Chapter 1. Literature Review

'I think it is true to say that some of the utility schemes in Great Britain have made the public conscious of the advantages of good and simple design'(Russell, 1950)

The Literature Review brings together for the first time the written text and relevant images that have been published on the High Wycombe furniture industry. It allows the reader to see the scope of what has already been researched and published in this area, and draws attention to any gaps in the knowledge.

As the introduction suggests much research has been carried out to date on the history of High Wycombe, from the birth of Wycombe as a chair making town in the mid to late nineteenth century to the war years at the beginning of the twentieth century. To understand High Wycombe in the post Utility years it is necessary to look back at how the town developed at the beginning of the twentieth century. This will help position High Wycombe as a manufacturing and design centre. This thesis will not research this area of study extensively, but will summarise it in order to contextualise Wycombe in relation to furniture production in England at the time of this study.

Firstly, though, it is essential to reflect on the broader area of Furniture History in England, as this will help develop the understanding of where the town was placed within this manufacturing sector.

1.1 The Furniture Industry in England

The history of English furniture has been researched widely by groups of researchers including; art historians, academics and museum curators. Pat Kirkham recognised that furniture history is one of the most academically strong areas within the umbrella of design history, (Kirkham, 1987, p.59). Kirkham's (1988) *'The London Furniture Trade 1700-1870'*, was the first real attempt to give an integrated account of the furniture trade in London. This text analysed the role of the furniture-maker as well as the rise of the proffesional designer, reviewing the various crafts involved in furniture making, training, design, management and innovation.

Kirkham (1987, p.60) states that:

> It is part of social and cultural history because furniture is an expression of the material culture in which it was designed, made, commissioned, marketed, purchased and used...Furniture history is also part of economic history in that furniture making can be studied in the same way as say the textile trade or the steel industry. The business and financial organisation of furniture making, from small workshop to large factory, is part of business history, an expanding sub-section of historical study.

Kirkham identified oral history as being an important neglected area of study and has interviewed furniture workers from the London furniture trade to start to bridge the gap in this area. Interviews with furniture personnel (designers, directors, workers, managers and sales representatives as well as consumers), have all added knowledge of how and why furniture was designed and made. It is therefore important that recollections of people with first-hand knowledge are recorded.

Social, cultural and economic histories inform furniture-based research contributing to our understanding of how it has evolved through human history. Giedion (1948, pp.300-301) tells us that:

> From the early Middle Ages to the thirteenth century, the monks were the agents and creators of cultural life; they little heeded such questions as how the body might best relax in a chair, the medieval interior bore the mark of its austere origins. Even during the growing prosperity of the fourteenth century the ladies with their costly damask robes and long ermine-trimmed sleeves ate at rough trestle tables crowded on backless benches.

It was not until the latter decades of the eighteenth century that England began to influence the tastes and behaviour of all Europe. It was indeed a productive period in English furniture making. From 1660-1840 there were over 40,000 furniture makers in England recorded by the Furniture History Society (Beard and Gilbert, 1986). In 1788 Hepplewhite confirms this, 'English taste and workmanship have of late years been much sought for by surrounding nations' (Harrison, 1971, p.79). Hundreds of cabinet-makers, chairmakers, carvers and gilders worked in London at that time; 2,500 are listed by Sir Ambrose Heal in *'The London Furniture Makers 1660-1840'* (Harrison, 1971, p.79). The latter half of the eighteenth century was the prime of the London furniture industry, with Chippendale, Hepplewhite, Sheraton and other great personalities and furniture makers, where they designed, made and sold fine furniture. These prestigious London furniture makers produced 'fine chairs which

went to furnish the dining-rooms, the drawing rooms and the principal bedrooms of the great houses of the country' (Mayes, 1960c, p.23).

Chairs made for common use also developed in England during the late eighteenth and nineteenth centuries. The English vernacular traditions of design were conserved by rural chairmakers, especially wood turners of which rush seating and Windsor chairs were the standard (Cotton, 1990, p.13). They continuously developed and improved their unique chair styles far into the Victorian period. Such traditional furniture was made for everyday use in farmhouses, inns and cottages where everyday life was much the same in 1750 as it had been in 1650 (Gloag, 1964, p.183). Regional craftsmen used indigenous materials and native woods, such as oak, elm, ash and beech. High Wycombe chairmaking was no different to the rest of England in this respect. 'Most of this traditional furniture was still made locally because communications were so poor' (Harrison, 1971, p.76). High Wycombe became different from the rest of England in that this traditional of vernacular furniture was produced in such great volume.

