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**Vernacular craft to machine-assisted industry: The division of labour and the development of machine use in vernacular chair-making in High Wycombe.**

**1870-1920**

**1. Introduction.**

This paper explores the changes in vernacular<sup>1</sup> chair-making in High Wycombe, UK, in the period 1870-1920. High Wycombe was once known as the chair-making capital of Britain, its fame initially coming from the vernacular 'Windsor' type chairs that were made in the locality, and then developing into a fully-fledged industry. This production was mainly based on the utilization of the extensive beech woods colloquially called 'the Buckinghamshire weed' that grew in this area of southern England.

During the period reviewed, the chair-making industry of High Wycombe changed from being a mix of 'bodgers'<sup>2</sup> working directly in the beech woods and selling their turned parts to chair-makers, through various business organisations to fully developed factory based operations with specialised machines to assist each operation of chair-making.

The paper will start with a brief background and history of the pre-machine situation and its divisions of labour. It will then follow with a discussion about the original chair-makers. This is followed by analysis of the trade of chair-making and the sub-divided processes therein. Built on this are analyses of the changes in tools to machines and the nature of the machine-assisted production systems used up to c. 1920 and the factory system. A brief discussion about the nature of distribution will be followed by an evaluation of the contribution made by High Wycombe chair-makers to the maintenance of a vernacular tradition.

## 2. Background to the Industry

Furniture making in the High Wycombe area has been traced back as far as 1349 and there are subsequent records of furniture makers throughout the centuries. As in many other localities it would appear that there were mainly local carpenters or joiners making items for local consumption, and there was no indication of anything approaching an industry. The particular craft of making chairs in the area dates to before 1700 with reference to a 'turner' in the parish register of High Wycombe in the 1680s. More importantly, Daniel Defoe, author of the classic novel *Robinson Crusoe*, identified in 1725 that there was: "a vast quantity of Beechwood which grows in the woods of Buckinghamshire more plentifully than in any other part of England." He also added that this timber was used for: "...beech quarters for diverse uses, particularly chair-making and turnery wares. The quantity of this, brought from hence, is almost incredible, and yet so is the country overgrown with beech in those parts, that it is bought very reasonable, nor is there like to be any scarcity of it for time to come."<sup>3</sup> So, evidence of an eighteenth century chair-making centre is clear.

The earliest references to the well-known Windsor chair type are also found in the early eighteenth century. References were made to Windsor chairs being sold in the 1720s,<sup>4</sup> and in 1730 a London dealer was advertising 'all sorts of Windsor Garden Chairs of all sizes painted or in the wood.'<sup>5</sup> In the church records of West Wycombe for the 17 December 1732 is the following mention of the purchase of a chair – 'Wins. chair ordered by the Vestry' - surely a specific reference to a Windsor chair. When some sixty years later in 1798, a list of men was drawn up for military service purposes, more than 50 chair-makers were recorded as living in the borough and parish of High Wycombe.<sup>6</sup>

Much of the early, and often undocumented, history of the chair trade is shrouded in hearsay and myth. The following extract published in 1861 gives a flavour of the already wistful chair-making legends: 'In a happy hour the people dwelling amidst the beech woods

of the Chilterns took to chair-making, and so vigorously pursued the occupation, that the Buckinghamshire weed [beech tree] is becoming scarce as the oak was in the sixteenth century.’<sup>7</sup>

It is generally agreed that by the end of the eighteenth century in the High Wycombe area there was an established craft tradition in chair-making.<sup>8</sup> In these early days the production focused on completed chair products which were sent up to London and elsewhere to be sold. In the main, individuals produced chairs, but there were instances of chair masters operating a business and of turners supplying other centres with the turned parts. It is probably indicative of the piecemeal nature of production that topographical publications of the late eighteenth century and early-nineteenth century do not refer to chair-making as a significant industry. Mention is always made of paper and lace making as the staple industries of the town and area. However, by 1848, Kingston, in his *History of High Wycombe* noted that: ‘For many years Wycombe and its neighbourhood has obtained a just celebrity for the immense trade carried on here in the manufacture of chairs, which are exported to the most remote parts of the United Kingdom.’<sup>9</sup> The reference to ‘exporting’ clearly demonstrates something of the scale of the trade even by 1848. We shall return to the growing trade a little later.

