THE INDUSTRIALISATION OF THE LONDON BREWING TRADE: PART I

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Introduction

The aim of this study is to examine the development of the London brewing trade from the mid-eighteenth century to the mid-nineteenth century. The intention is to use this specific aspect of the capital's industrial sector as a vehicle for investigating its economic history as a whole, its part in Britain's industrialisation and its decline as a manufacturing centre. It is argued here that there were early aspects of industrialisation in certain areas of London manufacture, such as sugar-refining, distilling and particularly brewing. Contrary to popular belief, large factories did exist in eighteenth-century London.

The role of London in Britain's industrialisation has been widely dismissed by historians. In 1925, an influential historian of the time, J.L. Hammond, stated that the industrial revolution was 'like a storm that passed over London and broke elsewhere'. In 1992 Leonard Schwarz, in London in the Age of Industrialisation: Entrepreneurs, Labour Force and Living Conditions, 1700-1850, sought only to qualify the metaphor by saying that the storm broke upstream of London. In this model, low transport costs allowed the flow of goods to supply the concentrated demand of London's population so making it the great market place of the country where manufacturing was 'never of supreme importance'. He argued that the metropolitan economy responded to provincial and foreign competition by moving into the finishing trades, such as tailoring, shoe-making and furniture manufacture. Thus, for example, cheap cloth from the North could be fashioned into suits by London tailors.² Primary manufacturers, such as the silk-weavers of Spitalfields and clockmakers of Clerkenwell, succumbed to foreign competition and the Thames ship-builders lost their trade to provincial revivals in the North. All of this is true, but it does not give a complete picture of London's diverse industries.

Schwarz also maintained that large factories were precluded from the capital due to the high price of land and raw materials, such as coal, but this was only partially true. He did acknowledge that the drinks trade was an exception, large breweries and distilleries produced cheap alcoholic drink for a mass market. He then said little more about this sector, except that they were confined to areas south of the river where sufficient water was available. However, a glance at the map of the location of London's major breweries (Appendix C) clearly indicates that this was incorrect.

London's centrality to the state had an inbuilt advantage over provincial areas in certain trades. Close proximity to the court provided business opportunities to the finishing trades, which has been well documented. However, London was home to all departments of state, the most important of which was the Customs and Excise offices. That any advantage should accrue from this seems at first obscure. However, it was because taxes from the capital's industries were easier, and therefore cheaper, to collect that the Government gave special allowances to encourage successful London industries, such as sugar-refining, distilling and brewing.

Taxes were the life blood of the British 'war machine' as described by Philip Harling and Peter Mandler in the 'Fiscal-Military State to Laissez-Faire State, 1760-1850'. Military success against France was funded by a

high tax regime where the excise was a 'potent revenue extractor and a model of administrative efficiency'.3 The success of the excise lay with the decision to tax the English propensity to drink vast amounts of alcohol. As the tax base was to be as broad as possible wine was ruled out, because it was predominantly drunk by the upper classes. This meant that revenue was to be sourced predominantly from beer. In the early eighteenth century, it seemed that spirits might replace beer as the main source of revenue, particularly in London. However, the sale of gin was curtailed owing to the moral outrage against widespread drunkenness in the lower classes. Once it was decided that beer was to be the main source of revenue, government rules encouraged the rationalisation of the number of breweries, particularly in London, where the revenue would be easier to collect. The policies of William III and Queen Anne, in the early eighteenth century, allowed some London brewers to grow into vast establishments, where they created a new beer called 'entire butt', more commonly known as porter. They accumulated sufficient capital to develop new methods of mass-production, distribution, marketing and finance, which today we would recognise as industrial development long before the before the advent of water and steam technology.

The most comprehensive work on the early brewing trade is undoubtedly *The Brewing Industry in England 1700-1830*, published in 1959.⁴ The author, Peter Mathias, had a clear aim, to provide a largely economic account of the brewing trade in that period, the first such study of its kind. Although the title indicates a nation-wide remit, it is predominantly concerned with the London brewers' development of porter. Mathias deals exhaustively with problems of production and supply, but those of demand are not investigated. It is the intention in this study to build on Mathias's work by using digitised eighteenth-century literature that has become available, including newspapers and magazines, to investigate the factors which affected the market for beer.⁵

It is important to remember that the publicans were the customers of the London brewers, who were wholesale manufacturers and forbidden by law to sell directly to the public. *The English Alehouse* by Peter Clark⁶ and *A History of the English Public-House* by Herbert Monckton,⁷ whilst not primarily concerned with the brewing process, help us understand the difficult rela-

tionship between brewer and retailer. In this period, most decent people would not set foot in London public-houses, which were home to thieves, prostitutes and vagabonds where violent drunken behaviour was commonplace. The London brewing trade was a rough business and many of the London brewing dynasties were founded on tax evasion, coercion and corruption.

We know little about the development of brand identity in the brewing trade of the eighteenth century and how consumers made choices between particular products. The operation of the 'tied-house' system, whereby publicans were under obligation to sell the beer of only one brewery, raises the question as to whether there was a free choice of competing beers within a certain locality. There was collusion between breweries over the price of porter, so the question then arises as to what determined choice. Was it the quality of the beer, the facilities of the public-house, or was it just a case of the nearest would do? Beer was an important element in the diet of the labouring classes, and over time, tastes changed and porter went out of fashion, as did its successors. The aim of this study is to clarify the market for beer and the effect on its manufacture in the period 1700 to 1850.

Chapter 1: Brewing in eighteenth-century London

Concern about the size and power of London had been expressed for many years. An Elizabethan metaphor described London as, 'the swollen head of the ricketty body of England'. It was argued that wealth was finite and that London grew strong at the expense of more distant parts of the country. These ideas continued to prevail in the seventeenth century when it was said, 'London, the Metropolis of England is perhaps a head too big for the body, and possibly too strong'. However, by the late seventeenth century, a political debate had ensued where these views were challenged. The polemicist, Nicholas Barbon, produced a new metaphor which described London as the heart of the nation, 'which by its motion, giveth life and growth to the rest of the body'. 3

Charles Davenant, in his influential publication of 1695, *An Essay upon Ways and Means of Supplying the War* specifically dismissed the rickety body metaphor, stating that:

some people are led to think the Growth of London not hurtful to the Nation; but on the contrary to believe that there is not an acre of land in the country, be it never so distant, that is not in some degree better'd, by the Growth, Trade and Riches of that City.⁴

The message was clear, London was now seen as an engine of growth that was vital in the prosecution of the war against France. This was the background to the industrial development of the London brewing trade, along with the mercantilist policies of the late seventeenth century.

Throughout the eighteenth century Britain was periodically at war with France, which had to be financed by higher taxes. In the War of Spanish Succession (1701-14) defence costs rose to 69% of national expenditure. a figure matched only once that century when, during the Seven Years War (1756-63), it reached 70%.⁵ Britain drew on its industrial resources to overcome France's demographic superiority when it 'outperformed its Continental counterparts over the course of the long eighteenth century'.6 Trade was expanded to finance wars against potential enemies, but it was also designed to weaken their ability to wage war by taking away their trade; 'how this Expence can be long continued by the French, is hardly imaginable ... this Interruption of their Commerce will bring a Ruin upon them', as summarised by Davenant.7

Trades that were successful were to be encouraged and protected in return for an acceptance of increasing taxes which fell on many products, the most important of which were beer, malt spirits and sugar. Thus, the brewing, distilling and sugar refining trades, which enjoyed protectionist policies, began to prosper in the late seventeenth century, particularly in London.

The brewing process in eighteenth-century London

At the beginning of the eighteenth century brewing was virtually unchanged from the medieval period, a description of which will involve contemporary terms, some of which are still in use today. Water for brewing was always called liquor. It was heated, but not boiled, in a copper before being pumped or ladled into a vessel called a mash tun. Malt, which had been milled in the brewery, was then added to the liquor to begin the

mashing process, where the starches in the malt could dissolve and convert to the sugars necessary for fermentation. This was a lengthy process which was aided by the continual stirring of the mash with wooden utensils called rudders. The resulting sweet mixture was known as wort, which was then drained off from the spent grains into a vessel called an underback. From there, it was transferred back to the copper where hops were added before it was boiled. The hopped wort was then strained into a shallow vessel for cooling, before being transferred to the working tun where yeast was added to begin fermentation. When that process had finished the resulting malt liquor was drawn off, leaving the sediment in the tun. It was now ready for maturing in the cask where a small amount of the yeast sediment was added to initiate a minor secondary fermentation.

The mash tun had a false bottom to retain the grains of malt when it was emptied. The wort from the first mashing was used to make the strongest malt liquor. The mash tun was then refilled with liquor to obtain a second wort, which subsequently went through the same procedures to make a weaker drink. This was repeated until finally, a wort to make small beer was produced, which was little stronger than water. This re-use of the malt grains had continued until they had extracted all 'saccharine matter'. The complete production run, including the repeated mashings and fermentations, was known as a guile.

Before the use of the hydrometer, brewers referred to the 'length' of the beer rather than the strength. This was a measure of how many barrels of beer had been produced from a quarter of malt. Thus a strong beer might have a 'length' of beer two and a half barrels, compared with five barrels for small beer; it served as a crude indicator of the beer's alcoholic content.

Before the introduction of hops around 1540, all drink made from malt was known as ale. When hops were added to malt liquor it was called beer. By the eighteenth century all malt liquors contained hops and the words ale or beer had lost their original clear meaning. However, brewers used less hops in ale than in beer, which was intended for keeping.⁸ To further complicate matters, all malt liquors in the North of England were called ale, regardless of their hop content.⁹

Brewing literature

Government policies drove the rise of the common brewer in early eighteenth-century London, a process accompanied by a diminution in the powers of the Brewer's Company to control the trade. ¹⁰ This inspired a public discussion of the brewing trade in various publications. Furthermore, the imposition of tax on beer engendered a succession of guides to promote domestic brewing as an alternative to paying the beer duty. These provide an invaluable source for technical details of the brewing process but also of the contemporary concerns of the London brewing trade.

One of the earliest, A Guide to Gentlemen and Farmers, for Brewing the Finest Malt-liquors, much better and cheaper than hitherto known, was published anonymously in 1700. It then appeared as a chapter in England's Interest: or the Gentleman and Farmer's Friend, by Sir Jonas More, published in 1703. More describes the brewing process in great detail, advising the brewer to use the wort from the first boiling to make strong beer, re-using the malt for a second boiling to make a wort for the weaker small beer. More claimed that the best strong beer for keeping was brewed in March or October, and advised that:

In brewing *March* or *October* beer, it is advisable to have large vessels bound with iron hoops, containing two, three or four hogsheads, according to the quantity you intend to make, putting all into one vessel. This sort of drink keeping, digesting and mellowing best in the largest quantities.¹¹

Thus, at the beginning of the eighteenth century, it was already known that large vessels carried advantages for the palatability of beer that was to be stored for a considerable time before being sold.

The most important brewing guide of the early eighteenth century was *The London & Country Brewer*. It was first published in 1734, being advertised on 31 January 1735,¹² the first of many editions which extended over a period of 25 years. The author, William Ellis, sought to assure the reader of his experience as a brewer by relating how his great brewhouse in London used a considerable quantity of malt to brew stout beer, common butt-beer, ale and small beer.¹³ He wrote, 'In my Brewhouse at London, we brew'd three times a week throughout the year, as most of the great ones do'.¹⁴

Ellis had inherited his uncle's brewery in St. James, Westminster in 1713,¹⁵ before selling the brewery to take up farming around 1717.¹⁶ From his farm in Little Gaddesden, Hertfordshire, Ellis became a prolific writer on agricultural matters, probably the most widely read in the early eighteenth century.¹⁷ He travelled widely in southern England to promote his books, his agricultural inventions and his seed business. Many of his books contained anecdotes of his travels which did much to discredit his reputation in the late 1700s. However, today his works have been reinterpreted to be seen more as a form of journalism.¹⁸ Thus, Ellis's works on brewing are valued, not just for their contemporary technical content, but as a commentary on changes in the brewing industry over a quarter of a century.

In the early eighteenth century, most people preferred pale beer, especially in the country, where hard water allowed the production of finer beers. Hence, the consumption of brown beer was predominantly confined to London. Even there brown beer was considered 'heavy and glutinous', drunk only by labouring men. ¹⁹ Brown beer was made from the cheapest brown malts which were suited to the soft water of London. Ellis stated that brown malt was:

... very much impregnated with the fiery particles of the kiln ... for this reason London brewers mostly use the Thames or New River waters to brew this malt with, for the sake of its soft nature; whereby it agrees with the harsh qualities of it better than any from the well or other hard sorts, and makes a luscious ale for a little while, and a But-beer that will keep very well five or six months.²⁰

More stated that brown malt, dried with straw or wood, was greatly inferior to pale malt, which was dried with, 'Pit-coal charkt, called in some places Coak'. ²¹ Ellis also thought that pale malt was better than brown, but, as it cost two shillings more, its use was precluded in the common beer sent to public-houses. ²² At this time hops were not considered for their contribution to the taste of the beer, only for their preservative qualities.

Mechanisation

The principal mechanical process that took place in the early eighteenth-century brewery was grinding malt.