The nineteenth century was, throughout Europe, a period of immense and revolutionary change; again Harrison (1971, p.101) highlights that 'England blazed the trail in the use of machinery in industry'. Furniture companies were realised and factories were being built all over England. Many of the furniture factories in High Wycombe were built at the end of the nineteenth century and the beginning of the twentieth century.

The interwar years also saw a period of immense change in the furniture industry. Scott (2007, pp.1-2), states that:

> The domestic furniture industry constituted one of the most rapidly growing `traditional' manufacturing sectors in interwar Britain, owing to a combination of technical change that favoured mechanised quantity production and a revolution in retailing which created a new mass market. National retail chains, which had not been significant prior to 1914, played a key role in extending the market for suites of new furniture, via a combination of liberal HP terms and aggressive national advertising. These gained virtually complete control over branding and design of their stock, effectively dictating terms to the large number of medium-sized firms who supplied them... Furniture has been neglected in accounts of interwar industrial growth; largely due to the paucity of source material (Scott, 2007).

According to Scott (2007, p.2) the production figures from the Board of Trade showed a rapid growth in the industry:

> Particularly on the retail side, as by 1955 all the major HP chains had been taken over by Great Universal Stores.[1] Production data was compiled by the 1946 Board of Trade furniture working party (specially tabulated from the interwar Production Censuses), for manufacturing establishments producing 'furniture and cabinet ware of wood' and employing eleven or more workers, [as shown in Figure 1]. These reveal furniture to be a rapid growth industry - real net output rose by some 91.1 percent over 1924-35, compared to 22.4 percent for all manufacturing. This is a staggering rate of growth for a long-established industry.

The following table (Figure 3) shows this rapid growth of the furniture industry during the interwar years.

Year	**Number of establishments (thousands)**	**Number employed (thousands)**	**Gross output (£million)**	**Net output (£million)**
1924	923	45.1	17.8	8.9
1930	1133	63.5	23.5	12.4
1935	1106	75.5	27.7	14.6
1938	997	75.9	30.0	16.2

Figure 3 Growth of the UK furniture industry, 1924-38 (excluding firms employing under 11 people)

There is no doubt that technical advances had a huge impact on the number of firms engaged in furniture production during the period of both the First and the Second World Wars, but these technical advances were also to impact on the industry in the second half of the century. Reid (1986, p.166) declared that:

> Technical change had its most marked effect upon the number of firms engaged in the trade and over the years 1950-1957 the number of companies producing furniture [in the UK] dropped from 3,148 – 1,987. This decline, though sudden and acute, did not affect employment or output, and since the industry subsequently stabilised at this number of companies, can be seen as a weeding out of those who could not or would not modernise.

It was during the twentieth century that massive changes occurred in the UK furniture industry, from the immense development and progression at the beginning of this century to the huge closures of furniture factories towards the end of the

[1] Great Universal Stores (GUS) was originally a mail order company that included furniture in 1950s.

century (Grover, 2008). The next section aims to place High Wycombe into the overall history of furniture production in England.

1.2 High Wycombe: A Furniture Town

High Wycombe is known nationally and internationally as a chairmaking town. Indeed its reputation also includes the manufacture in the twentieth century of reproduction pieces of furniture designed and made by Hepplewhite, Sheraton, and Chippendale discussed in the previous section. This chapter aims to look back over the history and to reveal the rise of High Wycombe as a furniture making town, where 'the industry progresses from chairs into all sorts of cabinet making' (Ginger, n.d.).

High Wycombe has produced manufacturers and entrepreneurs since the seventeenth century when the water mills were used over the centuries for milling corn and making paper (Sparkes, 1989, p.3). Ivan Sparkes, former curator of Wycombe Museum, wrote a number of articles and publications on High Wycombe during the 1960s, 1970s and 1980s. He states that in High Wycombe 'As each industry declined, a new one emerged, and so in the eighteenth century, chair-leg turning became the cottage industry' (Sparkes, 1989, p.3). High Wycombe has therefore always been able to adapt and change when differing market forces present themselves.