## 2.1 Bodgers

So who were the chair-makers of the region? The ‘bodger’ is the first name associated with Wycombe chair-making. Definitions are difficult and vary from a derogatory name for the itinerant worker in the woods given by more respectable workers, a slang reversal of the name jobber [bojjer], or possibly a corruption of the old word for a travelling dealer, also once known as a ‘badger’.

In any event the bodger has passed into folklore as the turner who working in the beech woods with a basic pole lathe, turned and supplied legs and under frames for Windsor chairs. Enough has been written about the bodgers of the Buckinghamshire beech woods to secure for them a place in industrial mythology, but it is worth mentioning that this is by no means a recent phenomenon. In 1895, the trade journal *Furniture Record* noted nostalgically, and maybe with Ruskin's famous admonishment in mind- "You must either make a tool of the creature or a man of him"- that 'bodging' was an operation that carried on 'without the concomitants of smoke and chimneys and great gaunt buildings wherein the workman becomes merely a hand.'<sup>10</sup>

They worked for the purchasers of stands of trees bought from estate owners at auctions: the trees were felled and converted into chair stretchers and legs. Some bodgers worked in rough thatched shelters built in the woodland where the trees were being felled. Others worked in sheds somewhat nearer to home. The turner's most well-known piece of equipment, the pole lathe, was powered by a long, flexible length of sapling and was used to turn the finished design into the chair part. Once turned, the finished articles were then sold to the Wycombe factory owners and other chair-makers.

**Figure 1 here**

## **2.2. Demand**

There was clearly a growing demand for house furnishings from the later eighteenth century onward. It picked up momentum throughout the nineteenth century, and High Wycombe was in a good position to take advantage of this growth. An important factor in the expansion of the trade was the massive growth in population nationally, particularly in London, which meant that the market for Wycombe-made chairs was constantly rising.

Growing from a base of the 'traditional' Windsor chair, the chair companies in Wycombe took vernacular forms and developed them into variants and versions to develop an astonishing range of chair styles and types to meet the increasing demand for differentiation in styles. Writing in 1862 about chairs made in High Wycombe, Sheehan noted the large demand, 'which might appear fabulous to those who have not reflected upon the extent to which a thriving industrious people create a national wealth, which gives an impulse to every occupation, and fills every dwelling with comforts and elegancies of which our forefathers never dreamt'.<sup>11</sup>

Between 1861 and 1881 the number of turners in the district almost doubled, from 186 to 340, thus reflecting the growing demand for chairs. The growth of High Wycombe and its hinterland as a production centre was sufficient to suppress the development of other makers in the same area. Demand from London and the South East was soon satisfied by 'exports' from the Chiltern region and production responded to demand so quickly that no other town could compete. The trade continued to grow, its market spreading into the Midlands and the North. By 1850 the other regional centres such as the North West and the Cotswolds were in something of a decline, as a direct result of this competition.

### **3. A rapidly developing trade**

Between the years 1800-1860 the number of workshops in High Wycombe grew from a mere handful to 150, and by 1875 their total output had risen to an estimated number of 4700 chairs per day - a remarkable figure. The area in and around High Wycombe became the biggest producer of chairs in the country, and between 1851 and 1871 the population of High Wycombe borough and parish grew by 46%.

Sheehan's *History of Buckinghamshire* 1862 noted "the wondrous cheapness of the Wycombe chair is produced by the division of labour in every manufactory, and by the competition amongst the manufacturers in a trade where a small capital and careful organisation will soon reward the humblest enterprise."<sup>12</sup> Ruskin was again cautioning against the idea in the *Stones of Venice*: 'We have much studied and much perfected, of late, the great civilized invention of the division of labour; only we give it a false name. It is not, truly speaking, the labour that it divided; but the men'. Nevertheless, with such a demand and such a growing product range it was inevitably the best method of working. The product range of Wycombe was certainly wide: they were noted thus: 'the common chairs of commerce such as the 'Windsor' chair; the 'cathedral' chair; the 'bedroom' chair; the 'kitchen' chair; the 'barrack' chair; the 'reading chair': any chair in short made either of wood alone or of wood combined with cane or rush work is the object on which the entire manufacturing of Wycombe is practically expended.'<sup>13</sup>

The chair-making also benefited from the availability of the factors of production (land, labour, capital and management). We already know of the ample raw material, and working premises were often also dwellings, or later purpose built factories. Skilled labour was plentiful, little capital was required to set up as a chair-maker and there were enough entrepreneurs to develop management skills and businesses as time went on. This availability meant that there was often no initial real need to develop factor-saving techniques. This impacted on the development of factories and machinery, although one of the most important changes in the furniture-making business and High Wycombe was arguably the advance of first, the belt-driven, and then the self-propelled machine. It was due to a number of factors, including the growth of sale volumes, and the production of other furniture types apart from chairs.