This took place in the brewery when the malt was required because it deteriorated soon after grinding by absorbing moisture and overheating.²³ Malt-grinding between two stones was an ancient process, similar to that of grinding wheat for flour. Ground malt was called grist, which was added to the water in the mash tun where the maltose dissolved to produce the mash. However, if the malt was ground too fine it caused problems by making the mash so thick that it set.²⁴ In the 1720s new machinery began to appear where the malt was crushed between two iron rollers which were operated by two men. This had the effect that, 'it will not grind any of the malt to powder; but will squeeze it flat only, which is a great advantage in brewing your drink'.²⁵

Larger breweries used a horse-mill. This technology had been scarcely changed since medieval times, the only advance had been to place the horse-wheel above the horses which were voked to it. They walked in a circular path, turning the wheel and its central vertical shaft, which was carried though to the floor above where it turned the upper stone of the grist-mill. Being on an upper floor, the millstones were positioned high enough to allow the grist to descend via a wooden chute into the mash-tun. In 1734, William Ellis states in The London and Country Brewer, 'in my common brewhouse at London, I ground my malt between two large stones by the Horse-mill'.26 The horse-mill was used in many locations for convenience, where running water was not available, or where space was limited. Wind-mills and water-mills received their power for free, but they were generally unsuitable for urban situations such as a London brewery, where the horse-mill reigned supreme. The great mechanical improvement to breweries at this time was in the wheel-work. By translating the rotary power of the horse-wheel from the vertical to the horizontal plane, using cog wheels and cranked shafts, it was now possible to pump water and beer throughout the brewery. If we return to the 1738 edition of The London and Country Brewer, Ellis now spoke of these improvements, whereby:

that hand pumps for pumping water from the well or the New River are now replaced by a contrivance that works the pumps by a single horse in the malt-mill and saves a great part of a mans wages...the wort pump is now likewise supplied by the horse-mill and with great expedition will throw up the worts out of the underback into the copper.²⁷

Once water had been pumped to the tanks at the top of the brewery, gravity allowed both it and beer to be directed by opening valves where necessary, which meant that manpower could be reduced.

Water quality

The most elementary ingredient of malt liquor was water, which could be obtained from few sources in the quality and quantities required for brewing. Most London breweries preferred water from the New River, which was available in many areas north of the Thames. If this was unavailable, they were constrained to use well-water, which More thought was only satisfactory if soft enough to 'bear sope and lather without breaking'.28 Fortunately, London wells usually produced soft water. The last choice was from the Thames, or its tributaries, and was obviously determined by a brewery's proximity to the river. More allowed that it could be used for brewing if taken upriver from Greenwich but it would not make beer that would keep. The best source was, 'a small rivulet or brook undisturbed by navigation'.29 Few eighteenth-century brewers used water from the Thames, which was already polluted by that time; even the riverside breweries preferred well-water. However, London brewers encouraged the myth that Thames water made the best brown beer to combat competition from the provinces.

Summary

Brewing in late seventeenth-century London had scarcely changed since medieval times. Most beer was brewed in the alehouse where it was consumed. A few breweries had grown to a moderate size simply because of the density of the population within their catchment area. These breweries were in place to benefit from changes in fiscal policy, which was driven by the need to finance war with France. The Government determined that the London brewing trade would be central in providing revenue to support wartime costs. Thus, tax advantages were given to the wholesale brewer, which would accelerate the growth of their size at the expense of the publican brewer.

Chapter 2: The London brewing trade and the excise system

New fiscal policies which, followed the 'Glorious revolution' of 1688, meant the British state underwent a radical transformation. King William III's determination to act as a major European power meant that he needed new sources of revenue. The growing department of excise became the only realistic candidate to consistently deliver the necessary income to fund these war aims. The duty on beer was the mainstay of government revenue which was collected by a faltering excise system. Each tax change engendered new methods of evasion and fraud, whereby a few London brewers made a fortune by charging the full price whilst keeping the duty. Fewer and larger concerns were easier and cheaper to monitor. The regulations were tailored to encourage the development of larger breweries in London by protecting them from domestic and provincial competition. This led to the establishment of a few brewing giants that dominated the trade, and provided the critical mass needed for its industrial development. Some of the brewing dynasties created at this time lasted well into the nineteenth century.

Malt liquor and the beer duty

The seeds of the porter revolution were sown by William III as part of his life-long project to defeat the aggrandizement of Louis XIV. William sought a new source of income from non-food uses of corn, the principal one being the distillation of malted barley to make malt spirits, which were taxed lightly to promote success. The second, was the export of corn, including barley. Both of these measures could act as a buffer against famine, as they could be stopped in times of harvest failure and the barley used to augment wheat supplies for bread-making. Furthermore, wheat could not be sown continually as it exhausted the soil, so barley had to be grown as part of a crop rotation process.

Barley used for the production of small beer was considered essential, providing the population with a safe alternative to poor quality water. However, where barley was used for spirit production, it could be dropped if there was a need to sow more wheat. Theoretically, barley used for the production of strong beer fitted

the same criterion as spirit production, it was not considered essential, and therefore could be stopped at times of shortage. However, rarely happened because of the amount of revenue it provided. The malt tax and beer duty were the most important sources of revenue for the government throughout the eighteenth century. Finally, these measures benefited the landed interest, whose support was needed by the Government.

Charles I had first attempted to tax malt liquor in 1635, when he was seeking more income. The problem was how to collect the tax from the thousands of ale-house brewers. It was decided that in towns, ale-house keepers should be prohibited from brewing, forcing them to buy their beer from common-brewers instead, thereby reducing the number of places of tax collection. This seems to have been ineffectual, lasting only two years when only £3,000 of an expected £12,000 was collected. However, the idea had arisen and was re-imposed by Cromwell in 1643. Now ale-house brewers selling strong beer or ale for more than six shillings a barrel had to pay two shillings a barrel, those selling beer or ale at less than six shillings to pay six pence. In 1656 enforcement was improved when powers of entry, search and seizure of goods were introduced. After the Restoration it was expected that the duty would be removed. However, in 1660 all Acts of parliament pertaining to beer duty were endorsed by Royal proclamation, thus the beer duty was established and survives to this day.2

In 1672, King Charles II modernized the excise system, beer and ale were to be classified into two separate groups. Any malt liquor that was sold for 6s. or more a barrel was deemed to be strong beer or ale, whilst that sold for less than 6s. a barrel was deemed to be small beer or ale.³ This simple definition was to remain unaltered for 110 years, despite the anomaly that strong beer was defined only by its price regardless of the amount of malt used in its production. This was a feature which was to become the source of much tax evasion. A duty of 1s. 3d. was imposed on all strong beer or ale and 3d. on small, but gave tax-free allowances for waste and leakage to 'common brewers and makers of beer, not selling the same by retail'.4 These amounted to a 13% reduction of the duty to be paid and gave a massive advantage to those brewing for the wholesale market, compared with the publicans who brewed their own beer and paid the full amount of duty.

The Government's policy was to use the tax system to encourage the larger common brewers at the expense of the small publican brewer who would be unable to compete on price. Since the beer duty was to be collected in breweries, a reduction in their number would enable the Excise department to collect the duty more efficiently.⁵ Furthermore, the common brewers of beer, gained an advantage over the common brewers of ale, whose allowances only amounted to 9% of the beer duty.⁶ Thus the brewers of ale were also disadvantaged in price competition with the brewers of beer. Whilst this was a national measure, the main effect was in London, where there had been large common brewers for some time. These fiscal incentives intensified the process of centralised production encouraging fewer and larger breweries.

The arrival of William III in 1688, brought new ideas of public finance from the United Provinces, which led to great changes in the London brewing trade. William's fiscal policies were always subservient to the fact that he saw the English throne primarily as a power base which would enable him to continue his war with Louis XIV of France. His first thoughts were to consolidate his tenuous grip on power by conciliatory measures to the likely sources of opposition. He asked Parliament to modify the unpopular Hearth Tax, which was considered impractical, so it was repealed.7 Without any compensatory source of income this would have led to a massive shortfall in revenue at a time when he was actually seeking more resources to rebuild the navy. Thus, he introduced a new additional beer duty of 9d. a barrel to 'make and maintain a war against the French King', 8 which threatened to alienate him from the landed interest as consumption of malting barley plummeted with falling beer sales.

This placed the new king in a dangerous position. Barley was an important part of crop rotation, which had implications for wheat production and therefore the price of bread, which no monarch could ignore. Furthermore, most of the landowners were Tories, who had opposed the removal of James II. However, William had a scheme to placate them by offseting the fiscal raid on beer production with a new 'industrial' market for barley; distilling. All trade with France would be banned with a particular view to curbing the lucrative exports of French wine and brandy to England. William intended to replace brandy by bringing the Dutch taste for gin to England.

In 1690, he introduced an Act for the encouragement of 'the making of Brandy, Spirits and Strong Waters from malted corn, for the greater consumption of corn and the advantage of tillage in this Kingdom', It was also decreed that anyone could make gin, with all previous restrictions removed, provided they paid the duty which was a mere 1d. per gallon. Clearly, the distillation of gin was to be given every protection whilst the production of beer and ale was to be taxed to the hilt to underpin wartime finances.

The London brewers produced double the amount of revenue per capita compared with country brewers. Despite having only one tenth of England's population, London's brewers paid 20% of the national revenue from beer duty, £140,358 out of the national total of £694,476.11 The reason was said to be, 'obvious, because in London almost all pay Excise for their Drink, which is not so in the country'. 12 This demonstrates that tax-free private brewing in London was almost extinct. The population had little choice than to pay the extra duty on the price of beer, which increased from 2d. in 1688 to 2½d, per quart by 1694.13 Londoner's higher wage levels ensured that the new price held, 14 which encouraged the authorities to reward the London brewers with important advantages via alterations in the excise system.

The increase in duty of 1688 was accompanied by changes in the allowances for waste for all common brewers in England and Wales, whereby ale and beer were to be treated the same. However, this did not apply to 'the cities of London and Westminster and within the weekly bills of mortality'. 15 These changes amounted to a reduction of allowances for all 'country' brewers of beer outside of the metropolis, whilst London brewers still continued with their full allowance, which amounted to 13% of the beer duty. Lowering the London brewers' costs of production protected them from provincial brewers' competition. However, it was the continued preferential treatment of beer-brewers over ale-brewers within London which would have important consequences for the industrial development of the brewing process.

London's beer brewers were given fiscal encouragement because they were seen as the most important source of revenue. 16 This was relatively easy for the London excise to collect as it was already the most

extensive organisation in the country. Yet London brewers were also the most adept at avoiding the beer duty by illegal means, so requiring a more vigorous enforcement of excise laws than the rest of the country. A provincial brewer accused of evading the beer duty appeared before a magistrate, with the right of appeal to the Quarter Sessions. A London brewer facing a similar charge was taken before the Commissioners of the Excise, with a right of appeal only to the Commissioners of Appeal. 17 The London brewers complained of the injustice of this system, claiming that the Commissioners of Appeal always upheld the original judgement. The brewers' complaint was that the members of the two boards were drawn from the same ranks of society, knew each other, and were unlikely to disagree on verdicts. They claimed that the appeals were fruitless, stating, 'how often the appellant finds his adversaries, the Commissioners, sitting on the bench with the Commissioners of Appeal, hearing the case again'.18

This was exemplified in the case of Felix Feast, London's leading brewer in the late seventeenth century. Excise officers had alleged that Feast had a concealed vessel for hiding beer for the purpose of evading duty and was fined £50. Feast's appeal in 1694 was the first to be heard for 20 years. The Court of Appeal made Feast appear three times before confirming the original judgement, 'having been told that if they gave it against the Commissioners, they should never be able to collect the duty'. 19

The allegation against Feast was the simplest of frauds, merely hiding the beer from the excise officers, but it was also the easiest to detect as they were empowered to search every part of the brewery including the brewer's house.

As the price of beer had increased with each rise in duty, these enterprising brewers had found many opportunities to divert the money into their own pocket instead of the revenue. Sometimes the methods were as crude as simply reducing the strength of the beer as follows:

when the duty was previously doubled they paid 3s. 3d. more and made their customers pay 2s. 6d. more and reduced the strength by 3s. per barrel making 5s. 6d. and they reduced their measure making another 1s. totaling 6s. 6d. for the 3s. 3d. increase ²⁰

Fortunes were made in this period which laid the foundation of the brewing dynasties and their famous London breweries.

Beer manufacture had increased by approximately 4% a year, from 6,318,000 to 7,842,000 barrels in the period 1684-9.²¹ However, this figure proved to be a peak in production and was not repeated in the seventeenth or eighteenth centuries. The duty rose by 9d. a barrel in 1689 and again in 1690, and by 1694 the duty on strong beer had risen from 2s. 6d. to 4s. 9d. a barrel. Production fell from 7,842,000 in 1689 to 5,915,000 barrels in 1693, a decrease of 24.5%.²² However, revenue over the same period dropped by 29.66%, from £694,476 to £488,442.²³ This discrepancy of 5% represents the margin of fraud, where each rise in duty gave brewers the incentive to devise new methods of tax-evasion.