Chair leg turners[2] at work in the Chiltern woods producing legs and stretchers for delivery to the Wycombe factories were the beginning of an extraordinary industry, one which was to become one of the leading British chair-manufacturing districts in the late nineteenth and twentieth centuries. In 1798 the number of chairmakers in and around High Wycombe was still fairly small and whilst there were more chairmakers in the Wycombe area than other parts of the country, High Wycombe was not yet a chairmaking centre. Oliver (1966, p.26) states that 'at the end of the eighteenth century, the borough of High Wycombe had a population of less than 2000. In High Wycombe and its environs there were at least 58 chairmakers in 1798, and at this

[2] Chair leg turners became known as 'bodgers' in the early twentieth century.

time London was the centre of furniture manufacture with 182 manufacturers'. The figures for 1798 can be seen in Figure 4.

Place	Chairmakers recorded
Brands Fee	1
Chalfont St Giles	1
Chepping Wycombe Borough	33
Chepping Wycombe Parish	7
Dorney	1
Farnham Royal	1
Great Missenden	7
Hughenden	2
Monks Risborough	1
Upton cum Chalvey	4
West Wycombe	18

Figure 4 Figures from Dr Catherine Grigg, Collections and Interpretation Officer, Wycombe Museum 16 February 2010, taken from the Posse Comitatus, a document drawn up in 1798 to record the men deemed to be of fighting age

The most famous product of the Wycombe chairmakers is the Windsor chair. The name 'Windsor' is given to all chairs with a solid wooden seat, which has legs and parts of the back separately doweled into it. These were the 'simple' chairs described at the beginning of the chapter, but they are far from being simple to make. Oliver (1966, p.50) describes the skill in making a Windsor chair:

> The making of the Windsor chair has been of immense significance in the evolution in the furniture manufacturing industry. Its assembly moreover, called for a high degree of skill…every spindle in the back of a hand-made Windsor enters the seat at a different angle. At High Wycombe the exacting requirements of the 'gaffers' or foremen created a reserve of skill ready later in the century to be applied to the making of furniture in general.

A Windsor chair in use from as far back as the eighteenth century was the countryman's Windsor chair, and according to a recent Windsor chair exhibition in West Wycombe 'is one of the world's most successful chair designs' (Harding-Hill and Parrott, 2012). These were intended for rural dwellings but were also in use in lesser rooms and gardens of grand houses, and Harding-Hill and Parrott described the chairs as being 'the bridesmaids of important English country house collections and they rarely get the attention that is given to the more ornate classical furniture

and other works of art'. Many Windsor chairs were originally intended as garden furniture[3] and had a green painted finish.

Harrison (1971, p.82) states they were first made in the Chilterns, on pole lathes set up in the beech woods, by 'bodgers' who turned the spindles which gave the chairs their characteristic 'stick' backs. However there is little evidence for this, as bodgers are known to have produced only the legs and sticks, not complete chairs. Indeed the first Windsor chairmakers were usually also wheelwrights where similar technology and skills were required. The earliest known makers seem to have been in the Slough/Windsor area. One of the first recorded makers of Windsors, John Pitt,[4] described himself on his trade label as 'Wheelwright and Chairmaker.' Perhaps the best known of the Chiltern rural chairmakers, who was working much later, in the twentieth century was Jack Goodchild (Figure 5), whose work is prized and valued in a way usually reserved for antique furniture (Sparkes, 1981, p.31). The image shows the traditional Bow-back Windsor chair, and many of these chairs would have a 'wheel' motif on the back-splat.

High Wycombe was therefore still in its early trades of farming and paper mills when the chairmaking industry was becoming a distinct craft, combining the skills of the joiner, carver, turner and upholsterer. The beech woods of the Chilterns were in plentiful supply of the raw material for its new found industry.

At the beginning of the nineteenth century the furniture industry had two main centres, London and High Wycombe. London was the centre for cabinet making and High Wycombe for making chairs (Barker, 1980). It was not until the middle of the nineteenth century, according to Weaver, that High Wycombe could claim undoubted leadership in chairmaking (Weaver, 1929, p.12). The beech woods of the Chilterns provided a plentiful supply of the raw material for its famous chairmaking industry. The river Wye that runs through the town enabled power to be harnessed to sawmills, which could aid in the processing of timber (Harding-Hill and Parrott, 2012). Unlike the history of the furniture industry in general, Weaver's volumes of

[3] The outdoor/garden Windsor chairs were also called 'Forest chairs'.
[4] John Pitt of Slough, Berkshire (1714-1759) is the earliest maker of English Windsor chairs for whom a chair survives.

1929 on High Wycombe and the Victorian History of Buckinghamshire[5] were the only books on the history of the High Wycombe furniture industry, until the publication of L.J. Mayes' work in 1960[6] (Lowe, 1983, p.8). The capturing of historical evidence about the furniture industry in High Wycombe was continued in some part by Ivan Sparkes (Sparkes and Mayes were both primarily librarians).