In fact it is argued that the relative abundance of factors of production retarded the rate of technical progress by reducing the incentive to invest in factor-saving techniques. It is quite likely that the relative abundance of the factors of production (especially local raw material and labour) delayed the introduction of sophisticated machinery, as there was little incentive to invest. Even in the East End of London in the 1890s Booths survey found that

The effect of machinery in cheapening production during the last twenty years seems to have been slight. The economy brought by the introduction of the band saw and the circular saw has been followed by no other important mechanical invention.<sup>14</sup>

Some larger firms were occasionally commissioned to design and produce presentation furniture for important events, including chairs for the weddings of the Prince and Princess of Wales (later Edward VII and Queen Alexandra) and the Duke of York and Princess Mary (later George V and Queen Mary). Despite these special commissions, it was the town's ability to deal with the very large commissions that made its name. In 1873 an order for 19,200 chairs for a meeting held by the evangelists Moody and Sankey was completed within a few weeks and duly despatched to London. On another occasion 8,000 chairs were required for Crystal Palace, while in 1874 the firm of Walter Skull made 2,500 rush-seated chairs for St Paul's Cathedral.<sup>15</sup>

This extensive output (apparently around 5,000 chairs per day in the late 1870s) was achieved with the judicious combination of craft and machine-assisted labour and lasted for many years, producing an enormous range of chair types.

#### **4. The chair-making process**

This section follows a simple model of division of labour to demonstrate the process. In reality many versions and combinations occurred.



#### 4.1 Sawyers

The route of chair-making during the period, combined a number of different processes and skills. It started with the pit-sawyers. Before the advent of the circular saw, pairs of pit-sawyers worked in the beech woods around High Wycombe. These men produced the planks for seats and other parts of the chair. Working in pairs, they would dig a deep pit over which they would erect a wooden framework. A large log would then be placed across the pit and one man would go into the bottom of the pit (the 'under dog'): the second man would stand on the top (the 'top dog'). The log would then be split into large planks with the use of a large double-handled saw. The top dog and the under dog would move the saw back and forth in a regular rhythm, the saw guided by the top dog and the underdog suffering the effects of falling sawdust..

**Figure 2 here**

#### 4.2 Bodgers

For the legs and turned components the bodgers would cut trunks into sections appropriate for the length of legs upon which they were working. The crosscut saw and sawhorse were their only tools. The 'green' log was then split lengthwise into quarters with wedge and beetle or mallet. The quarters were then cut into roughly triangular billets, and then split using a froe to take advantage of the straight grain. These processes were called 'riving the wood' and 'cleaving the wood'. The billets were then trimmed with an axe to a roughly polygonal shape. They were then placed in a vice or a shaving horse and shaved to size using a drawknife, before being ready to be turned on a pole lathe by the 'bodger'. It appears that the bodger remained relatively successful using the pole lathe, in comparison to the mechanical wheel lathe, for two reasons. Stopping the pole was instantaneous for the changing of billets and the low gear ratio and positive drive made it easy to work heavy

initial cuts to shape. The bodger therefore produced the legs and the stretcher pieces (some say at the rate of four to every three produced on the mechanical lathe). They were then stacked up, allowed to dry slightly, then sent to town for sale.

**Figure 3 and 4 and 5 here**

#### 4.3 Benchmen

At the manufactory, the chair seats were cut out with a frame-saw by the benchman. This person cut out the tops, seat shapes and the splats. When the seat was roughed-out it was passed to a bottomer.

#### 4.4. Bottomer

This occupation used an adze to shape the seat which formed the original two-inch thick timber into a shaped seat, which was, in parts, only less than a quarter of an inch thick.

**Figure 6 here**

#### 4.5 Bowmaker

The specialist bowmaker produced the curved back or arm rails by placing them in a steam box for up to an hour, until they become pliable. After this they were quickly bent (within a minute of taking the items out of the steam box) around a wooden form to produce the correct curvature of the sections. The chair parts were then brought together for framing-up

#### 4.6 Frammer

The framer or maker then proceeded with the next steps, which included assembling the seats, legs and stretchers into a framed set. This process was known as 'legging up' and the framer used hand-held spoon bits in a brace that were fitted into his 'breast bib,' (a wooden bar, shaped to the chest and fitted with leather straps to hold it to the body. It had a circular space designed to take the head of the brace to relieve some of the heavy pressure on

the framer's chest. Following this process, the holes were then drilled for the stocks, bows and arms. **Figure 7 here**

Having assembled the chair from the parts supplied, the chair-maker then used a variety of other tools (including travishers [curved spokeshaves], inshaves and planes) to refine the shape of the seat and the bows. It was finally passed to others to be stained, polished, rushed or caned as necessary.

