectively, but no 'Greek vases'.

⁵BM. BP. f325 appears to be a summary of accounts, perhaps still outstanding in 1807-1811.

⁶Christopher Rowell, 'The second Earl of Egremont and Egremont House: a private London palace and its pictures', *Apollo*, vol. CXLII, no.434, April 1998, pp. 15-21. A total of 220 pictures was recorded on his death in 1764, of which he had bought 183.

⁷PHA., WSCRO. Cat. no. 6613 re. Thomas Morgan, china man, 6 tea cups and ware (5 guineas), 6 caudle basins and plates (4 guineas) 1762-3; 6606 third Earl's trip to France 1774-5, and purchase of Sèvres porcelain (3768 livres); 6616 re. Josiah Wedgwood 1774-5; 6616 (1774-5), 6611 (1778-9), 6640 (1794-5), 8101 (1789-90): re. William Storer, 'earthenware and glass man'.

The 1837 inventories on the third earl's death suggest substantial entertainments had taken place in the country at Petworth. Tablewares in the 'store room' included at least 25 different table services; about half were specifically 'desserts'. Plates from the two largest sets suggested the Petworth kitchens could cater for 84 at dinner. There were also 5 tea/coffee sets, and one breakfast set. Dresden and Sèvres were named producers of the desserts, but a large number were of unattributed 'British' origin. Spode, ironstone and printed wares were differentiated, while the form and decoration of many of the fine china pieces suggest they might be Derby made, for example the 'botanical dessert'. The housekeeper's room contained more functional and everyday wares including cups, teapots, eggcups, and plates that were blue printed or Spode. The reception rooms were well decorated with a large collection of massive 'Indian jars' and 'chintz bottles'; a display cabinet included a few Sèvres, Dresden and oriental pieces, but no obvious English ornamental wares of any period. Egremont's London home, at 4 Grosvenor Place, acquired after Egremont House was sold in 1794, held more contemporary and practical Spode and Dresden tablewares, although ornamental items were still old Indian. The Brighton property was equally well equipped for hospitality, but the ceramics are largely unidentifiable.⁸

*Prince of Wales, The Coutts Inventory of Carlton House. January 1793*⁹ (Royal Archive ref. no. RA Box 3/154); and 1826 (Vol. U, Windsor Castle).

Useful ceramics under the supervision of Francois Benois in 1793. (Lygo, 14 October 1790, refers to Mr Weltje, who had been in charge of the porcelain, had been sacked, and his rôle in the kitchen and confectioner's room taken by the Prince's Cook: other Weltje duties had gone to another gentleman.) China in the Confectionery and Coffee Room, mainly tea/coffee wares, broth basins, include unnamed pieces, much of which may be French-style Derby, six Wedgwood ice pails for wine, and three 'Derbyshire Manufactory' services. The 1826 inventory includes 10 Sèvres services (one Tournai, 1789), and other part services, amounting to 1,662 pieces. Of note are the few items of Derby porcelain in the 1793 inventory that can be matched to known documented orders - it has been commented on in the text that china, particularly ice pails, was broken; some purchases were intended as gifts, others were sent to Brighton.

⁸PHA 11, 313-6.

⁹Drawn up as security for a loan.

APPENDIX 3

Fire Insurance Policies related to the Derby China Works, showroom etc.

Sun Insurance Policies Guildhall Library, Vol. 74-395, 1745-1793, MS 11936 and CD (County Departments) series, 1793-1813, MS 11937.

Vol. 209. Policy no. 303537. Dated Oct. 10th, 1771.

‘William Duesbury and John Heath of the town of Derby, China Manufacturers, on their Kiln House, Woodhouse, Mill House, Painters Workshops and Stable adjoining each other (Bricks and Timber) situate in Lawrence Street at Chelsea in the County of Middlesex, not exceeding £200. Utensils and stock therein only not exceeding £500; on utensils and stock in a Brick and Timber House only situate in Butcher Row, London in the occupation of ? Bertles, Gent, not exceeding £800’. Total £1,500.

This policy was further annotated ‘See Ind N21 ... 341’. An endorsement was therefore added during the life of the policy; unfortunately the endorsement volumes relating to 1770-4, the ‘12160 series’, have been lost. Premium of £3.15s. paid, renewed Michaelmas 1772.