When Queen Victoria visited the town in 1877 as a guest of Disraeli at Hughenden Manor, the council decided to mark the occasion by deputising Councillor Walter Skull (a local chairmaker) to organise his fellow chair-masters and erect an arch of chairs over the High Street, beside the Guildhall, beneath which the Queen would pass (Figure 6). It is not known for certain why this tradition arose, but it has been suggested that it originated after Marble Arch was moved from Buckingham Palace to Hyde Park Corner in the mid-1800s. This has continued to be a High Wycombe tradition 'It was clear from this one gesture that Wycombe and chairs were becoming synonymous' (Rattue, 2002, p.32). The arch shows the sheer range of chairs that were made in the area by this time. The base of the arch consisted of Windsor chairs but the rest was made up of a great variety of different styles, including church chairs (another type of chair manufactured extensively in High Wycombe).

The second half of the nineteenth century saw High Wycombe expand greatly, with the furniture industry being the generator of this expansion. Mayes explained that 'High Wycombe was becoming the chairmaking centre of the country and by 1880 all was prosperity in the chair world of Wycombe' (Mayes, 1960c, p.69). The numbers working in the chairmaking industry grew rapidly after the mid nineteenth century. The Collections and Interpretation Officer at Wycombe Museum cites in her 'chairmaking talk' that in 1790 there were only four chairmaking businesses in High Wycombe; by 1830 there were twenty (Grigg, 2010). By 1877 (the year of Queen Victoria's visit) there were almost 100 factories in High Wycombe producing nearly 5,000 chairs per day (Sparkes, 1981, p.13).

At this time the manufacture of chairs and other furniture began in some cases to be centralised in very much larger factories, with all the specialist trades 'in house'. A

[5]Weaver, L. (1929) *High Wycombe Furniture*. London: Fanfare Press.

[6]Mayes, J. (1960) *The History of Chairmaking in High Wycombe*. London: Routledge & Kegan Paul.

stimulus according to Andrew (2005, p.68), had been the award of 'The Champion Chair' to the Wycombe firm of Edmund Hutchinson at the Great Exhibition of 1851; this made High Wycombe's chair industry far more widely known. But according to the Wycombe Museum collections database there was no such award. It was known as the Champion Chair, with a plaque on the chair to this effect because it was exhibited at the Great Exhibition and the makers rather cheekily designated it the 'Champion Chair'. It was described in the official Great Exhibition catalogue as 'antique arm chair of oak, with carved ornaments, canvas pillars, stuffed silk velvet seat and arms' and made by Edmund Hutchinson's company. According to records at the Victoria and Albert Museum the chair is not mentioned in any of the winning categories. This bold anticipation of a prize may have made High Wycombe's furniture industry even better known. It is therefore difficult to agree with Andrew (2005) that this chair had an influence on Wycombe's chair industry, as there had been no contemporary writing about it.

Wycombe was not always seen as the central pride of the chairmaking profession in the UK, as Rattue (2002, p.34) reflects the reputation of standards in High Wycombe and its reproduction work:

> During a debate in the House of Commons in the 1870's Randolph Churchill referred sneeringly to Wycombe's output of 'cheap and nasty' furniture. Their pride stung, manufacturers such as Skull tried to raise quality in the industry. Sometimes this meant making reproductions of antique chairs. Birch's in particular, shook off the traditional conservatism of the Wycombe furniture trade and employed rising designers such as Punnet to design pieces strongly influences by the Arts and Crafts movement, and sold them to Liberty's and other stores. Much of this change involved bringing in outside talent.

This devaluing of the industry was not reflected in the town itself. The furniture industry in High Wycombe was regarded with respect and admiration. In 1889 Thomas Glenister was elected Mayor of High Wycombe, the first chair manufacturer to hold the office; he was followed by Richard Goodearl and Walter Birch. According to Rattue (2002, p.38) 'there could be no clearer sign of High Wycombe's economic and social dominance by this one industry'. The value of the owners of furniture companies and their election as mayor continued for many years, with Mr William Owen Haines being the last mayor linking to the furniture industry in 1960; his old fashioned furniture factory closed two years later.