**Figure 8 here**

#### 4.7 Other

In addition to these basic divisions, there were further sub-divisions as the trade developed. These included men who specialised in back making, top making, seat boring, bow making, band sawing and cane-seat making. As can be seen from this brief discussion, the process of chair-making was very well defined in terms of the division of labour. However, this situation was not perfect by any means and one of the major issues was bottlenecks in parts of the process. The introduction of machinery at crucial points began to solve the problems.

### **5. Machinery in the chair-making industry**

Like many other applications of machinery to furniture making, bottlenecks in the process were the first to receive attention. In any subdivided process it was likely to be an issue, and chair making being no exception. For example, sawing was one of the primary problem areas as was hole boring or drilling and seating cane preparation.

Amongst the first pieces of powered machinery that were recorded in High Wycombe were in 1864 when James Smith's business was described as a 'Wholesale and export chair manufacturer by steam power, and steam saw mills'.<sup>16</sup> This set-up almost certainly employed circular saws to cut log into plank, and smaller band saws to cut sections into

parts. This did not affect the trade too much in terms of displacing men, as it simply began to remove a blockage in the process. Although the introduction of wood-working machines were being developed quite rapidly for other applications, their use in chair-making was more gradual. It is revealing that a price list published in 1872 by the Chairmaker's Protection Society reveals that less than 1% of the operations in chair-making referred to machine work, namely 'putting seats together by machine.'<sup>17</sup> Indeed, by 1875 a survey list of those employed in the trade only included three band sawyers and twelve machinists. There were, however, sixty-five manufacturers, eight sawmills, and one boring mill.<sup>18</sup>

The sawmills were employing frame or jigger saws, mechanical versions of the pit sawing process, to plank up timber. However it was the smaller single-purpose machines that were employed more and more at points of pressure to keep up with demand. These machines were designed for relatively simple one-operation processing, such as tenon cutting, dowel making, cane-seat boring, seat making and hole boring.

The round tenoner was a simple machine that reliably made regular tenons by using an internal cutter in a chuck, in place of the slightly variable older system of cutting tenons with sharpened hand tools.

The dowel-making machines responded to the development of standard-sized twist drill bits that cut regular-sized holes. In this machine a hollow cutting head was mounted on a hollow spindle that shaped the dowel exactly to the size of the drilled hole. This replaced the older method of knocking sawn squares through metal dowel plates.

The cane-seat boring apparatus was amongst the earliest chair-making machines to assist the process by drilling the up to seventy holes needed for a caned seat. It was used to take the physical strain off the workman, though he still had to position the work and guide the process.

The principle of the copying lathe (as used to make gun stocks etc) was adapted to create bottoming or adzing machines. Essentially a copying machine, this took three blanks and shaped them, following the outline of a 'master' shaped seat.

The four-hole borer was a complex machine that drilled the required four holes for the legs to be fitted into the seat. By automatic positioning and fixed angles of drilling, it deskilled the process and reduced the physical effort required.

The 1866 *Report of the Children's Employment Commission*, mainly interested in working conditions for younger people, noted from one report that a maker (Mr J. Smith) in High Wycombe used 'steam power for boring holes in the wooden part of the seats, that saves all the labour of using the 'stock and bit' and the pressure of it against the chest.'<sup>19</sup>

A further development was the linking of two processes together in the seat-making machines. Here a dual-purpose machine had seat parts fed to a circular saw for sizing, then passed along the frame to dowelling bits, ready set to drill out for jointing.