Vol. ?286. Policy no. 431569. Dated Aug. 12th, 1780.

‘William Duesbury of Bedford Sreet Covent Garden China Manufacturer, on his brick and Tiled Kiln House and Warehouse communicating situate in the town of Derby not exceeding £500. Utensils and stock therein not exceeding £500.’ Total £1,000. Premium of £2 paid, renewed Michaelmas 1783, followed by £5.19s.0d.

Vol. 333. Policy no. 510553. Dated Oct. 10th, 1785.

‘William Duesbury Senr. and William Duesbury Junr. of Bedford Street Covent garden China Men. On their own Household goods in their now dwelling house only brick situate as aforesaid not exceeding £100. Utensils and stock therein only not exceeding £3400.’ Total £3,500. Premium £8.13s. paid, renewed Michaelmas 1786. A claim was made against this policy for £53.4s.1d on April 21st 1785, the major part being to ‘reinstate carpenter’s and mason’s work’ but also including £6.2s.9d for damaged stock (DL uncat).

Vol. 333. Policy no. 511415. Dated Oct. 29th, 1785.

‘William Duesbury Senr. and William Duesbury Jnr. of the town of Derby Porcelain Manufacturers - On their now dwelling house situated aforesaid Brick and tiled not exceeding £200. Household goods therein only not exceeding £70. Wearing apparel ... £30. Warehouse, Stove, Workrooms over, Leantoos, Two Rooms over a passage, Package Room and Slip House with Rooms over all adjoining Brick and Tiled not exceeding £600. Utensils and Stock therein only ... £1000. Two Kilns and 2 houses adjoining Brick and Tiled ... £100. Buildings in the Woodyard adjoining near each other thatched ... £200. Utensils and stock therein ... £200.’ Total, £2400. Annotated ‘... Ind No 49 P107’, ‘Duty £1.16s.’. Premium £4.19s. paid, renewed Michaelmas 1786.

(MS 11937 CD series (County Departments). Vol. 1 commences 21st Aug. 1793, to run up to vol. 104.)

Vol. 42. Policy no. 720730. Dated Aug. 10th, 1801.

‘Michael Keene of the town of Derby, China Manufacturer - on his China Manufactory situate as aforesaid as of plan lodged in the office. Viz carpenters shop A not exceeding £30, Wood Room B £19, Placing Room C...£70, Kiln D...£90, Biscuit Room E...£50, Kiln F...£90, Drying and Placing Rooms G and H...£60, stove with ?a pot I...£90, Work Rooms with 2 stoves K...£160, Cellar L...£50, Cellar M with room over...£60, Three kilns N.O.P...£175, Clay Rooms, Cart Hovel and kilns Q.R.S.T.U.V...£10, Kiln W...£45, NB the buildings XY also those no. 1, 2, 3, 4, 5, 6, are not included in this insure.’
Total, £999. Unfortunately, plans relating to this policy are lost.

Other Derby-located Sun Company policies

Vol. 167. Policy no. 229614, Jan. 9th, 1766.

Anthony Stephenson of Derby, Druggist. Properties include house in tenure of *Richard Holdship, China Painter*, with adjoining outhouses, £300. Total, £1,000.

Vol. 168. Policy no. 233776, May 21st, 1766.

Geo. Salisbury, Derby pipemaker. Total, £200.

Vol. 198. Policy no. 287547, July 28th, 1770.

Joseph Pickford of Derby, Builder. Dwelling house at Nun’s Green £670. Total, £1,000.

Vol. 329. Policy no. 503352, April 9th, 1785.

Nathaniel Cockayne of the town of Derby, Baker ... tenement in tenure of *William Yates, chinaman*, not exceeding £30.

Vol. 329. Policy no. 503353, April 9th, 1785.

Ann Palmer, victualler of the town of Derby ... three tenements only in tenure of William Whitton, milkman, *Jno. Yates, Chinaman* and widow Baker ... tenement only in the yard of *Richard Whitecar, chinaman*.

CD series Vol. 22. Policy no. 674751, Feb. 2nd, 1798.

Thomas Soar of the town of Derby, porcelain painter ... on a house in his own tenure. £120.

CD series Vol. ?14. Policy no. 794362, Sept. 30th, 1806.

John Salisbury in the town of Derby, pipemaker, on a dwelling house and offices adjoining in Willow Row, three tenements adjoining in yard in tenure of Wild ... workshops only at top of said yard and garden not exceeding £300.