The 'mixing fraud'

The most common fraud was called 'mixing', which exploited the anomaly in the excise rules that allowed all strong beer priced over 6s. a barrel, to pay a flat rate of tax regardless of the alcoholic strengths of different strong beers. This allowed the following example of tax evasion:

a brewer has 9 bushels of malt in the mash tun for making three barrels and a half of common strong beer ... but the brewer goes clandestinely to work and makes but one barrel and half of extraordinary strong and two barrels of small ... but after the officer has gone so are mix't by Mr. Brewer and sent to the retailers for good strong drink, whereby Her Majesty is defrauded of half and upwards of Her Duty.²⁴

In fact, it was slightly less than half. This example would have produced duty of 7s. 1½d. for strong beer and 2s. 6d. for small beer, total 9s. 7½d., instead of the 16s. 7½d. due to the revenue, a substantial reduction in costs to the brewer who pocketed the difference

The scale of this fraud can be detected in the excise records with the changing ratio between strong and small beer, where small beer is over-represented. London beer production fell from 2,087,815 barrels in 1691 to 1,723,123 barrels in 1695 and 1,709,100 barrels

in 1700.²⁵ The production of small beer in 1691 was 41% of the total beer production, rising to 47% in 1695 before falling back to 40% in 1700.²⁶ As the Commissioners of the Excise began to get to grips with the problem, the percentage of small to strong beer continued to drop for the next ten years reaching 36% in 1710, back to the level of 1691.²⁷

The Commissioners of Excise, having been accused of negligence, purged the London Excise of corrupt officers by bringing in officers from the country.²⁸ They were censured for standing by whilst frauds took place:

... the brewers and distillers have been more diligent in contriving ways to defraud the Queen ... they are come to that perfection in smuggling the duty that they can perpetrate their hidden designs, the Queen's Officer stand by all the while.²⁹

This refers to a new technique of mixing small and strong beer by the use of underground pipes. By this method, the brewer was spared the laborious task of transferring large quantities of wort from one vessel to another, a time consuming activity, which ran the risk of detection. The mash tun was placed close to a wall in which was hidden a pipe. This led underground to a concealed vessel some distance away where the mixing took place.

In one case, an underground pipe led to a cellar which was not even in the brewery. Richard Hare, a common brewer of Limehouse, 'did mix five hundred barrels of strong beer with five hundred barrels of small beer after the gauge of such strong beer had been taken', ³⁰ This operation could be completed so quickly that detection was almost impossible, allowing a vast increase in the scale of the fraud, which in this example alone would have put nearly £100 in the brewer's pocket.

The Commissioners launched an investigation in 1696-97 and discovered that 58 breweries had concealed pipes connecting different vessels. It had become so widespread that a specific law was needed to outlaw such practices, where it was stipulated:

Great frauds having been carried on by brewers having private pipes and stop cocks under ground betwixt their strong beer tuns and small beer tuns, for privately mixing the small beer with strong to the prejudice of the revenue and fair trader, it was ordain'd that ... any common brewer

having any pipes should take up and demolish every such pipe before 28 April 1697.³¹

Several eminent brewers appeared on this list of 58 including, William Hucks, brewer to the King, Sir William Greene of the Stag Brewery, Pimlico, Sir John Parsons of the Red Lion Brewery, St. Katherines and the greatest brewer of them all, Sir Felix Feast and his partner John Calvert of the Peacock Brewery, Whitecross St 32

Centralisation

The doubling of beer duty between 1689 and 1694 led to the stagnation of revenue and a decrease in the number of common brewers. The duty was collected from the brewer some weeks before it was recovered in the publican's payment. Each rise in duty increased the amount of capital required to carry that cost, which many of the smaller brewers could not afford. When a large brewer forced out his smaller competitors he could dominate the locality and charge higher prices. However, he ran the risk of a serious accusation, that of engrossment, the term used to describe monopolising a market.

This was seen as an unfair method of inflating the price of one of the necessities of the people. Accusations came from the smaller brewers who claimed that they had been made bankrupt by larger brewers, who were seeking to eliminate competition:

By ingrossing all the trade in their own hands, pick't and cull'd their customers so well, after breaking so many smaller brewers, and joining the best of their trade to their own, refuse to serve any desperate customers, by which they have made their profits safe as well as great.³³

Increases in the price of staples such as bread and beer were likely to cause a riot, particularly if initiated by the practice of 'engrossment'.³⁴ E.P. Thompson wrote of a moral economy where a rioting crowd drew its legitimation from such unfair practices.³⁵ Despite these complaints the process of amalgamation had begun and they were to become a feature of the brewing trade throughout the eighteenth and nineteenth centuries. Today we recognise this as rationalisation, a necessary part of capitalism, which gives an indication of the early nature of the London brewing trade's industrial development.

Further to the natural process of amalgamation, there was a more intentional element in the centralisation of London's brewing industry, which was initially generated by the fiscal needs of the monarchy. In 1672, King Charles II had imposed a duty of 1s. 3d. on all strong beer or ale, but gave tax-free allowances for waste and leakage to 'common brewers and makers of beer, not selling the same by retail'.36 These amounted to a 13% reduction of the duty to be paid and gave a massive advantage to brewers of strong beer for the wholesale market, compared with the publicans who brewed their own beer and paid the full amount of duty. The Government's policy was to use the tax system to encourage the larger common brewers at the expense of the small publican brewer who would be unable to compete on price. Since the beer duty was to be collected in breweries, a reduction in their number would make for a more efficient collection system for the Excise. Furthermore, the common brewers of beer gained an advantage over the common brewers of ale, whose allowances only amounted to 9% of the beer duty.³⁷ Thus the brewers of ale were disadvantaged in price competition with the brewers of strong beer.

Whilst this was a national measure the main effect was in London where there had been large common brewers for some time. These fiscal incentives intensified the process of centralised production leading to fewer and larger breweries. This process was reinforced by William and Mary in 1689, when they introduced a new additional beer duty of 9d. a barrel to 'make and maintain a war against the French King'. 38 The allowances for waste were reduced to all common brewers in England and Wales, except for 'the cities of London and Westminster and within the weekly bills of mortality'.³⁹ These changes amounted to a 3% reduction of allowances for all 'country' brewers outside of the metropolis, whilst London brewers still continued with their full allowance amounting to 13% of the beer duty. The reason for this apparent generosity was because of the disproportionate amount London paid in beer duty to the Excise at the time. Despite having only 10% of England's population, London's brewers paid 20% of the national revenue from beer duty, £140,358 out of the national total of £694,476.40

A summary of these complex fiscal measures reveals that common brewers in London, with government assistance, were safe from provincial competition, at least on price. Furthermore, within London, the beer brewers had a distinct price advantage over the ale brewers. Thus, in the early eighteenth century, many publican brewers had no other choice than to take their beer supply from the common brewers, as they began to dominate the market on price.

The malt tax and its consequences

In 1695-96 the Government, desperate to augment wartime finances, considered yet another rise in the duty on beer. However, the prospect of an increase in tax evasion prompted them to listen to eminent writers, such as the economist Charles Davenant, who advocated the taxation of malt. He proposed a duty of 3d. per bushel from which he calculated a revenue of £525,000 per annum, and this was to be in addition to the existing beer duty.⁴¹ However, a more comprehensive proposal came from Anthony Burnaby of the Middle Temple in 1696. Burnaby, who sought a place on the board of the Commission of Excise, proposed a duty on malt of 8s. per guarter as a replacement for the beer duty, or 2s. per quarter if beer duty was to continue.⁴² In 1697, the government went even further; the beer duty was retained and a tax on malt was introduced at 4s. per barrel, double the amount proposed by either Davenant or Burnaby. The principal argument offered for launching the new malt tax had been to circumvent tax evasion by the brewers by using it as a replacement for beer duty. Thus, by retaining beer duty they would prolong the old frauds and engender fresh ones to evade the new malt duty.

However, evasion of the malt tax would not fall to the brewers, because it was not to be collected in the brewery. It was the maltster who would be responsible for paying the duty, passing the price on to the brewer. This left the brewers with only one way to mitigate this new tax, which was to reduce the amount of malt used in the guile by using molasses as a substitute. Edward Denneston, an ex-surveyor of the excise, described this fraud as follows:

 \dots there is a certain ingredient known as Molasses or London Treacle chiefly made by sugar-bakers \dots for when malt bears a prime high price, the brewers substitute Molasses in its place, every 100 weight whereof will go as far in brewing as a Ouarter of Malt. 43

London treacle was the cheapest of these two substitutes, a by-product of London sugar refineries. Molasses, which was imported from the West Indies, had a ready market as a cheap form of semi-refined sugar and was therefore more expensive. It was also in demand from distillers who used it in the production of 'brandy', a generic term for all home distilled spirits other than gin.

The Government was not slow to respond to this development, declaring in 1699:

Many common brewers do use large quantities of molasses by which means consumption of malt is prevented, and the revenue defrauded ... after 10 May 1699 no common brewer shall use or have in his possession any molasses, coarse sugar, honey, extract of sugar in the brewing of any beer or ale. 44

The introduction of the malt tax had triggered a complex set of interactions between three readily available commodities that were capable of fermentation; malt, unmalted barley and molasses. It also furthered an existing rivalry between the brewers and distillers in London, particularly after poor barley harvests when they were in competition for the same scarce resource.

An exceptionally bad harvest in 1699 brought about a debate over the prohibition of brewing strong beer and the distillation of spirits, which had always been part of the Government's strategy in times of scarcity. However, the London brewers deployed their skills as polemicists in publishing a tract, *The Case of the Poor Brewer Humbly Represented*, where they stated: 'The Brewers are so advantageous to the Kingdom, that there are three men who consume more malt in a year than all the Distillers have done; and surely such men ought not to be laid by'.⁴⁵ In the event, the brewers were successful. The distillation of spirits from corn were prohibited for one year, whilst brewing was allowed to continue.

The use of molasses continued for some time after its prohibition. In 1726, Daniel Defoe described how brewers, 'formerly mixt molasses with their ale, to sweeten it and abate the amount of malt, molasses being at that time much cheaper in proportion'.⁴⁶ This made the point quite succinctly, that it was only at times of exceptionally high prices that substitutes for malt, such as molasses, could be used. By 1742, it was reported that:

Molosses[sic] or treacle has been too much used in the brewing of stout beer, common butt beers, brown ales and small beer ... as malts are now twenty shillings per quarter there is no great danger of this imposition being rife again as the brewer was obliged to put such a large quantity of treacle into his wort ⁴⁷

Thus, the common brewers found that evasion of the malt tax was not worthwhile as the alternative was too expensive. It was also becoming increasingly difficult due to improvements in the efficiency of the tax collection system in the early eighteenth century.

The brewers and the excise system

When Charles Davenant had advocated switching the excise from beer to malt he had envisaged a reduction in the number of excise officers. He stated that the malt tax would be collected by 800 of the existing 1,400 officers, using the same districts laid out for collecting the duties on beer. This would allow the redeployment of the remaining 600 for all other duties. He stated:

in the excise on Beer and Ale has given such knowledge of revenues of that kind and has chalk'd out a plain way of dividing the Kingdom between the officers and instructed so many persons how to survey the several makers, sellers and retailers, and to obviate frauds, that excises will now be more easily collected with fewer officers. ⁴⁸

However, the retention of the beer duty alongside the new malt tax meant that the excise system would have to be expanded at a time when it was performing badly in the collection of revenue from the existing tax.

The fall in revenue from the London brewers had several causes, cold weather and a coal shortage had sometimes prevented brewing, but the main reason was fraud. Corruption had set in between the London excise officers and the brewers, who described the gaugers as, 'temptable wretches who serve for 18d. per diem'. 49 Many London officers were swapped with officers from the country and some were discharged. Factions had arisen within the commissioners, some wanted a return to the time when the excise in London was farmed, which led to bickering between commissioners. Many officers took sides and some resigned en masse in 1695, which led to the accusation against them of combina-

tion. It was then decided that, 'none of ye said officers be hereafter imployed in ye Excise without particular direction of this Board' ⁵⁰

John Brewer, in *The Sinews of Power*, stated that the Nine Years War (1688-97) had subjected England to all the strain of a major war, from which emerged a public fiscal-military apparatus.⁵¹ During the 1690s it looked like the administration would break down and money would run out. However, disaster was averted and lessons were learnt remarkably quickly. The ensuing War of Spanish Succession saw an end to the politicisation of the administration and the embezzlement of tax revenues.⁵² As a result the excise system was reformed, with better accounting, law-enforcement, and processing of remittances.⁵³

By 1725, a third of all government officials worked in the excise, which had its headquarters in London and was run by an Inspector General and a General Examiner.⁵⁴ The country was divided into 50 areas run by a Collector. Each area was subdivided into divisions, which were run by a Supervisor, who controlled the officers actually doing the rounds. The division responsible for London was described as 'the London Brewery', a separate department within the excise system, which consisted of 12 supervisors who managed 100 officers, gaugers and excisemen.⁵⁵ The strength of the system was in the checks and counterchecks. The system relied on the vigilance of the commissioners, collectors and surveyors. However, it also relied on information from fellow officers, who were encouraged to spy on each other.⁵⁶

These early eighteenth-century improvements in the efficiency and organisation of the 'London Brewery' allowed surveillance of London brewers to rise to an unprecedented level.⁵⁷ Brewers complained that excisemen:

... have now a liberty of coming by day or night; and they now gauge eighteen or twenty times in a brewing ... it empowers them to summon servants to give evidence against their masters, which must be a great temptation to idle servants which are turned off, to accuse their masters. ⁵⁸

This use of informers was crucial to improvements in the system. Excise officers were not allowed to gain directly from information provided against a brewer. However, the excise books show recurrent evidence of collusion between officers and informers, such as alehouse servants, who could claim a share of any penalty awarded against a brewer.⁵⁹ An excise officer in the 'London Brewery', who was paid £60 a year, was unlikely to have risked his job for such a trifle, but there were others in the system that would. These were called super-numeraries, who were employed for menial tasks, their wages coming out of incidental expenses rather than the general management costs.⁶⁰ They were described as, 'free-booters, all which are generally of inferior rank and no worth, to give information against any whom they please ... are sharers in the booties'.⁶¹

Gradually, the opportunities for tax evasion in the larger London breweries were reduced to a fraction of the levels of the late-seventeenth century and revenue began to increase; government policies had begun to bear fruit. However, surveillance in the numerous smaller breweries was less rigorous and they were still able to continue evading some tax. Thus, it was reported in Parliament as late as 1783 that beer was being produced of an extraordinary strength which was then mixed with small beer, 'after which the whole mixture is sold as strong beer. The penalties to which these frauds are liable have not proved effectual'.62 Clearly, the 'mixing fraud' had not been eradicated in smaller breweries like this, due to the unsupportable cost of maintaining the level of scrutiny required. The leading London brewers numbered around 30, leaving 150 or so smaller breweries to be supervised by the 'London Brewery'.63 If that number was too many for the effective prevention of their tax evasions, how much more so in the case of London's 6,000 public-houses.⁶⁴

The larger brewers were so effectively constrained from mixing beer in the brewery that they were even driven to mixing it on its way to the customer on the back of the dray. However, the authorities soon discovered this and it was enacted, 'if any common brewer shall mix small beer with strong beer upon his dray or elsewhere he shall forfeit £5'.65 Again, the smaller breweries would have been more successful in evading detection of this fraud, the drays of the larger brewers being too closely watched. The only place left for the large brewers to mix beer was the publican's cellar. The excise had already thought of that, with regulations that stipulated, 'The gauger may taste the drink on the brewer's dray ...

and enter into the cellar of any Innkeeper or Victualler and taste the drink in the same'. ⁶⁶ However, the chances of the exciseman finding a victualler in the act of mixing strong and small beer together were so remote as to be dismissed.