As the steam-powered saw mills reduced the bottleneck in that area of production, so did another much more specialised machine process attend to a further potential hold-up in the system. Mr. E. Skull of High Wycombe told the 1866 *Children's Employment Commissioners* of 'A machine [that] has lately been brought over from France which will create a revolution in our trade. Hitherto we have been in the hands of our "makers off" - those are the men who strip the cane off the wisp or inner part, which we cannot make use of - they are too often very irregular in their habits, and sometimes 20 or 30 caners will be kept doing nothing, because the maker off is away from his work.'<sup>20</sup>

Developments continued in machine applications as can be seen in the example of the Plumbridge business. They advertised themselves as 'timber merchants [with] steam sawing, boring and turning mills' that had:

3 band sawing machines [that] are continually at work sawing the planks of wood into various parts of different pattern chairs; two seat making machines are also at work making cane and stuffing seats...two steam turning lathes; and four boring lathes for boring holes in the seats are continually running, also a fret sawing machine sawing the backs and balusters for the better class of chairs.<sup>21</sup>

**Figure 9 here**

The use of centralised milling, turning and boring facilities also occurred in other furniture making areas, so this system is not unique to Wycombe.

The further employment of machinery was partly in response to the growing demand but also to the widening repertoire of chair products, so that in 1900 *The Furnisher* journal could report:

Several of the Wycombe factories have good plants of machinery which include frame saws, bands saws, circular saws, and fret saws; planing, thicknessing, moulding, tenoning, boring, mortising, carving, cane seat framing, turning, sandpapering and various other machines.<sup>22</sup>

However, referring to the continued use of the pole lathe, the *Furniture Gazette* commented in 1877:

It seems almost incredible that in this, the last quarter of the nineteenth century, any intelligent man can be found who will go on day after day with arrangements that were old when their grandfathers were born, instead of adopting the improvements, which have been introduced in the construction of lathes.<sup>23</sup>

As far as it goes, the traditional practice of wood turning at the point of felling the raw material was successful and cost effective. The point about this is that we can find some

works with steam-powered machines in the 1860s and yet in 1911 find another factory where the 'only means of sawing out chair parts was a hand operated handsaw, which needed about three people to turn and was also helped by the person actually sawing out the wood by a treadle connected to the drive'.<sup>24</sup>

The trade press was often commenting on the use of machinery, if not in an evangelical way, certainly in a practical acceptance of their merits to the trade. In 1899, the *Furniture Record* pointed out that there were still High Wycombe firms 'who are slow to recognise the value of machinery and who adhere to the old methods of labour in almost every department.'<sup>25</sup> Again in 1900 the *Furniture Record*, noting the more general introduction of machinery in the High Wycombe chair industry, found that: 'a few people however have still a horror of a machine-made chair, and the words "No machinery used" are no doubt intended as a recommendation of hand made goods'.<sup>26</sup>

It is clear that during the period 1880-1920 changes in manufacturing were to alter the shape of the industry although this change was piecemeal. In general though, as the chair industry became more mechanised by using labour-saving machinery, it released men for the more intricate handwork demanded by parts of the trade. This helps to explain how High Wycombe gradually facilitated the change from 'hand' production of vernacular type chairs to machine-assisted manufacture of high quality furniture.

## **6. High Wycombe chair factories**

These further developments are commented on in an article entitled 'High Wycombe: The Development of the Chair Industry' in the *Cabinet Maker*. It noted that 'about this time [1877] a few of the younger men were afflicted with 'divine discontent' and began to wonder why they should not improve the quality of their productions'.<sup>27</sup> This discontent was more to do with profitability than divine intervention although they may have been goaded by

Randolph Churchill's comments about the "cheap and nasty" products coming out of High Wycombe. In any case, whatever the motive, there was a perceptible effort made over the last twenty years of the nineteenth century to meet all the demands for any type of chair and to develop the business into other furniture types. This helps to explain why the bodger could exist and be a part of the production process of common Windsor chairs, along with some of the best examples of upholstery and cabinet-making produced.

In 1886 the Factory Inspectors' Reports divided the furniture manufacturers into three classes. The first were the makers who had steam mills of their own and produced a complete article from beginning to end: the second were manufacturers who sent timber to a public mill for conversion, (though they completed all other processes), and the third were the small suppliers of 'turned stuff' i.e. chair legs, stretchers and rails for chair masters in the town who then added seats and backs.

This last process was described thus: 'The small people who live in the villages near head-quarters [High Wycombe] and supply the manufacturers proper with what is called 'turned stuff', that is to say with the forelegs, stretchers, and lists [dowel rods forming the under frame of cane or rush seated chairs] of chairs according to any required pattern at so much a gross. Thus the backs, hind legs and seats ...are always made at the factory while the remaining 'members' of chairs are as often as not made miles away in the country.'<sup>28</sup>

The trade thus still demonstrated a mix of handcraft and more machine-orientated systems, with a quantity of turners still working in the woods after the First World War, and women working on the caning and rushing of chair seats in their homes. Small workshops remained important, including those in the yards behind public houses.