APPENDIX 4

From a letter from Michael Kean to F. Jessop, postmarked from Brussels and dated Feb. 5th, 1816. (BM. BP. f425-428.)

‘The finished stock in white and finished ware was surprisingly incomplete, both as a stock for sale and a stock from which to supply the enamellers with work - this imperfection was continued in part by what would be an advantage in an extensive and regulated concern, namely a great variety of shapes of ware, but in a manufactory so limited as that of Derby was the disadvantage was great, and more particularly so as the stock was through out of this irregular kind, at the beginning of the partnership, and as the men employed in making ware did not produce enough to keep the finishers employed in regular saleable goods; and these were obliged to be kept in work out of the irregular white stock, which instead of remedying the evil continued it, and it was thought inadvisable to discharge any of these finishers - It was extremely difficult to increase the number of men that worked in the clay, and when increased the difficulty for a time increased with them, by a want of room to hold their work, while in a state of clay, and the want of proper kilns to make it. Great proportional losses were incurred daily by this want of room, and want of proper kilns, for which there was but one remedy - that of increasing room and having sufficient good kilns - It will be evident to you that in the sales the disadvantage must have been most sensibly felt, for when a set, for example, of any thing was sold it almost always wanted something, and the order book was constantly loaded with trifles, amounting perhaps to a few shillings, and from the want of proper stock, and proper attention to orders, from a deficiency of intelligent persons, these trifles remained almost always for months unexecuted, often for years, and sometimes were never executed. - The cash account constantly felt this disadvantage. - The stock for sale was generally finished with superior care and taste, but supposing the ware (distinctly from the finishing) to have been the best, it is clear that the great irregularity of stock must have been highly oppressive - but the ware was incontrovertibly bad for use, and possessed every disadvantage in a manufacturing view, and was radically defective in every thing that constitutes the goodness and beauty of true porcelain. - From this must be inferred that the composition should be changed, or improved, the workmen in the clay increased, room enlarged, kilns if not increased in number at least changed totally in principle - hence study and money were both required, and the latter was only obtained by the severest application to business and general economy. The Mills with all other manufacturing apparatus were bad, and, as part of the stock, excessively valued - the bad kilns, as another part of the stock, prodigiously exceeded in their valuation the expense of good ones; and the Mills (in I believe an inferior state) were rated in 1795 much beyond what they were estimated at in 1811 (though I believe a better state).

‘The worse of this inferior stock was to be put in a way of sale, and new stock made to replace that sold. - This required an intelligent proprietor, which I could not consider myself to be at that time, faithful and able overlookers, honest and experienced firemen, and good accountants and salesmen. - Mr. Lygo had the management of the London Warehouse, but he attended to affairs foreign from the business of the warehouse - I was for several reasons obliged to part with him. - A Mr. King, a

wathmaker I believe had almost the total control of the manufactory and Books in Derby - he was offended at any investigations or interference, he had caused universal discontent, did not understand the business and left imperfect and irregular books. Mr. Mason was overlooker of the Claymen, but he was old and ignorant, and did harm and (I think) no good. - Mr. Wm. Smith of Derby was nominally overlooker of the painters, he also made colours and prepared gold - he did not properly execute the office of overlooker, as he was but little in the factory, having his own business to attend to, and he made colours and prepared gold in a private room, and without his processes being known to his employer. The firemen were unfaithful and ignorant - W. Smith was succeeded by Mr. Soare, a person who for many years gave me his best and constant assistance in the most faithful and zealous manner. Mr. Mason was succeeded, I think, by a person of the name of Baggeley, who was of much use for a considerable time. - Mr. King was succeeded by Mr. Barker who afterward replaced Mr. Lygo, and was himself replaced in Derby by Mr. Tatem. - These things were effected with great difficulty, and by much time, and you will suppose that while they were effecting the business would not be very prosperous. In a word, I think by the time there was sufficient room to carry on the manufacture with common advantage, and sufficient compleat stock of both kinds to be indifferently turnd, and to bring in any thing like business returns of money. The nine years of partnership were nearly consumed - this is properly when the business begun ...

‘... I did not understand the manufacture and became partner with Mr. D. on a general representation of advantages, and a partial representation of the disadvantages - but I would be [?] understood to disdain all intention of charging Mr. D. with unfair motives, I think he did not himself know the state of the concern correctly ...’