This represented a new version of the 'mixing fraud', whereby the beer was not mixed at the brewery where surveillance was too high. Instead, it was mixed in the public-houses which were far too numerous to be policed effectively. Thus, extra strong beer could be mixed with small beer to be sold at strong beer prices. This was often sold as three threads which was defined as a mixture of common ale and double beer.⁶⁷ Edward Denneston, claimed that the practice was widespread and cost the revenue several thousand pounds a year.⁶⁸ He described an instance in Wapping:

I found writ at the *Fortune of War*, thus, here is sold two-thrids, three-thrids, four-thrids and six-thrids ... I called for my host, desired to know what he meant by these thrids? He answered that beer was at 2d., 3d., 4d., and 6d. I tasted all four sorts and found them to be a mixture and not intirely brewed. I ordered the surveyor to search that house where he found only two sorts of drink, *viz.* extraordinary strong beer and small, so that according to the price he mixt in proportion.⁶⁹

It is interesting to note Denneston's definition of three-threads as a 'mixture, not intirely brewed', which is vital to our understanding of the development of entire-butt beer, more commonly known as porter. It signifies how beer which had not been 'intirely brewed', was now held in great contempt by the public, because of its general adulteration due to the various 'mixing frauds'.

The London brewers and butt beer

The development of butt beer was an incremental step before the adoption of the term, entire-butt or porter. A butt contained 108 gallons, the equivalent of three barrels, stood 46 ins high, and was the largest cask available at the time, obviously the most suitable for the long term storage of beer. Thus, butts became the preferred vessel of storage in the brewery vaults from where they were transported to the publicans' cellars, three at a time, in the brewer's drays. The advantages of

the butt over smaller casks was amply described by the leading brewing writer of the times, William Ellis, in *The London and Country Brewer*:

The butt is certainly the most noble cask for this use, as being generally set upright, whereby it maintains a large cover of yeast ... and its lower part by its broad level bottom gives a better lodgment to the fining and preserving ingredients, than any other cask whatsoever that lyes in the long cross-form. Hence it is that the common butt-beer is at this time in greater reputation than ever in London.⁷⁰

London brewers were finding it increasingly difficult to evade the duty on beer or could no longer contemplate the social disgrace of a conviction for fraud. These brewers had found that the best method of containing costs within a fixed price regime was to brew large quantities of beer when the price of malt was cheap. This entailed the use of additional hops to preserve the beer in butts until it had matured and for when it was needed.⁷¹ They also found that the storage of beer for such a long period meant that they could use the cheapest of the brown malts, which had been dried by a wood fire in the kiln. This had the adverse effect of giving the beer a peculiar taste which was ameliorated by its long term storage. As described by Ellis, 'its ill taste is lost in nine or twelve months, by the age of the beer, and the great quantity of hops that were used in its preservation'.72

London brewers adopted butt beer in reaction to the unprecedented increase in the price of brown malt in the early 1720s. When malt prices rose, they brewed only the more expensive pale beers, which would not keep, whilst drawing on their stocks of the cheaper brown beer for general consumption. Historically, the price of brown malt had been about 17-18s. a quarter, until late 1723 when the price rose to 24s.⁷³ Whilst the production of strong beer in London remained steady, malt production began to react to fluctuations in the price of barley. The price rise of 1723, caused the London brewers to 'brew short' and malt production began to fall, reaching a low point in 1724.⁷⁴ (See Appendix A)

The price of malt remained steady in 1724-5, before it rose again in late 1725 to 28s. a quarter.⁷⁵ When the price fell back to 25s. in 1726, malt production recovered until late 1727, when it rose to 30s. a quarter.⁷⁶ Malt production fell continuously through 1728 until

the price peaked at 34s. a quarter in December,⁷⁷ and malt production fell to a new low.⁷⁸ (See Appendix A) Throughout this time, sales of strong beer from London breweries showed only a slight decline, which demonstrates how brewers were able to draw on their stocks to enable continuity of supply. Through 1729, 1730 and 1731 the price gradually fell back to about 19s. a quarter, where it remained and malt production recovered to the levels of 1720.⁷⁹ (See Appendix A)

There were times within this period when the price actually fell, as in September 1725 when it reduced to 23s. a quarter, 80 which enabled brewers to increase production and replenish their stocks. This process was exemplified in a parliamentary debate on the fall in excise revenue from beer in 1729, when it was stated that the price of malt was so high that the brewers only brewed what was necessary for immediate consumption:

none of them brewed any large quantity for staling, as they call it, whereas in years when the price is low they brew great quantities they keep by them as stock-in-hand, to be ready to answer any future demand. This is more particularly the case with respect to the sort of Strong beer or Ale, which the brewer may keep for several years in his cellars and is generally the better, the longer it is kept.⁸¹

This clearly demonstrates that by 1729 London brewers had developed the expediency of brewing sufficient stocks during periods of cheap malt prices to last up to two years, in the hope that they would last until a better harvest brought lower prices. This was the primary economic drive behind the development of butt beer, to which other considerations of taste, texture and colour were secondary. The extra hops used in brewing butt beer to last for this extended period gave the beer a bitter taste, which was mitigated by the maturation process, known as staling.

The reputation of London beer as a stable product, spread throughout the country. Travellers bemoaned the quality of the local beers in provincial towns, and advocated that, 'the butt beer of London is so much improved, that not only several of the Nobility have it at their tables, but it is sent to York, Scotland and Ireland'. 82 This success led to supply problems, where a shortage of casks led to additional costs in keeping sufficient butts to store the increased quantities of beer.

A leading London brewer, Benjamin Truman, gave the following evidence to Parliament:

... brewers were obliged to use ten times the vessels they did formerly by reason their trade heretofore consisted chiefly in brewing mild beer and ale, which is now disused, the present demand of their customers being all for strong beer; the former of these liquors is drawn in two months, the latter is kept as many years.⁸³

The solution to the problem of increased storage costs would be solved with the use of larger storage vessels at a leading London brewery to develop a beer that was called entire-butt, more commonly known as porter.

Summary

The excise system was eventually successful in its duel with the London brewers, who had countered each rule with new methods of fraud. The mounting regulation of the larger breweries became so intense that brewers could no longer evade the duty and put the money in their pocket. In the end, their life was simpler if they just passed on the tax to their customers and turned their ingenuity to making their money honestly.

This period proved to be one of innovation. Without the use of the hydrometer, the 'mixing' frauds must have required much experimentation to obtain the right strength of beer. These improved brewing skills were then turned towards 'legal' methods of maintaining profit margins. The wealthier London brewers devised a new method of brewing brown beer from the cheapest brown malts, with additional hops for long term storage. They had enough capital to carry the cost of its storage in butts for up to two years, as a hedge against inflation. This was called butt beer, which was to transform the London brewing trade with the possibilities that flowed from the increased shelf-life of this product, and will be discussed in the next chapter.

Chapter 3: The 'Porter Revolution'

The porter revolution represents the industrial development of the London brewing trade in the early eighteenth century. The rules of the excise allowances had created a few brewing dynasties in London who had accrued sufficient capital to initiate brewing on a larger scale. In the early 1720s, increased malt prices induced the development of entire-butt beer, which the public dubbed 'porter', the generic term for common beer sold in the public-house.

The period of porter's development, from 1720 to 1760, coincided with London's 'Gin Craze', which inhibited the growth in all beer sales, including porter. However, the brewers' successful promotion of porter over gin, epitomised by Hogarth's print *Beer Street*, led to a period of expansion in the second half of the eighteenth century.

The 'origin' of porter

The origin of porter has been the subject of many studies of brewing. Oliver Macdonagh in, *The Origins of Porter*, stated that the increased use of hops allowed the use of cheaper malts. This confirmed by the brewing writer of the time, William Ellis, who stated:

Brown malts are dried with straw, wood or fern ... wood leaves a sharp tang but many thousands of quarter of this are used in London for brewing butt-keeping beers because it is two shillings a quarter cheaper and the ill taste is lost in nine to twelve months, by the age of the beer, and the strength of the great quantity of hops that are used for its preservation.¹

However, Macdonagh then went on to claim that the development of porter was due to taxation, stating that, 'The duty on malt having risen more steeply than that on hops, there was now an incentive to increase the hoprate, that is, the ratio of hops to malt'.² This is incorrect. Malt tax was introduced in 1697 at 6¾d. per bushel, which did not change until 1760.³ Hop tax was introduced in 1711 at 1d. per pound which did not rise until 1778.⁴ Furthermore, the idea that increasing the hop rate would allow a reduction in the amount of malt does not seem logical. Less malt would mean a reduction in alcohol which no amount of additional hops could disguise.

The Brewing Industry in England 1700-1830 by Peter Mathias, remains the most comprehensive study covering this 130-year period. He states that the appearance of this new beer should be seen 'as an event of the first importance, or as an invention exactly equivalent to coke-smelted iron, mule-spun muslin or pressed ware in

pottery'. Mathias rejects assertions made in an article, 'The History of the London Brewery, from the beginning of King William's reign to the present time' published in *The Gentleman's Magazine* in December 1760. This 'single uncritical source' claimed that entirebutt, later known as porter, was developed in 1722.8

The article also appeared in The Gazetteer & London Daily Advertiser and Lloyd's Evening Post, both dated 24 December 1760. More importantly, it was published by the influential Annual Register in 'The Chronicle for December 1760', under the same title but with the following preamble: 'The great noise occasioned by the late additional tax of three shillings a barrel, may render agreeable the following papers relating to the London brewery'. The piece concluded with 'an account of 'BEER brewed at the principal brew-houses in the city'. 10 52 brewers were then listed in order of production figures which included the most famous brewing names of the age. Thus, the article has some authority, as it was unlikely to have been published in this form without the agreement of the London brewing trade. Mathias was probably not aware that all of these articles were copied from a letter, which had already been published in The London Chronicle, on the 1 November 1760, and with a shorter title, 'The History of the London Brewery from the year 1688' and was not anonymous, 11 but was signed by Obadiah Poundage.

This was obviously a pseudonym, which was not unusual for eighteenth-century letter-writers to newspapers. As with most pseudonyms, the choice of name is intended to carry meaning. Obadiah was considered a prophet of doom, particularly for those who do not support their family. Thus, it could be a call for unity in the trade, which was divided over an impending price rise which is fully discussed later. The name Poundage could also carry a message to the Government that the old system of poundage was an undifferentiated ad valorem duty on goods. This preceded the system of excise, which particularly targeted the brewing trade, and was proposing a massive tax increase at that time. Poundage is perhaps, supporting the tax increase this time, whilst warning them not to go too far. All primary sources have to be viewed in context and the contents of this letter have to be treated with caution. However, when checked against other evidence, it seems clear that the author had a detailed knowledge of the brewing trade in London, which gives insight into the development of porter.

Poundage's letter referred to the introduction of Pale ales into London and encouraged London brewers to brew their own version, called Twopenny, at 4d. a quart. This scenario is corroborated in *A Dissertation on Drunkenness* of 1727, where Burton, Dorchester and Yorkshire ales were said to be available in London with also, 'compositions of sundry liquors, including, Twopenny and numbers of Pale Ales, nam'd after the respective brewers that prepare them'. Poundage then claimed that the brewers, to compete with Twopenny, improved brown beer by hopping it more and staling it for longer. Again, this has already been proved correct. 14

Poundage then stated that:

Some drank Mild beer and stale; others what was the called Three-threads at 3d. a quart. On this footing the trade stood until about the year 1722, when the brewers conceived there was a means to be found preferable to any of theses extremes. That beer well brewed from being kept its proper time, becoming mellow ... they ventured to sell at twenty three shillings per barrel, that the Victualler might retail at 3d. per quart ... The labouring people, porters etc. found its utility; from whence came its appellation of *Porter* or *Entire Butt.*¹⁵

The language may be antiquarian, and the account is incomplete, but it is still an accurate description of the development of porter.