The role of the public house is interesting. As a central point in an area it could serve as a depot for timber and components produced elsewhere and would have room for workshops to assemble the chairs. In some cases, the function of publican and chair master



was combined into one as the one trade supported the other. So it was commonplace to find a two-storey workshop in the yard of a public house, either run by the publican, or let out. One example from 1875 shows that the tenants of the 'Spread Eagle' included a sawyer, a benchman, a back-maker and a Windsor framer. Amazingly, this system was still just operating into the 1950s.

However, both factory and workforce sizes were clearly increasing towards the end of the century. James Cox and Sons employed one hundred and fifty, while North and Sons of West Wycombe employed most of the village population (Around six hundred by the end of the century). New premises were built, including a number of 'state of the art' brick factories in High Wycombe. [Figure 10 here](#) Nevertheless, there was a continuation of the domestic outworking systems and jobbing turning well into the twentieth century. So there was no spectacular change but rather a trend developed earlier by some manufacturers, which co-existed with traditional methods for many years.

As early as 1864 *The Decorator* magazine, in an article entitled 'The Philosophy of Machinery', made some perceptive points:

The old systems of jobbing and chamber-work are inevitably doomed and those who are wise who have not already induced to remodel their establishments, will do well to take into immediate consideration the advisability of doing so now that such opportunities present themselves.<sup>29</sup>

It must be remembered that High Wycombe was an amalgamation of a wide variety of businesses that did not all act in concert. Indeed some firms continued in established ways, not through fear of the new but because the need for machines (i.e. changes) was not deemed necessary. Interestingly, John Richards in his *Treatise on the Construction and Operation of*

*Wood-Working Machines*, published in 1872, pointed out that ‘Whenever manipulation approaches what can be done with machines, they should not be used, and cannot with profit be applied.’<sup>30</sup> In addition, output was often increased more by adding men and machines than by attempting technological or organisational developments and increases in the business size. On the other hand, the expanding firms that used machinery for their developing businesses also had the ability to finance the establishment of the factories and the equipment required, and inevitably became larger-scale. These firms included Birch, Cox, Glenister and Skull, all of whom were employing over 50 persons by 1875.<sup>31</sup>

This dual approach affected changes in the nature of the workplace itself. The move away from low-pitched narrow buildings with no services and lighting to the modern, purpose-built factory unit was a slow process, not only for the workforce but also for the profitable production of goods. As indicated above, the more ambitious businesses were changing or rebuilding earlier. The new factories of Birch were reported in the *Furniture and Decoration* magazine in 1894 and give a good account of their operations. In one building they found

On the first floor nine machines used for planing, moulding, rabbiting, boring, tenoning, square chair framing etc. etc. in fact chairs were being made to use a popular expression “untouched by hand”. The upper floors are used for fitting up, finishing and storing enough parts being in readiness to fix up 10,000 chairs at a moment’s notice. This building is entirely devoted to the bona fide Wycombe chair.<sup>32</sup>

The description continues with another building where all the better class work was produced:

About thirty high class chair-makers are employed in this department in inlaying, stringing, cutting out, fixing and finishing the chairs complete for the polishing shop. On the framing floor are to be found two of Moore Universal carving machines which are kept busy carving backs for the oak chairs which have long been a speciality of the firm. In addition twenty carvers are also employed in finishing and carving the more delicate work.<sup>33</sup>

The report continues in a similarly detailed vein, but the above is enough to indicate the 'state of the art' of the chair-trade by the mid 1890s. It clearly shows the distinction between the vernacular 'Wycombe work' and the machine's application to that and the finer quality jobs that were made with a combination of hand and machine labour.

In 1900 another report on the High Wycombe trade discussed the work of Skull and Sons:

Here the artists' taste may be traced in every detail; the designs are original, the carving is done by hand and the furniture made and put together by hand. Mechanical lathes and sundry small contrivances of that kind, of course are used, because they do the work in the best possible manner, and save the workman's time, but all the furniture bears the stamp of individuality, which can never characterize machine made articles.<sup>34</sup>

This indicates one direction that manufacturers could take; the upgrading of production to suit a particular niche in the market. Others seeing the developments occurring in the lower end of the market were determined to meet the demand. This was achieved by building a different sort of factory 'modelled upon the American plan of receiving the raw timber at one end, which does not come out again into the open air until it is put into the railway vans

ready packed for the destination'.<sup>35</sup> An example of this new factory type is Bartlett's. The 1908 Bartlett factory appeared highly organised, although there were many instances where work was cut out on the band saw for example, then quickly finished by a benchman with a spokeshave. On the other hand, the factory operated a cyclone dust extractor system and a conveyor processing system for work in progress.