APPENDIX 5

From: 'State of Ornamental Trade of 1796'. (BM. BP. vol 2. f1477.)

This document relates to the value and subsequent breakdown of costings by Kean of ornamental goods sold through London and Derby in 1796. The value of goods sold was suggested to be £487, made up of £641.5s.3d-worth of goods sent to London, of which £464 was sold, and £23 sold in Derby. Kean suggested splitting the loss on unsold ware, 'making a sum to argue ... the gross sale of 1796 ... £564'. The statement was probably made c. 1818.

‘Expenses		
Trade discount is 20% plus 5 % for money		
Much of the £564, but not all, was sold to the Trade, say 15% disc.		£84. 12. 0
Carriage to London at 1½%, say		8. 9
Expenses of sale in London at 15%		84. 12. 0
Breakage in carriage and to the time of sale 5 & 6%		28. 4
Workmen’s wages, Part of overlooker’s time and		
2 Boys / from wages book		220. 0. 0
3 mixing of ornamental slip @ £3.0.0		9. 0. 0
2 glaze @ £3.0.0		6. 0. 0
Expense of firing an ornamental biscuit kiln, say £4		
.. .. glaze kiln say £6		
3 Biscuit kilns say		12. 0. 0
2 glaze .. say		12. 0. 0
Rent and Taxes of factory on a proportion of £564 to about £5,000,		
which was about the amount of the gross London sale, say		10. 0. 0
Gold and colours - say at least		20. 0. 0
Painting and gilding at £1 per week		52. 0. 0
Suppose 8 enamel kilns at £2 each		16. 0. 0
Modellers’ wages in 1796		38.14.10½
another ..		4.18
Fires wear and tear for implements etc., say		10. 0. 0.

		629. 9.10½
	5% on capital, say-	31. 6

	Total expense -	657.15.10½
	Deduct receipts	564

	Balance loss	- £93.

The above is intended to be under charged in the Expenses.
It is possible and even probable there may be errors in the above from some haste, and other circumstances - But if there are, there can be no doubt they will be pointed out.’

APPENDIX 6

From William Billingsley's 'General Calculations on the Business' related to setting up and costing production of china at Pinxton. Letter to Coke, 22 August 1795. (Private papers, quoted from private publication, Exley, 1963.)

'Kiln of white ware pr week; expenses:
A kiln will contain 70 teasets, equal to 332 dozen of tea ware, the Clay, Glaze and making amount to about 1s.5d per dozen, which would be a weekly expenditure of £23.10s.0d.

Coals to burn a Biscuit Kiln and Saggars 4t.10c. at 10/- per ton	2. 5. 0d
Wood to Fire a Glaze Kiln 3 Chord at 18/- per chord	2. 14. 0d
Men necessary to Fire the Kilns and Labour'r per week	4. 3. 0d
Clay for saggars and Making per week	1. 8. 0d

Would be weekly expenditure of about	£34. 0. 0d.

'Cont re. costings of 70 teasets in the White per week:
... allowing one seventh for Loss, it would produce 60 teasets per week, and 4d per Tea for Such Ware would be a Cheap price, and at 57 Teas per Set is 19s.0d per set which would produce £57 per week, and deduct the £34.0s.0d. expenses from the £57 produce, the remainder is £23.0s.0d there being some other extra expenses which possibly might amount with unforeseen Loss's to £7.0s.0d. per week, which deducting there remains a Surplus of 16 pounds - the rent of the Buildings Deduct'd £1.0s.0d. per week, there would remain a Clear profit of 15 pounds pr. week ...

'... I am Certain that it is far more advantagious to finish the Ware than Dispose of it in the White (But I would advise to do both for the present). To Finish 20 sets Pr week in the middling and Lowest stile (except a few Elegant ones) will take about 20 pounds Pr. week in Cash which would produce in Profit at least 10s.0d Pr set Clear which would be 10 pounds pr week, but the higher China is Finish'd to a Certain criterion, the profits increase Double in Proportion to the expenses extraordinary - Desert and Table services ... I believe pay Exceedingly well.'