The development of porter at the Red Lion brewery

Porter was developed by Humphrey Parsons at the Red Lion brewery, by extending the methods used to brew butt beer. The brewery, which was situated at St. Katherines, Wapping with its own wharf on the Thames, had been in the Parsons family since 1614. Humphrey Parsons had inherited the business from his father in 1717 at the age of 41, 17 and was determined to expand the brewery. Radong with the other large brewers, he reacted to the steady increase in malt prices in the 1720s by brewing butt beer for storage whenever the price of brown malt fell sufficiently. Parsons's beer was popular with working men, it was described in 1726, in *The Artificer's Looking Glass*, as the 'best strong beer in London'. 19

Parsons's innovation was to increase the storage capacity for this measure by commissioning the building of a cask of unprecedented size, which is described in the following poem in *The Ladies Diary* of 1728:

henceforth, renowned Parsons, you shall be... esteem'd our patron, own'd a deity... your stately cask to be your throne, from whence... to all your votaries your laws dispense... this spheroid cask, whose magnitude is such... the Trojan horse did not contain so much... for by th' dimensions it does appear... to hold twice eighty barrels of strong beer.²⁰

It stood 13½ ft. tall, had a diameter of 10½ ft. at the middle, and a capacity of 160 barrels. ²¹ This development was the first step in the industrial development of the brewing industry. It exemplifies an evolutionary model of industrialisation as it was an extension, rather than a revolution, of cask-making technology. A large cask of these dimensions could still be made by hand.

Mathias claimed that Parsons had commissioned vats in 1736, each costing £562 and having a capacity of 1,500 barrels, which has been widely quoted in brewing histories. ²² However, this seems unlikely on many counts. First, it was too expensive. The cost of an equivalent storage capacity would require 500 butts costing 18 shillings each, ²³ which would have only amounted to £450. Storage of the 1,500 barrels would require ten of Parsons's large casks cost £13 7s. each, ²⁴ bringing cost of storage capacity down to about £130.

Second, it is inconceivable that a vat of that size could be built using contemporary technology. A vat of a comparable size belonging to Samuel Whitbread in 1804 - standing 27 ft high with a diameter of 22 ft would contain 1,782 barrels.²⁵ Vats of this size required iron hoops spaced 4-5 ins. apart, weighing between one to three tons each, 26 which would have been beyond the capabilities of coopers in 1736. Finally, an article in the Annual Register of 1770 described the casks at the Red Lion brewery as, 'surprisingly large ... a cask called the Old Hen holds 150 barrels; seventeen casks called the Seventeen Chickens, which hold each 70 barrels'.²⁷ Notwithstanding any losses over the years, these remaining casks total 1,340 barrels capacity, which probably explains the origin of the '1,500 barrel vat' myth of 1736.

Parsons had built his first large cask of 160 barrels capacity some time before 1728. He realised that beer from different guiles, which had been brewed at various times of the year, could be blended together. When left to mature over a period of time, they coalesced to produce an homogenous liquor, which was free from the endemic variations of the brewing trade. Thereafter, he deployed the message that his beer was a standardised product which came from one cask, which he called entire-butt.

When Parsons became Lord Mayor in 1730 several poems were dedicated to the event, including the following lines, 'Well-brew'd, well-hop'd, well ag'd, like PARSON'S beer. Has now prepar'd the well concocted mass; To the large cask once more the liquors pass'.²⁸ Clearly, Parsons had successfully promoted the features of his brewing process as being unique, with no other brewers receiving such attention in the press. This is confirmed in a plagiarised version of William Hogarth's new work, The Harlot's Progress, which appeared in 1733.²⁹ (See Appendix B). Comparison with Hogarth's original shows that the sign of the 'Bell' public-house is depicted with the additional words, 'Parson's Intire Butt Beer'. 30 In order for this satire to have any currency these additional words would need to be instantly recogniseable and is further evidence that, by that time, Parsons had built up a network of public-houses that displayed his sign, so becoming London landmarks. Parson's Entire was a simple, but effective, brand-name which encapsulated the promise that his beer was free from mixing and adulteration and represents a stroke of marketing genius that was far ahead of its time.

Humphrey Parsons's great innovation was not only the adoption of large casks for the storage of beer, it was inevitable that someone would have done that sooner or later. The true revolution lay in his selling the idea that his beer had been produced from his 'great cask' without mixing or adulteration, which he encapsulated in the name 'Parsons intire butt', often shortened to just 'intire'. Thus, the use of 'intire' to describe beer entered the English language in its own right. William Rider, in his *New Universal Dictionary*, defined the word as follows, 'Intire - unbroken, or undiminished. Without any adulteration, Intire Butt Beer'.³¹

Increasingly, 'intire' became 'entire' in contemporary advertisements, as in *The Daily Advertiser*, 'The Chequer

Inn in Holborn is fitted up ... Note, Alderman Parsons's entire beer'.³² For those who wished to impress, a public notice was considered essential, as with the following:

'To the Worthy Beneficial Society of Woolcombers' Thomas Topham, commonly called the Strong Man, in gratitude bound for a favour, will entertain them with a dish of beans and bacon at the 'Three Coneys' in Clapton, where he intends to conclude with a dessert of Alderman Parson's entire ... June 11, 1746.³³

The name was for public consumption, carrying the clear message that this beer came from one vessel, which had not been mixed or adulterated. It was for advertising purposes only and did not appear in the company records. Parsons's accounts show that stocks are merely referred to as beer, there is no mention of 'intire'.³⁴ The accounts of his major competitors were similar. Ralph Thrale at the Anchor brewery, Southwark, refers to stocks as mild beer in 1748.³⁵ Benjamin Truman at the Black Eagle brewery, Spitalfields, does not refer to beer stocks as 'intire' until 1759.³⁶

It seems probable that Parsons only made one cask of 160 barrels. By 1770, there was only one large cask of that size at the Red Lion brewery, the remaining 17 were all 70 barrels each.³⁷ This corresponds with the size of Truman's great casks of 80 - 90 barrels each.³⁸ However, both Truman and Thrale had only four great casks each in 1748,³⁹ compared with 48 at the Red Lion brewery in 1745.⁴⁰ Finally, the tap-house at the Red Lion brewery was named *Lady Parson's Great Cask*; in the singular, not the plural.⁴¹

Porter or entire-butt?

An explanation of the difference between porter and entire-butt beer is overdue. In fact there was no difference, the terms were interchangeable, it is just a question of different etymologies. The common man who entered a public-house of Parsons, despite the sign of *Parson's Entire* over the door, asked for porter, not entire-butt. It was best summarised in *The Drury Lane Journal*, where the purchaser was cautioned not to trust, 'the signs that are hung out for THE ALDER-MAN'S ENTIRE BUTT BEER ... a good book has no

occasion for taking a Title-page'.⁴² The people knew that the term entire-butt was cosmetic. It was intended to convince them that their beer would not be mixed with small beer, water or even worse. However, they were not that gullible, they preferred the vernacular term for their beer which was porter.

In 1730, the link between 'Parson's Intire' and porter was made in the following lines in a congratulatory poem to Parsons on becoming the Lord Mayor of London:

Owes its perfection to the BREWING TRADE...

When tir'd with work, good liquor can restore...

The Work-man's former strength, and give him more If PARSON'S noblest Tun inflames their brains...

If Beer and Ale, a nobler mixture joins...

The force of either, when its drank alone...

If bitter, thick and flat; it dully flows...

of solid pudding and substantial beef...

true English basis lays; while native drink, sound, generous Porter fills every chink.⁴³

The use of the word porter to describe a drink, rather than a labourer employed to carry goods, began in the early 1700s. It most probably developed from the contraction of the term, porter's ale which was in use as early as 1710 when Jonathon Swift's poem *A Town Eclogue* included the following lines:

But what to me does all that love avail, If, whilst I doze at home o'er porter's ale, Each night with wine and wenches you regale.⁴⁴

In 1716, Alexander Pope published A Further Account of the most Deplorable Condition of Mr. Edmund Curll, bookseller, where he likened his books to, 'journeymen, born in garrets among lice and cobwebs, nursed up on gray peas, bullock's liver, and porter's ale'. ⁴⁵ The link from porter's ale to porter was provided by Daniel Defoe, who gives us an explicit description of porter in his 1724 publication, The Great law of Subordination Considered, or the Insolence and Unsufferable Behaviour of Servants in England duly enqir'd into. He describes conversations with servants over 'a mug of porter, as they call their alehouse beer and ale'. ⁴⁶ However, in 1726, Defoe reverts to the older term, when he stated that the common drinkers were, 'not contented as formerly with ordinary beer or Porter's Ale; but

they are advanced, first to Twopenny, then to Doublebeer or Stout'.⁴⁷

The term porter first gained public attention when it entered the political debate between Whigs and Tories over the Hanoverian succession. In May 1721, Whig polemicist, Nicholas Amhurst, adopted the term 'beef, cabbage and porter' as a metaphor for simple but honest poverty by stating that, 'poverty was much preferable to bondage; that we would rather dine at a cook's shop on beef, cabbage and porter'. 48 Thereafter, 'cabbage, beef and porter' was denounced as Whig propaganda by Nathaniel Mist, Jacobite editor of the *Weekly Journal*, or *Saturday's Post*, who declared that it was indigestible and 'a great deal of nonsense and impudence'. 49

T. Warner's 1727 *A Dissertation upon Drunkenness* described the choice of malt liquors available in London:

The so much magnified beer of Dorchester, next Burton Ale, Derby Ale, Lincoln Ale, Nottingham Ale, Yorkshire Ale, Doncaster Ale, Basingstoke Beer, Sussex Beer, Newberry Beer, October Beer, Amber Beer, Yorkshire Stingo, Norwich Nogg, and of the capital liquors that have slain their thousands, Twopenny, Three Threads, a composition of sundry liquors, and lastly, HUMBLE PORTER.⁵⁰

Clearly porter was then known by all and sundry as a drink associated with the poorer classes. Thus, we know that the term porter evolved from porter's ale, and was used to describe the cheapest, and probably the weakest, of the officially designated strong beers.

Porter and patriotism

Contemporary literature provides a fuller picture of porter's penetration of the London market for beer, with many references to the patriotic nature of a pint of porter. The following poem about Parsons's beer is but one example:

Bold Britons boast no more of Bacchus here, Since he's dethron'd by Parsons' humming beer Straight abdicate him our dominions quite And Parsons deify, as t'is his right Let foreign dregs no more our sense invade, Which robs our stores and spoils domestic trade Champaign, Bordeaux and Burgundy no more.⁵¹ To reinforce the point, Parsons's porter was widely known as 'black Champagne' or 'British Burgundy'.⁵²

Linda Colley, in *Britons: Forging the Nation*, describes how there was a concerted effort in the eighteenth century to promote domestic products as a patriotic alternative to imports, particularly from France. The argument went like this, the English, Lowland Scots and Hanoverian King were all descended from the Saxons who had been contaminated by the French since the Norman Conquest. Therefore, the importation and consumption of all things French were to be discouraged and replaced with British products and manufactures.⁵³ Another eighteenth-century poem, *A Tankard of Porter*, took a similar view:

The foaming cup replete with mad'ning juice Of Gallic vines, to others taste I leave. Why should I sicken for exotic draughts, Since with kind hand domestic Ceres gives Potation more robust? - Replenish here Boy, take this honest tankard - fill it high With buxom porter, such as Hercules, Was Hercules in being, would imbibe.⁵⁴

The substitution of British products also was encouraged by the Anti-Gallican Association whose aims were 'to promote British Manufactures to extend the commerce of England and oppose the importation of French commodities'.55 Thus, the manufacture of London gin could replace French brandy and London porter could replace French wine. Brian Harrison, in Drink and the Victorians, explains how beer was considered patriotic because it supported agriculture, unlike wine, brandy, tea or coffee. It evoked patriotic images of a foaming tankard, John Bull, contempt for all things French with the slogan of the masses, 'No Popery and Wooden shoes'.56 Neil McKendrick states in The Birth of a Consumer Society that this was a time when drinking beer or Portuguese instead of French wine, were considered to be convivial and patriotic activities.⁵⁷

Other cultural issues were probably just as important. Hogarth's famous depiction of *Beer Street* was widely interpreted as 'John Bull at his happiest',⁵⁸ accompanied with the following lines:

Beer, happy produce of our isle, can sinewy strength impart,

and wearied by fatigue and toil, can cheer each manly heart.⁵⁹

Central to this scene of male camaraderie, are foaming tankards of porter. Compare that to the scene of *Gin Lane* where all is ruin and the central figure is a solitary woman abandoning her infant child; destroyed by gin, mother's ruin. Beer was the drink for men, it was manly. Gin could be consumed to accompany beer as a 'chaser', but it would be impossible to sustain a social evening, drinking only gin without becoming hopelessly drunk. All men were expected to know how to 'handle their drink', to get sufficiently inebriated to lose inhibition but without losing complete control.

Beer was integral to Londoner's lives. Their personal milestones, betrothals, weddings and wakes were lubricated with drink. Fathers acknowledged their adolescent sons' first drunken episodes as a rite of passage in reaching manhood. At work, apprenticeships, promotion and leaving for another job were celebrated with heavy drinking. As with the major events in life, the working week had its own rhythm for drinking. The weekend began on Saturday night when heavy drinking continued through Sunday to 'Saint Monday', an unofficial holiday kept by a third of London's workers. 60 These occasions were recognised opportunities for social drinking in public-houses, which were predominantly for men, any women present would not be considered respectable.