In stark contrast, and in the same year, other journalists, on their visit to Henry Goodearl and Sons in 1908 were astonished by: 'the information that they had no machinery whatever, and here it was that we had the pleasure of seeing some of the methods of fifty years ago still practised and practised successfully, even in competition with modern machinery.'<sup>36</sup>

By 1912, in the first of a series of articles entitled 'Furnishing Trade Centres' the *Furniture Record* could say about High Wycombe:

It is always difficult to generalise but it may be said that the speciality of High Wycombe today is in the very best kind of machine-made furniture produced by selected workmen of the best class. This does not of course mean that Wycombe is specialising in the highest price lines but that in machine-made goods its furniture appeals to the middle class buyer.<sup>37</sup>

In the same year, the Chairman of William Birch was saying that public taste was improving year by year and it was imperative for manufacturers to be ready to meet the new demands with the most up-to-date plant and facilities available.<sup>38</sup> These comments seem to demonstrate how far the industry developed in the period under review from making simple vernacular chairs to becoming a famous furniture centre.

The intervention of the First World War and its impact was probably the final phase of transformation. The importance of the introduction of the manufacture of airplane parts was very significant as a marker in the process of change in the industry. This was recognised by the *Cabinet Maker* in an article entitled “Wycombe after the War”. In this article, they noted how the new class of work would be a gain for the industry. They noted also that the new machinery would be invaluable for the post-war trade but more significantly that ‘the experience gained in the process of standardisation is bound to have its effect on the factory operations of the future’.<sup>39</sup> This was echoed by *The Times* newspaper that noted that

The pre-war factories, with their wartime experience are better organised than before and are being run on scientific lines. This of course applies especially to the production of everyday furniture of the kind that is and for some years will be required in immense quantities.<sup>40</sup>

They saw that the use of jigs, machinery and standardized production methods would enable the use of unskilled labour to become a major factor in postwar businesses. It was evident that the trade had turned a corner as far as production methods were concerned and there would be no going back. Thorough mechanisation had to wait until the 1930s when the completion of the National Grid and alternating current came to High Wycombe, allowing independently placed electrically-driven machines, nevertheless many old techniques existed beyond the Second World War.

## **7. Transport and selling**

An important aspect of the business of chair-making was distribution. It has been made clear that the market for the Wycombe chair was extensive, so it was imperative that there be an appropriate distribution method. The use of 'travellers' who plied for business using model chairs or printed broadsheets with drawings of products, was one of the most common methods of trading, although some makers took loads of chairs to markets and sold them from the cart. Up to the First World War the majority of chairs still went to market piled high on horse-drawn carts, wrapped in straw for protection. In 1861 Walter Skull explained the process: 'When I began the trade I loaded my cart and travelled to Luton. All there was prosperous. There was a scramble for my chairs, when I came home I laid my receipts on my table, and said to my wife, "You never saw so much money before..."' The article continued to point out that 'this manufacturer now sends his chairs to London, Liverpool and Manchester, to Australia, New Zealand and Constantinople.'<sup>42</sup>

In conjunction with the need to import raw materials and export the finished chairs, a railway link was desired. The Great Western Railway branch line had passed through Wycombe from the 1850s, but it was not until two decades later that the railways became linked with the trade, and particularly used to distribute chairs. It seems however that the chair-makers were not too satisfied with the service: late arrivals, insufficient covered storage space, damaged chairs, and thefts during journeys were all cause for complaint.<sup>41</sup> It is not surprising that, at the first opportunity, in 1904, a Wycombe chair-maker, William Keen invested in a steam wagon. This made the round trip to London and back with a double trailer of chairs in 14 hours, as opposed to the two days and night for a horse-drawn vehicle.

**Figure 11 here**

By the late nineteenth century, many of the larger chair-making firms had taken showrooms in London and were sending furniture for display in the great international exhibitions and trade fairs all over the world.