Billingsley goes on to suggest the expenditure of the working capital:	
'... rent of buildings ...	£50.0s.0d
As in the trade Six Months Credit is allow'd and the expenses would be	
about	£54 pr week before a return
which would be 6 Months or	26 weeks which would
amount	

	324
	108

in cash advanc'd for	1404 pounds and allowing for
Extraordinary	96 it would be 1500 pounds
advanc'd , the interest of which allowing ten pr cent pr annum would be	
pr annum	£150. 0s. 0d
Superin'ting the Business pr annum	£150. 0s. 0d
Employing a Rider and other Expenses pr annum	£300. 0s. 0d

	£650. 0s. 0d
& as before stated the profits on the white ware would	
amount to £15 and the finished £10 pr week,	
that is	£25'.

APPENDIX 7

London Sales / Porcelain Goods sent from Derby with ‘gold had from London’.

	Goods sold or sent from Derby in pounds	Gold from London in ounces	Value of Gold in pounds *
1781		72	
1782		66	c. 262
1783	5,404	66	
1784	4,253	68	
1785	5,670	90	c. 347
1786		125	
1787		156	c. 602
1788	5,689	156	
1789	5,863	156	
1790	5,737	156	
1791	5,012	156	
1792	5,383 (of which £232 biscuit)	192	c. 818
1793	5,740 (of which £424 biscuit)	222	c. 946
1795			c. 729 #

* Based on the cost Lygo paid per oz. in 1787: £3.17s 6d, 1790: £4.5s.0d, and 1793: £4.5s.3d.

Only 19 purchases of 6 oz. each are recorded for the first nine months of 1795, totalling £486, but pro rata the total value might be c.£729, or more, allowing for the autumn pre-Season production.

APPENDIX 8

Statement of the likely finances of the Derby China Works, c. 1793, based on the Kean and Billingsley calculations in Appendices 5 and 6.

Say value of porcelain sales through London: £5,800.

	Debit (£)	Credit (£)	Balance (£)
London trade c. 66% of sales value = 3,867 with 20-25% discount		3,000	
London private sales		1,900	
Derby 'country' trade		580	5,480
Carriage 1.5%	87		
London expenses 15%*	870		
Breakages 5% to 6%	319		

Cost of selling in London	1,276		4,204
Purchase of Gold	950		
Wages @ £32 per week	1,664		
Factory, mill rent / taxes	100		
Working kilns	440		
Slip, glaze	165		

Production costs	3,319		885
Wear and tear	110		775
Duesbury's own 'salary'	?		

* Figures available related to the cost of running the London showroom in the mid-1780s would suggest it then cost nearer 10% to run.

Although Kean allowed money for modellers in his ornamental calculations, there does not appear to be an allowance for drawings, prints, etc. Because the ornamentals had become dominated by biscuit wares, Kean's calculations may underestimate the proportionate costs involved in the decoration of useful wares: enamels, decorating, burnishing and associated firing; Billingsley added another £20 per week to allow for decoration in the 'middling and Lowest stile'. The £775 'profit' could easily become a loss in depression years, due to competition, mismanagement, or failure in debt collecting. In 1796, book debts were equal to about two-thirds of the value of annual production, or over five years' 'profits'. The balance also includes about £200 of rent from the Henrietta St / Bedford St and wharf properties, which in the lawsuit were deemed to be Duesbury II's private estate, and nothing to do with the business.

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Since study of these manuscripts began in the mid-1980s the documents have been recatalogued and numbered, and some have also been misplaced. In the text many documents are referred to by the current catalogue number; however some are referenced with old catalogue numbers, or date of document, as originally seen. The Lygo letters 1786-96 are referenced by date.

Duesbury Papers, DL82 1-21 (includes the showroom managers Wood's and Lygo's letters, and early Chelsea and Derby factory accounts).

Parcel 17x (mainly London showroom day-books).

Sketches etc. of Derby decorators, in two volumes, Bemrose Gift.

Derby Philosophical Society, 1784, 1787-9 (BA 106 MSS/9229-30), members, library catalogue, ledger of chargers.

Derby Canal Company.

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Derby City Museum and Art Gallery.

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Derbyshire Record Office.

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Abbreviations:

DAJ: Derbyshire Archaeological Journal

DPIS: Derby Porcelain International Society

ECC Trans.: English Ceramic Circle Transactions

EHR: Economic History Review

EPC: English Porcelain Circle

NACF: National Art Collections Fund

NCS: Northern Ceramic Society

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