Brewers did not advertise at that time, but publicans often used an event to advertise in newspapers as in the following examples:

Sailors from the Burford are invited to honour Admiral Vernon at the 'Horns' in Gutter lane, Cheapside, where entire-butt beer will be for one day gratis. 61

This is to acquaint my friends that I have opened the Sun Tavern in the Strand...as it shall suit their conveniency, I having provided good wines and other Liquors with Calvert's Entire Butt Beer.⁶²

The Old Swan & Rummer Tavern in Finch Lane will shortly suffer the modern transformation; the Vaults are fill'd with Calvert's Entire Butt, over which four seasons have smil'd 63

These are three further demonstrations of the use of entire-butt as a promotional device, the latter indicating that the beer had been conditioned for at least a year. Today, this would be considered as a trademark.

Public-houses increasingly adopted the term entire-butt on their signboards, which did not meet with universal approval. Many felt that it was demeaning to have this juxtaposed with the adopted hero of the house. The portraits of *The King of Prussia*, *The Duke of Cumberland* or the *Marquis of Granby*, were said to have, 'filled every sign-post and he may be figuratively said to have sold the ale, beer and porter of England'.64

Particular exception was taken by some when Admiral Vernon, the most popular hero since he had taken Porto Bello with only six ships in 1739, was similarly treated, 'whose head hangs aloft, as a sign ev'ry where, to warn in the porter to Calvert's butt beer'. 65 Many thought that this represented exploitation of famous names and questioned:

why the glorious *Duke William* should draw *porter* or the brave *Admiral Vernon* retail *slip* ... Propriety of character, I think, requires that these illustrious personages should be deposed from their lofty stations: and I would recommend hereafter, that the *Alderman's* effigy should accompany his *Intire Butt Beer*.66

The 'Alderman' referred to, was Sir William Calvert, who became known as the 'Alderman Brewer'. The public were advised, 'not to trust the signs that are hung out of the Alderman's Entire Butt Beer'.⁵⁷

For most of the brewers who followed Parsons's lead the term 'entire' or 'intire' did not appear in their ledgers, but on the signboards of their public-houses. It was a form of sales promotion. However, there was no copyright over the use of the term 'entire butt'. Thus, as other brewers tried to emulate Parsons's success, the term proliferated, evoking the comment, 'we have Parsons, Calverts and Hucks Intire Butt Beer with much the same difference among them all, tweedle dum or tweedle dee'.⁶⁸ Clearly, porter was becoming a standardised product.

Government policies of protecting the brewing trade from provincial competition with generous allowances had encouraged a London oligopoly of a dozen or so firms, of which Parsons stood *primus inter pares*. He was a popular politician, to be Lord Mayor twice was unusual, but he was also controversial. As a Tory Catholic with Jacobite sympathies, he needed to be careful about his clandestine trips to Paris, where he was considered the 'City of London' representative to the court of James Edward Stuart.⁶⁹ This made him a target of political satire, which provides unexpected sources of evidence of his brewing activities.

Parsons was a close ally of John Barber, a leading Jacobite supporter who raised funds for the Pretender, for which he had been briefly imprisoned. Barber eventually succeeded Parsons as Lord Mayor. After his death in 1740, Nicholas Amhurst was in correspondence with Edmund Curll about a forthcoming biography of Barber. He wrote, 'Your biographer should not omit the History of the Pint of Porter, which the *Alderman*, then a poor printer's boy, paid for. Curll, wrote in reply:

my Biographer has carefully followed your instructions, but he told me he scorned to take notice of an Incident so *mean* as a *Pint of Porter*, or of the *Person* who let *poor Jack* pay for it.⁷⁰

'Poor Jack' was undoubtedly John Barber and we can only speculate how he 'paid' for his close friend Parsons's 'pint of porter'. However, for the purpose of this study, it is clear that in 1741, Humphrey Parsons was the 'History of the Pint of Porter'.

Further proof of his early domination of the market for porter is to be found in another eighteenth-century satire, *Rodondo: or the State Jugglers Canto III.* This long poem was published in 1770, and is a wide-ranging attack on politicians generally. Amongst other themes, it compares Humphrey Coates, a notorious wine-merchant friend of John Wilkes, with Humphrey Parsons. Both are known informally as 'Numps',71 which leaves much scope for ribald comment. The evidence of Parsons's domination of the porter trade is contained in the following few lines:

Let us together lay our heads, and make a liquor of three threads, Which being jumbled in one barrel, Will take off all pretext of quarrel, and chuck'd down, as he'd chuck a slug, The whole contents of Hum---yes mug, No sooner was the potion down, Than dreadful Civil War began, To waste the Parson's inward man, For Porter, who possessed of old, The sole dominion of his hold. 72

The information is all there, a liquor of three threads all in one barrel in Parson's sole dominion; this is the story of the development of porter by Humphrey Parsons.

The decline of the Red Lion brewery

Humphrey Parsons had built up a lead over his rivals which seemed unassailable. However, in 1741 he died unexpectedly leaving his widow Sarah Parsons to run the Red Lion brewery.⁷³ The Parsons family were unable to provide a suitable successor and the brewery began a long period of decline. This was to become a familiar theme in many of the porter-brewing dynasties, as each in turn failed to achieve continuity in the management of their breweries.

Initially, the Red Lion brewery continued to grow, 74 but as time passed Sarah found the brewery increasingly difficult to manage,75 particularly after her decision to move to Paris.⁷⁶ Widowhood was common enough in the eighteenth century and those of wealthy businessmen often liquidated their assets and put them into safe investments as money-lenders.77 This seems to have been the original plan of the Parsons family, as Humphrey Parsons's will of 1725 directed his wife to dispose of the brewery at the best price. However, a codicil was added in 1740 that revoked that clause, directing his wife, 'to carry on the said trade for the benefit and advantage of my son John Parsons until he shall arrive at the age of twenty one'. 78 However, a problem arose when John Parsons was declared bankrupt in an ill-advised brewing venture, which disqualified him from running the brewery.⁷⁹ Thus, Sarah was left with the burden of running the business alone.

It seems that the brewery was in a state of disrepair by the time that the lease was due to be renewed, when the land owners threatened to repossess the property unless the buildings were renovated.⁸⁰ After much negotiation it was agreed in 1746 that a new lease would only be granted if:

Sarah Parsons should within seven years lay out, in rebuilding or substantially repairing the premises, the sum of four thousand pounds, and the said Sarah parsons agreed to pay the sum of one thousand pounds as a fine ... all that Capital Message, Tenement or Brewhouse known by the name or sign of the Red Lyon situate lying near East Smithfield 81

A new lease for 99 years was granted in 1749, so the repairs must have been completed and the fine paid, which would have been a drain on the finances of Sarah Parsons at a time when production at the brewery was in decline.

In 1746 she prepared a 'Book of orders for the conduct of the London brew-house', where the most detailed set of rules were laid down for each member of staff.⁸² Additions were made over a period of eight years which provide great insight into the day-to-day running of a major London brewery. In 1747 she brought in the services of an accountant, Edward Sparke, to oversee the operations of the counting-house.⁸³ However, by 1748, Sparke was increasingly taking on a managerial role. The yard manager was instructed to report any man of a failure of duty to the head clerk to have his pay stopped, but to report anyone guilty of 'a great misdemeanour to my self of Mr Sparke in order to have that person discharged'.⁸⁴ Clearly, in the absence of Sarah Parsons, Sparke was now in charge.

The rule book gives us an insight into management practice in the early eighteenth century, and is full of contradictions. The broad clerks' duty was to supervise the broad coopers who went out to public-houses to start the beer and repair casks, but they were also told, 'whilst every servant shall keep to their own duty, you are to take notes in writing of everything you observe and lay them before me every Friday'. 85 The yard clerk was given jurisdiction over all men working in the yard, 'except the men belonging to the brewers and except the broad coopers and trimming coopers who take orders from the broad clerks and the Head Clerk'. 86

This hierarchical management structure was fraught with areas of disputed authority, which led to a breakdown of discipline. Edward Sparke seems to have been singularly unsuccessful as a manager, having offered to resign in 1751 when Sarah Parsons showed disap-

proval in the running of the brewery.⁸⁷ Sparkes spoke of the brewery workers as 'low people with whom it is beneath her to have any connection',⁸⁸ which reflects the attitudes towards London labourers at that time.

M.D. George, in London Life in the Eighteenth Century, stated that London workmen were considered to be 'idle, profligate and drunken'. 89 E.P. Thompson records how foreigners were astonished at the London workers' lack of deference. 90 The London brewers reacted to this by employing unskilled labour from the country whenever possible. In a small provincial town a worker, if sacked for indiscpline, could face a boycott from other employers, whereas London workers knew that it would not happen in London where the labour market was immense. A leading London brewer was quoted as saying, 'If a man has to leave our employ we fill his place up from the country. We are afraid of London men. They are shuffling, lazy and know too much'. 91

By 1755, the relationship between Sarah Parsons and her manager seems to have broken down entirely, when he wrote directly to her son-in-law, Sir John Hynde Cotton, as follows:

The only way to restore to herself the honour dignity and respect justly due to her is to get a resolute partner, able to govern such a pitiful crew, as it is necessary in a great Brewhouse, with a rod of iron, they being in general insensible to any other kind of treatment or government.⁹²

Clearly, Sparkes no longer considered himself capable of managing the brewery and he advised Parsons to obtain a partner who could run the business with authority. She had soon realised that she needed to delegate to manage unskilled labour on this scale, the problem had been to find the right manager. On her death in 1759, the Red Lion brewery passed to her son-in-law, Sir John Hynde Cotton, and continued its long decline under a series of managers and partners until the late eighteenth century.

*The principal brew-houses of London*⁹³

In 1748, the five leading porter-brewers, in order of production, were as follows:⁹⁴

Brewer	Address	Barrels brewed in 1748
William Calvert	Hour Glass brewery, Thames St.	55,700
Felix Calvert	Peacock brewery, White Cross St.	53,600
Benjamin Truman	Black Eagle brewery, Spitafields	39,400
Sarah Parsons	Red Lion brewery, East Smithfields	39,000
Ralph Thrale	Anchor brewery, Southwark	35,000

Table 1. (See Appendix C).

These breweries, which had been created from the proceeds of earlier tax evasion, were beginning to forge ahead of the rest of the London brewing trade as they powered the 'porter revolution' of the early eighteenth century.

The Hour Glass brewery was an ancient brewery, situated in Upper Thames Street in the City, where it occupied a waterfront site with its own wharf. Originally owned by Josiah Nicholson, it was inherited by Felix Calvert on his marriage to Nicholson's daughter in 1715. Calvert was from a dynasty with many family members trading as brewers in the city in the early eighteenth century. Felix Calvert's nephew, William Calvert, joined the company to became one of the most influential brewers in the development of porter. By 1744, Calvert was already making inroads into Sarah Parsons's lead in production. He knew how the Red Lion brewery worked and adopted the same methods. He

When Calvert was made an honorary Doctor of Law by Cambridge University in 1749, *The Gentleman's Magazine* published the following satire, which compared him with Parsons:

As the highest degree in the university has been bestowed on an honest fellow, exercising the trade of *beermaker*, I hope it will not spoil his beer, since it may give a turn to the lower rank of people against it; as in the case of another worthy brother-trader(Alderman Parsons), who lost his credit with them, for doing himself the honour of taking a hunt or two with the king of France, which occasioned the

downfall of his butt, and the rise of his successor's (Alderman Calvert); but if he would add his new title there is something so humorous in the Doctor's Intire Butt, that it may catch the vulgar, and keep them in good humour with him.⁹⁷

William Calvert had stepped into Humphrey Parsons's shoes in other ways than beer production. He took over as Alderman for Portsoken when Parsons died, before going on to become Lord Mayor in 1748.98 Furthermore, he was honoured with a knighthood in 1744,99 something that Parsons never managed due to his Jacobite sympathies.100

The Peacock brewery, White Cross Street, Cripplegate had been in the Calvert family since the late seventeenth century. Felix Calvert senior was in partnership with Felix Feast in 1720 when they are mentioned in A Guide for Malt Worms, where a publican is described as, 'well serv'd by CALVERT and FEAST', finds that his Trade's, by pow'rful drink, increas'd'. 101 When Feast died in 1724 Calvert took on William Seward as a new partner and the business flourished. Calvert was reported to be worth £80,000 when he died in 1737.102 His son, Felix Calvert junior, continued the partnership with Seward to become London's greatest brewery by 1760. Although Felix Calvert at the Peacock and William Calvert at the Hour Glass were second cousins, they were in fierce competition to become London's 'first brewer'.