## 8. Conclusion

The contribution of High Wycombe and its environs to the vernacular chair-making tradition is an important one in the history of furniture. It is a fascinating mix of methods and processes, businesses, materials and products. In a relatively short time High Wycombe developed from producing the everyday designs made from locally available materials with strong associations with traditional craft-making skills, to exhibition pieces of exceptional standards. The growing range of models offered, the response to the market demand and the increasing quality of the production meant that what once were vernacular side or even garden chairs became used in the dining rooms of Britain and elsewhere. This change based partly on investment in machinery, partly on continuing outworking methods, and partly on division of labour, ensured the continuation of an eighteenth century vernacular tradition into the twenty-first century which is arguably quite an achievement.

### Endnotes

<sup>1</sup> Vernacular in this paper refers to the features of chair-making native to the High Wycombe, Buckinghamshire locality.

<sup>2</sup> Definitions are difficult and vary from a derogatory name for the itinerant worker in the woods given by more respectable workers, a slang reversal of the name jobber [bojjer], or possibly from the old word for a travelling dealer, also once known as a 'badger'.

<sup>3</sup> Defoe, D., Letter 4, Part 3, *Tour through the Whole Island of Great Britain*, 1724-7.

<sup>4</sup> Gloag, J., *Dictionary of Furniture*, Revised edition, London, 1990.

<sup>5</sup> Crispin, T., *The English Windsor Chair*, Alan Sutton, 1992, p.6.

<sup>6</sup> Mayes, L.J. *The History of Chairmaking in High Wycombe*, Routledge 1960, p. 26.

<sup>7</sup> Knight, C., *British Almanac*, London, Cassell, 1861, p.26.

- <sup>8</sup> Evans, N.G., 'History and Background of English Windsor Furniture', in *Furniture History*, 15, 1978, p.48.
- <sup>9</sup> Cited in *Cabinet Maker* 29<sup>th</sup> December 1906.
- <sup>10</sup> *Furniture Record*, December 1895. Ruskin's comment was in *Stones of Venice*, 1853.
- <sup>11</sup> Sheehan, T., *History and Topography of Buckinghamshire*, 1862, p. 920.
- <sup>12</sup> Ibid.
- <sup>13</sup> *Inspection of Factories and Workshops*, Leeds Mercury, April 22, 1886.
- <sup>14</sup> Booth, C., *Life and Labour of the People of London*, , 1888, Vol. 4.
- <sup>15</sup> Judson *High Wycombe Directory*, 1875 p. 17.
- <sup>16</sup> Mayes, 52.
- <sup>17</sup> Mayes, 54.
- <sup>18</sup> Mayes, 59-60.
- <sup>19</sup> *Report of the Children's Employment Commissioners*, 1866, p. 203.
- <sup>20</sup> Ibid p, 202.
- <sup>21</sup> *High Wycombe and District Illustrated*, 1894: p.17.
- <sup>22</sup> *The Furnisher*, 1900, p.135.
- <sup>23</sup> *Furniture Gazette*, 21st April 1877.
- <sup>24</sup> Bert Mullett reminiscences tape notes, High Wycombe Public Library.
- <sup>25</sup> *Furniture Record*, 3<sup>rd</sup> November 1899.
- <sup>26</sup> *Furniture Record*, March 1900.
- <sup>27</sup> *The Cabinet Maker*, 6<sup>th</sup> November 1915.
- <sup>28</sup> *Inspection of Factories and Workshops*, Leeds Mercury, April 22, 1886.
- <sup>29</sup> *The Decorator*, April 1864.
- <sup>30</sup> Richards, J. , *Treatise on the construction and operation of woodworking machinery*, London, 1872



<sup>31</sup> J. Oliver, *Development and Structure of the Furniture Industry*, Oxford, 1966, p. 71.

<sup>32</sup> *Furniture and Decoration*, January 1894.

<sup>33</sup> *Ibid.*

<sup>34</sup> *The Furnisher* 1900 p. 139.

<sup>35</sup> *Furniture Record*, 30<sup>th</sup> September 1904.

<sup>36</sup> *Cabinet Maker*, 18<sup>th</sup> January 1908.

<sup>37</sup> *Furniture Record*, 12<sup>th</sup> May 1912.

<sup>38</sup> *Bucks Free Press*, December 1912.

<sup>39</sup> *Cabinet Maker*, 26<sup>th</sup> October 1918.

<sup>40</sup> *The Times*, 29th February 1920.

<sup>41</sup> See *Bucks Free Press*, 23 July 1859, 16th January 1874, 27th February 1874, to mention only a few occasions.

<sup>42</sup> *Knight's British Almanac* 1861.

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Figs 3,4,7,8, courtesy High Wycombe Library Local Studies Collection