The Black Eagle brewery was founded by Joseph Truman at Black Eagle Street (later Brick Lane), Spitalfields in 1666.¹⁰³ Two of his sons, Benjamin and Joseph Truman junior, were made partners in the early eighteenth century and inherited the brewery in 1721.¹⁰⁴ In 1733, Joseph died leaving Benjamin in sole charge as the senior partner and under his management the brewery prospered. In the decade 1740-50, the records show that the value of the company tripled, from £23,339 in 1741¹⁰⁵ to £68,160 in 1750.¹⁰⁶ Production increased from 39,400 barrels in 1748 to 60,140 barrels in 1760.¹⁰⁷

The Anchor brewery was a small, ancient riverside brewery, on the south bank of the Thames, at Deadman's Place (later Park Street), Southwark, which had been owned by the Child family since 1616. ¹⁰⁸ In 1696, it came into the ownership of Edmund

Halsey, who had married James Child's daughter and inherited the brewery. 109 Halsey expanded the brewery in 1700, spending £3,546 on construction and £408 on new coppers. 110 He was also an innovator, bringing in blind horses to drive a horse-mill. 111 In 1720, Halsey is mentioned in A Guide for Malt Worms, when it was reported that, in Moorgate, 'Liquors, the best, are vended here, From heav'nly Punch to HALSEY'S Noble beer'. 112 When Halsey died in 1729, having no male heir, the brewery was left to his daughter, who had married a nobleman, Lord Cobham. 113 As it was not thought fit for a nobleman to continue the business, the decision was made to sell it. However, it was worth a fortune and they could not find a purchaser. After some time they were forced to negotiate with the head clerk, Ralph Thrale, Halsey's nephew who had worked in the brewery for many years. The brewery was signed over to Thrale for £30,000 on the understanding that he was to pay for it out of the profits, which took him until 1740.114 Thrale became involved in politics and was elected MP for Southwark in 1741. Thereafter, a period of lavish spending ensued which was reflected in a decline in the value of the brewery from £72,044 in 1748115 to £66,867 in 1757.116 Much of the money was spent on his son, Henry, which is reflected in one of his last comments, 'if this young dog does not find so much after I am gone, as he expects, let him remember that he has had a great deal in my own time'. 117 When Ralph Thrale died in 1758, he was reported as, 'the greatest brewer in England, upon his own bottom', 118 meaning that he was a self-made man.

In this early period of the porter's development, the production of strong beer in London had fallen from 1,118,800 barrels in 1725 to 915,400 in 1748.119 During the same period the number of common brewers fell slightly from 176 in 1725, to 158 in 1748. However, the five leading porter-brewers' share increased, from 223,200 barrels, which accounted for 24% of London production in 1748. 120 In 1760, they produced 306,370 barrels out of a total of 1,114,300 barrels, 27.5% of London's production of strong beer. 121 Clearly, the growth of the larger porter breweries was at the expense of the small brewing victuallers, which was the Government's intention. As the trade contracted, mergers and take-overs increased in a process that we would recognise today as industrialisation.

Porter and the 'Gin Craze'

An important factor in the contraction of the porter trade was that of London's 'Gin Craze' of the early eighteenth century. It was not until Government legislation had finally conquered this problem that growth of porter production could resume. Since 1690, government policy had been to encourage the distillation of spirits from malt. This was seen as a an extra source of income for the landed interest, whilst providing a source of revenue from the malt duty. 122

By the 1720s there was increasing public disquiet about increases in drunken behaviour due to the drinking of spirits. This was voiced by Sir Daniel Dolins, Chairman of the Middlesex Quarter Sessions, who addressed the London magistrates as follows:

... the beastly drunkards, that contrive to drown their reason and senses with liquor; and the venders of gin and other strong waters; who against the law not only suffer tipling, but dead drunkenness, in their shops and houses; shall not escape your prosecution, when they do not escape your knowledge. I can no longer doubt, but it must soon reach the ears of our legislators in Parliament assembled. 123

However, there were other voices that came to the defence of gin. The influential writer, Daniel Defoe, published *A Brief Case of the Distillers, and of the Distilling Trade in England*, in 1726. He argued that there was nothing new in drunkenness, which was often caused by beer, and there was no call for a ban on brewing. Furthermore, if London distillers were banned, gin would be supplied by the Dutch. 124 Finally, he delivered a broadside to Parliament, blaming them for forcing poor people on to gin by increasing the price of a pint of beer from one penny. 125

Parliament legislated to suppress the consumption of gin in 1736, when riots had ensued with cries of 'No Gin, no King'. 126 The Government responded by offering £5 reward to any informer of illicit stills, which brought 12,000 cases to the authorities by 1738. 127 However, this further inflamed the situation and many informers were, 'killed, and others dreadfully hurt by the mob'. 128 As the unrest continued, the Government's anxiety was clearly demonstrated when the constables and headboroughs of the Tower Liberty were advised to be, 'very diligent and circumspect in the execution of

the Gin and Riot acts'. 129 Thus, in the face of sustained rioting, the act became a dead letter and was repealed in 1743, when Lord Bathurst summarised the whole episode in the House of Lords:

The people, thinking themselves oppressed by the law began to declare war against informers, many of whom they treated with great cruelty, and some they murdered in the streets. By their obstinacy they at last wearied the magistrates ... so the law has been now for some years totally disused ... The practice, therefore, of vending and drinking distilled spirits, has prevailed for some time without opposition. 130

Defoe was not alone in defending the distillers on the grounds that they paid duty on malt and were therefore equally as useful to the economy as the brewers.

However, by 1728, Defoe had changed his mind. He now called for the abolition of gin, stating, 'There is not in nature so unhealthy a liquor as Geneva ... malt liquors, especially common draught beer, is most wholesome and nourishing' 131 This volte-face by Defoe embodies the national dilemma about drink. He now realised that his logical argument that intoxication was the same whether from gin or porter, missed the point. The lives of the lowest classes were so wretched that many wanted oblivion as quickly, cheaply and frequently as possible, which was facilitated by cheap gin. The attitude of the average London drinker was voiced by a disgruntled cobbler who complained about the porter in London and Westminster as follows, 'there is absolutely no such thing as getting drunk with it at any price'. 132

The respectable, working classes considered the drinking of neat gin by men as, anti-social, unmanly and the behaviour of a 'sot'. ¹³³ However, as the price of beer increased, men began to drink 'purl', which was gin mixed with small beer. ¹³⁴ A pint of 'purl' cost a farthing less than porter, which could not compete with this cheap substitute. It was said in 1738, 'one pint of small beer with a quartern of gin at the sum total of five farthings will toss up their spirits twice that sum in ale'. ¹³⁵ This change of drinking habits meant that porter consumption was reduced in relation to that of small beer, which is reflected in the statistics for beer consumption in London in the period of the 'Gin Craze', 1720-1760.

Taken decade by decade, there was an increase in the amount of small beer consumed in London, expressed as a percentage of strong beer, which coincides with the rise in spirit consumption. In Table 2, we see that during the period of the 'Gin Craze', 1720-1760, the ratio of small beer produced, in relation to strong, rose decade by decade. By the 1750s, as prohibitive measures against gin began to bite, we see the reduction in spirits accompanied by a reduction in small beer consumption to 35% of strong beer. In 1760, when the 'Gin Craze' was seen to be at least curtailed, if not over, the consumption of small beer had dropped to 29% of strong beer, which was now in line with national consumption. 136 Clearly, the 'Gin Craze' was a London phenomenon which affected the sales of strong beer, which at that time was predominantly porter.

Decade	Percentage of Small beer to Strong beer in London	Percentage of Small beer to Strong beer in England
1720s	38%	37%
1730s	41%	37%
1740s	41.3%	37%
1750s	35%	37%

Table 2. The ratio of small beer to strong beer 1720-1760

The increase in gin consumption also had consequences for the production of porter. Traditionally, distillers took the very cheapest of malts, which were quoted separately at the Bear Quay grain market, where prices were up to 3s. less per quarter than brown malt. However, during the 1720s, distillers had found that that more alcohol could be extracted by using better malt. By 1727, 'Distiller's Malt' ceased to be listed in the newspapers and journals under 'Prices at Bear Quay'. ¹³⁸ The distillery trade numbered less than 30 in the whole country, 24 of them being in London ¹³⁹ and the latter operated as a cartel at the grain market, forming a wealthy elite that were now in competition with the porter brewers for brown malt. A contemporary writer complained thus, 'the smallness of their number makes them easily

capable of combining together at Bear Key, on Market days for Corn', 140

The pressure on malt prices increased in the 1730s when the London distillers began to use unmalted corn, which was the subject of the following report in 1736:

malt-stilling is vastly different to what it was 30 or 40 years ago ... instead of using the worst of our barley they use the best, a great deal of which is unmalted, which being ground into meal will raise a much more profitable fermentation, especially when they mix it with wheat flour from whence they get a great deal more spirit and save expenses in the manufacture and the King's duty. ¹⁴¹

In the early eighteenth century, distillers had discovered by trial and error that they could introduce unmalted barley into the mash tun, along with malt, and it would still ferment. Today, we know that there is enough diastase in malted barley, the enzyme that is responsible for turning starch into sugar, to convert the addition of unmalted barley. Furthermore, it produced a stronger spirit than the same amount of malted barley. By using unmalted barley, which paid no malt tax, the distillers had found a way to reduce their costs, resulting in greatly increased profits. They could afford to outbid brewers for the better malts.

However, their use of barley or even wheat disrupted the market for grain in London, which proved to be their undoing. This disruption proved to be more decisive in ending the 'Gin Craze', than the all of the various laws that had been passed over that period. The distillers' use of wheat affected the price of bread, which lost them the support of the landed interest in parliament. In the 1750s, high prices caused bread shortages and the distillers were blamed. The porter-brewers exploited the opportunity to gain public favour by introducing a 'yeast scheme' to help bakers keep down the price of bread. 142

Wartime shortages in 1757, induced a proposal in parliament to ban the distillation of wheat. The distillers were untroubled by this as the alternative of malt and barley still lay open to them. However, the brewers had deployed their arguments with some skill to petition for a total ban on the distillery trade. The distillers' representatives put up a strong argument that they could

use the lowest grades of barley that were unfit for the brewers. This was countered by the brewers who asserted that there was no way of ensuring this, which won the argument. After much debate in the House of Commons, the brewers were successful and the bill received royal assent on 11 March 1757. It is a crucial decision, parliament had decided that the brewers were more valuable to the economy than the distillers.

The ban lasted until 1760, when a constrained distilling trade was allowed to resume at a greatly reduced level. This ban, together with legislation, effectively ended London's 'Gin Craze', allowing the porter trade to enter a period of expansion. In 1760, the total production of strong beer in London rose to 1,114,300 barrels, an increase of 22% over the figures of 1748. 145 Production was becoming increasingly focussed on the larger breweries. In 1760, the leading five porter brewers produced 27.5% of London's strong beer production, 306,370 barrels in total. 146

Samuel Whitbread and porter's great expansion period

In 1760, the annual figures of production give a picture of transformation in the London brewing trade. In Table 3 we see that the order of the leading five porter-brewers has changed with the arrival of Samuel Whitbread at second place with 63,408 barrels, which signalled the second phase of the porter revolution. 147

Brewer	Address	Barrels brewed in 1760
Felix Calvert	Peacock brewery, White Cross St.	74,734
Samuel Whitbread	White hart brewery, Moorfields	63,408
Benjamin Truman	Black Eagle brewery, Spitalfields	60,140
Andrew Hope	Hog Lane, Shoredich	55,304
William Calvert	Hour Glass brewery, Thames St.	52,785

Table 3. Five leading porter-brewers 1760 (See Appendix C).

The emergence of Whitbread represents a new era in brewing where the mass production of porter was seen as a safe investment for capital, rather than a quick profit. Competition between brewers for a static market meant that profits had been pared down to the bone. Even as sales began to grow unsteadily in the 1760s, there was concern that it would attract investment from outside the trade, expressed as follows:

no set of men have trespassed so much on each others trades, as the brewers have done; and this not always by commendable means The publick ... have mistaken this pursuit, for industry instigated by the rewards of large profits; when the real truth is, that their expences and charges being very great, they must always be grasping at more trade, in order to be able to bear them. 148

This summarises the market conditions as the porter trade began to grow. Competition was so fierce that profits could only be maintained by mass production. Whitbread came prepared to do just that.

Whitbread had entered the trade in 1736 as an apprentice to John Wightman of West Smithfield, who was a 'general beer brewer; that of porter-brewer, not being then known'. ¹⁴⁹ Apprenticeship was no longer favoured by brewers and Whitbread was probably the last to enter the trade by this route. ¹⁵⁰ He was a dynamic individual with no brewing heritage and no family dynasty for support. He saw new opportunities outside of the traditions of London's brewing oligarchy. During his apprenticeship, he seems to have amassed £2,000 in savings which he probably accumulated from dealing in beer. ¹⁵¹ He used it to start his own brewery in Old Street, Shoreditch in 1742. ¹⁵²

Within a year, Whitbread attracted the attention of Godfrey Sewell, a wealthy linen draper from Ludgate Hill, who invested £20,000 to become a partner. With this amount of capital available, Whitbread decided to make inroads into the market by raising the standard of his porter. It was said, 'his stock was stronger than was usual with a view to force a trade ... the publicans, of course, flocked to him'.153

Whitbread had new ideas on marketing as well as production. He wanted to achieve a continuity of supply which was difficult to match against the seasonal nature of brewing. The answer was to rent cellars for storage

so that he could guarantee the supply of porter to his customers. Thus, *The Golden Tun* in Covent Garden, could offer, 'Whitbread's and Shewell's Intire Butt Beer sold all the year'. ¹⁵⁴ He was paying £100 a year for renting 48 cellars around Chiswell Street, in 1747. ¹⁵⁵ This was considerably more than Truman, who was only renting 22 cellars by 1760. ¹⁵⁶

In 1749 he moved to new premises in Chiswell Street, Finsbury, with the intention of building a 'capital porterhouse' which he called the White Hart brewery. Profits were ploughed back into the brewery, which was rebuilt to include a porter tun room designed solely for the mass production of porter. 157 Whitbread had been an active member of Brewer's Company since his apprenticeship days, but as his brewery expanded he resigned his place on the Court of Assistants in 1757.¹⁵⁸ In 1760, the partnership with Shewell was dissolved and Whitbread continued alone. He was the first brewer to produce 100,000 barrels in 1780.159 His ambition was to become London's first brewer, which he achieved by overtaking Felix Calvert at the Hour Glass brewery by 1786, when he produced over 150,000 barrels. 160

The 'old order' of London brewers saw Whitbread as an interloper and were not amused at his success. Obadiah Poundage, described Whitbread as a 'tubman' in 1760, which was a vernacular term for a beer-dealer, ¹⁶¹ in the following thinly-veiled attack in *The London Chronicle*:

Harry Pinck entered the scene of trade as a tub-man; how most of these men get more by the beer they buy, than the Brewer himself, is pretty well known. Harry was successful; he took a brewhouse, and joined the tubman's craft to an ignorant practice of brewing; he made a stronger commodity than his neighbours could afford, spent more money, established the customs of poundage and presents, became popular, was universally courted, everyone talked of his good sense, his knowledge, his industry, and extraordinary rise; in short, Harry outshone the rest of the Brewery. ¹⁶²

The young Samuel Whitbread was the catalyst who sparked the second phase of the porter revolution. He was an entrepreneur with no market base, who had to 'force a market' by raising the quality of his beer, whilst keeping down production costs to maximise profits. He was unconstrained by the traditions of the old order,

whereby a mercantilist approach sought to restrict entry to the trade and minimise competition. It would be an overstatement to portray his methods as 'free trade' at this time, eventually he did also acquire some tied-houses. However, his initial approach was for the mass production of porter with the associated economies of scale to sell it wherever he could; where he led others followed. His investments pioneered the mass production of porter, including the porter tun room, the largest vat in London and, eventually, a steam engine.

Whitbread, Thrale and the export of Porter

In 1763, *The Universal Director* gave an overview of the London brewing trade, dividing it into three 'branches'. ¹⁶³ There was the 'small beer branch', which was confined to home consumption, but was 'considerable'. The 'pale ale branch' only brewed pale beer, which was usually called Amber. Finally there was:

the Butt Beer or porter Brewers, which is the most considerable of the three, the consumption of this liquor being universal, not only in this metropolis, but throughout the three kingdoms; and the reputation of London Porter is risen to such a height, that great quantities are exported to foreign parts. ¹⁶⁴

At that time, porter was still seen as a beer that could only be produced in London. George Watkins wrote in his brewing guide, *The Compleat Brewer*, 'porter is a drink peculiar to London, which has been attempted in vain in many other parts of the Kingdom'. ¹⁶⁵ This meant that there were opportunities to export porter to other parts of the country and abroad.

Brewers were allowed a full drawback of the beer duty on exports, which was enough to compensate for the freight charges to the east coast of Ireland. The export of London porter into Dublin began with a modest 5,000 barrels recorded in 1741. The decades that followed there was a rapid expansion reaching 20,000 barrels by the early 1760s. This was impressive but still amounted to less than 2% of London's production of porter at that time. However, this sector was only pursued by a few porter-brewers, so this production was concentrated in its effect, with most of the Irish market divided between Ralph Thrale and Samuel Whitbread. However, the sector was only pursued by the early 1760s. With most of the Irish market divided between Ralph Thrale and Samuel Whitbread.

The brewers of Dublin could barely compete on price as they paid a domestic duty of 4s. 6d. a barrel, ¹⁷¹ but when it came to quality they could not produce anything to rival the superior production methods of the London porter breweries. The Dublin Society offered a £10 premium to any Irish brewer who could produce, 'the best beer, in imitation of London Porter'. ¹⁷² The Irish authorities were facing the same concern over the drinking of whiskey as did the English over gin. They urged brewers to be more attentive to the rules of the Dublin Society, whereby there would be no need for, 'the inundation of London Porter, an heavy, cloudy, intoxicating, ill-flavoured liquor, that annually overflows this city'. ¹⁷³

By 1773, Whitbread and Thrale had 80% of the sales of London porter in Dublin, which led to a catastrophic collapse of the Dublin brewing trade leaving 25% of them bankrupt. 174 The Irish brewers simply could not match the efficient production of the London brewers. Whitbread's adventure into the Irish market was indicative of his business ethos, which was to brew for the open market rather than the tied-house system. This was reflected in his obituary in *The Monthly Magazine*, where it was reported:

he exported pretty largely, especially to Ireland ... the high character of his beer, rendered it less necessary to push business, by becoming the owner of a large number of public houses.¹⁷⁵

After 1760, Whitbread soon went from second to first place in London's porter production. Ralph Thrale and his son Henry tried to emulate this success by competing hard, first in the Irish market and then in London. When Henry Thrale, succeeded his father his main ambition was to overtake Whitbread's production to become London's 'first brewer'. He invested so heavily in building bigger vats than those of Whitbread that he nearly went bankrupt. Clearly, as competition between the porter-brewers began to spread, size had become everything.

In this period of expansion, the five leading porter breweries were listed in *The Universal Director*, 'that the merchant, who intends to purchase for exportation, may know the proper houses to apply to for each'. ¹⁷⁶ Out of the 50 brewers listed, only twelve were specifically designated as porter-brewers, including the Anchor,

Hour-Glass, Peacock, Black Eagle and Whitbread's new White Hart brewery; there was no mention of the Red Lion brewery. 177

Under the ownership of Hynde Cotton the Red Lion brewery had continued to decline. In 1767 he asked Samuel Dickinson of the Cannon brewery, Clerkenwell, to become the managing partner of the business. 178 There was every chance that this would succeed, the Cannon brewery was producing 23,335 barrels in 1760, compared with the Red Lion's production of 34,098 barrels, which was not an insurmountable difference in scale.¹⁷⁹ After some negotiation Dickinson took over the brewery in 1771. For reasons unknown the venture failed, Dickinson was declared bankrupt in 1774, 180 and the company was put into administration. An accountant was appointed to oversee the brewery, and Dickinson was directed to provide a 'brewing plan' for the year 1774-75. This gives us a valuable insight into the production of porter in the second stage of the 'porter revolution'.

The brewery had a guaranteed income of £850 a week from its tied houses. The plan, which was to brew 28,500 barrels to supply them, also gave a detailed breakdown of the costs as follows:

Malt	9,600 Qtrs @ 33s.	£15,840	Beer, 28,500 barrels @ 29s.	£41,325
Hops	800 cwt. @ 80s.	£3,200	Yeast	£250
Excise	Beer Duty @ 8s. less allowances	£10,300	Grains	£450
Production charges		£7,000		
	Profit	£36,070 £5,955		
		£42,025		£42,025

Table 4. Effects at Midsummer 1774, Plan of the work to be discharged before Midsummer 1775. ¹⁸¹

With total costs of £36,070, the beer was to be sold for £42,025 providing a profit of £5,955, a margin of 16.5%. ¹⁸² In the same year, Whitbread's profit margin was comparable at 14.75%, although the scale was altogether different. Whitbread made £26,632 profit on the sale of 106,600 barrels. ¹⁸³ Profit margins were comparable with the most successful companies in the city such as the East India Company at 14.2%, and far ahead of the Million Bank, the Westminster Fire Office and London Assurance Corporation. ¹⁸⁴ The London porter breweries were now among the most profitable concerns in the country.

The porter-brewers had only succeeded in continuing to make a profit by brewing on a larger scale. This was summarised in a note left by Benjamin Truman in 1775, explaining his philosophy to his grandson, William Truman Read who he hoped would take over the brewery after his death:

Grandson ... there can be no other way of raising a great fortune but by carrying on an extensive trade. I must tell you young man, this is not to be obtained without spirrit and application which I will explain to you in a few words as follows. In the year 1769-70 our grist was 126 Qtrs. now 176 Qtrs. You'll see the difference of 50 Qtrs. advance brewing on each guile. 185

Truman had expanded the brewer and increased the size of the copper from 346 barrels to a massive 484 barrels capacity. This allowed a 20% decrease in the cost of hops, which is explained if we consider the eighteenth-century brewing technique. Hops could only be added to the wort when it was boiling, so a bigger copper meant that the hops would go further. Thus, when Truman increased the size of the copper by 40%, the hops were only increased by 20%, from 10 cwt. to 12 cwt. However, the main benefit from this increase in capacity was derived from raising production from 62,280 barrels in 1770 to 87,120 barrels in 1775 without any significant increase in overheads. This resulted in an increased profit of £12,780. 186

Storage was another capital intensive aspect of porter production. Porter required adequate storage facilities for up to two years, making it a major problem for porter-brewers at this time. By 1747, Samuel Whitbread was renting 48 cellars in the area around his brewery. 187 Many brewers solved the problem by using brokers who

bought the 'green' beer and matured in their own cellars. In 1760, this process was condemned by Obadiah Poundage, the self-appointed spokesman for the 'London Brewery', who stated:

So little idea had the brewer of being at the charge of large stocks of beer, that it gave room to a set of moneyed people, to make a trade by buying these beers from brewers, keeping them some time, and selling them, when stale, to publicans for 25s. or 26s. a barrel. 188

This gave the brokers a nine to twelve shillings profit for each butt of beer they processed. Brokers and middlemen were universally despised in eighteenth-century London, and these were no exception, attracting the derisory name of 'tubmen' or 'second hand brewers'. 189

Storage of beer in cellars was inconvenient and expensive. Whitbread paid £79 a year for keeping 270 butts in a Bethnal Green cellar, which took nearly 2s. out of his profit on every barrel sold. His answer was to build a vat to hold 1,000 barrels for the long term storage of beer at the White Hart brewery. Hen it was destroyed by fire in 1773, He whitbread decided to engage the engineer John Smeaton to build six large underground storage tanks instead of wooden vats. He called these 'cisterns', the largest of which held 3,600 barrels, and calculated that the 4,000 butts that would be made redundant could be sold to pay for the capital outlay of £4,200. He called for capitalisation on a scale unseen in other industries at this time, in London or elsewhere.

This gives us an excellent indication of the porter-brewers' philosophy at this time, which was to increase the scale of brewing operations to maximise the margins offered by the fixed price policy. This demonstrates the maturity of the 'porter revolution'. Having pioneered the mass production methods of the early eighteenth century they were now increasing production to maximise profits, which was driving the smaller brewers out of business. In the years from 1760 to 1787, London's porter production rose by over 12% to 1,250,800 barrels, whilst the number of breweries fell from 174 to 154.¹⁹⁵ The leading five porter breweries, in order of production, were the White Hart, Hour Glass, Anchor, Black Eagle and Peacock breweries, which combined produced 573,334 barrels, equivalent to 46% of London's total. (See Table 7 in Part III)

The advent of porter in the early eighteenth century heralded the industrial development of the London brewing trade before the 'industrial revolution' of textiles and ceramics. London's porter-brewing industry carried all the signifiers of industrialisation; massive increases in production and investment, mechanisation, and rationalisation of supplies. The larger London brewers began to develop modern business methods which we can recognise today. Their success lay with the containment of costs within a fixed price regime, which relied on sufficient capital to store beer for long periods. The operation of voluntary price control dictated that profits were based on volume sales.

In this early period, the larger brewers managed with their own accumulated capital, which had the advantage of excluding the smaller brewers from the competition. Product branding, as with Calvert's or Parsons's entirebutt, were an early feature of the industrial development of brewing in London. Advertising was in its infancy in the early eighteenth century, but many brewers' became household names, displayed on the drays and public-house signs, and even found their way into contemporary literature.

There never was a more politicised trade than porterbrewing, which was born out of fiscal measures and was rescued by a parliament that could not afford to see it succumb to the growth in gin consumption. The brewers were politicians to a man, whether in parliament or out of it. They deployed their rhetoric with great skill to promote porter as a patriotic, manly and healthy alternative to gin. However, they knew that all moral arguments were secondary to the economic necessity of a continued porter-brewing trade in London; the finances of the state depended on it.

As the development stage of porter gave way to a period of consolidation and growth, porter breweries were becoming too large to be managed by a single individual. Continuity was already becoming a problem for hierarchal management structures based on family ties. The industrialisation of production had yet to be matched by the control of demand, which is discussed in the next chapter.

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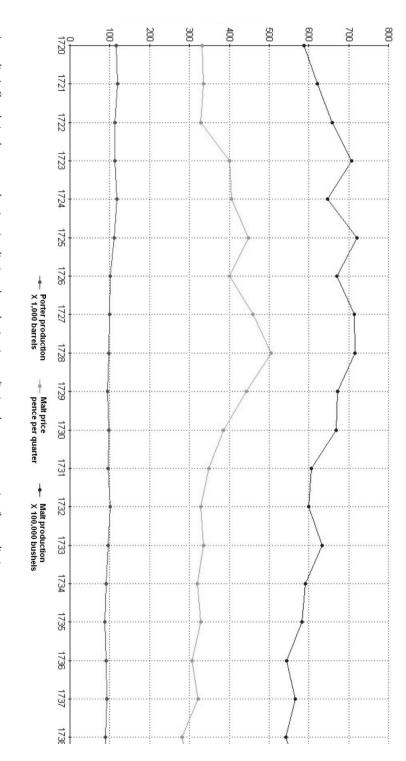
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Appendix A: Correlation between malt prices (top line), malt production (centre line) and porter consumption (bottom line)

Sources. Porter Production: Mathias, P. (1959) The Brewing Industry in England 1700-1830. Cambridge: CUP, p.544; Malt Prices: Rogers, J. (1902) A History of Agriculture and Prices in England. Oxford: Clarendon, pp.27-69; Malt Production: Mitchell, B. (1962) Abstract of British Historical Statistics. Cambridge: CUP, p.247.





Appendix B. Original (above) and plagiarised version (below) of Hogarth's Harlot's Progress depicting 'Parsons Intire But Beer'.