As the years went on into the twentieth century the emphasis was turning from a solely chairmaking town to a centre capable of producing an array of fine quality furniture. The turn of the century was also a time of discontent, 'strikes and lockouts were often the order of the day as war loomed over one of the largest furniture manufacturing areas in the country' (Sparkes, 1989, p.3). The first decade of the twentieth century had seen the full flowering of Wycombe's achievements in the field of fine furniture production, and with the emphasis on furniture, not just chairs, and a tour of factories, small as well as large, could reveal fine craftsmen at work on undertakings worthy of their skill. It was expected that sideboards and cabinets were being produced which may well become the museum pieces of the not too distant future. Wycombe's reputation had never stood higher (Mayes, 1960 c, p.109).

Other towns, old and new, had their furniture makers but Wycombe was the only town concentrating on the production of furniture (Oliver, 1966, p.48). The success of the furniture industry was to continue into the twentieth century. 'By 1913 High Wycombe had overtaken London to become, in terms of output, the major furniture making centre of the United Kingdom' (Reid, 1986, p.54).

1.3 Working Conditions and Factory Changes

The crafts involved in chairmaking and furniture making in High Wycombe (as with the rest of the UK) varied from the dirty woodworking mill and cabinet making workshop, the malodorous finishing shop, to the more 'genteel' upholstery workshop. Unfortunately some of these crafts proved detrimental to the worker, whether it be hearing problems from the machinery in the mill or working in a dusty environment causing a number of health issues including dermatitis, asthma, lung disease, allergic reactions and cancer. Fortunately the working conditions in the furniture industry have changed and improved hugely since the improvements of working conditions throughout the 1960s and 1970s.

Mayes (1960c, pp.35-45) described the first furniture workshops at the end of the nineteenth century in High Wycombe as very simple, with no heating except in the polishing shop. Windows were a luxury and would normally have no glazing, just a sheet of oiled calico. Workers would therefore be required to buy their own oil-lamp and lamp oil, and when gas was more common the worker would pay a proportion of

the gas bill. Sparkes (1975, p.118) also describes the men having to pay for workbench space and to provide their own tools.

1.3.1 Health & Safety

Up until the Second World War, Health and Safety issues had not significantly entered the workplace, with no guards on belts or cutters. 'For the first half century of the machine age an operator with all his fingers was a rarity for many of the processes involved having the hands very close to the unguarded belts and cutters. There were no guards of any sort; belts came down from overhead with nothing to prevent a man's clothing from getting caught up' (Mayes, 1960c, p.69). At this time it was not only inside the factory that was a hazard but also the factory building itself. The factories were traditionally built of brick and timber (Figure 7 shows the brick ground floor with few windows where the making took place and the timber first floor where the polishing and packing took place) and with highly combustible liquids and materials (such as timber, polishes and adhesives) plentiful inside the factory, especially on the first floor; fires were commonplace. Figure 8 illustrates this point, showing the timber frame from the first floor ruined in a fire and the brick built ground floor still just about standing.

The negative implications of dust and noise in the workplace were not apparent until much later in the century, but these were becoming more bothersome with the increase in productivity. Wood dust consists of tiny particles of wood produced during the processing and handling of wood and wood based products. The main operations likely to produce high levels in the industry are: machining operations particularly: sawing, routing and turning, sanding by machine and by hand; and using compressed air lines to blow dust off furniture and other articles before spraying (GMB, n.d.).

In the second half of the twentieth century the health implications of working in the dusty conditions of the furniture industry were beginning to surface. Research carried out by consultants at Wycombe Hospital connected a link between woodworkers and nasal cancer (adenocarcinoma of the nasal cavity). The study (Acheson *et al*., 1968) looked at populations from Banbury, High Wycombe and

Aylesbury. It confirmed and amplified preliminary reports which suggested that in the Buckinghamshire and Oxfordshire furniture industry there was an excessive risk of adenocarcinoma of the nasal cavity and sinuses among woodworkers. Working conditions in the small (furniture) firms were relatively poor by contemporary standards, and the use of exhaust ventilation was unusual (Acheson *et al*., 1968, pp.578-588). The study went on to highlight the particular risk for male workers in High Wycombe, and those working in the woodworking crafts within the furniture industry. Research was carried out using death certificates, to give cause of death, of cases back to 1900, and it seemed unlikely that nasal cancer was prevalent in the High Wycombe furniture industry before the Second World War. The material described in Acheson's paper showed beyond any reasonable doubt that certain classes of workers in the Buckinghamshire furniture industry were especially at risk in respect of adenocarcinoma of the nasal cavity and ethmoid sinuses. The trades principally affected were wood machinists, cabinet makers, and chairmakers. Most of the patients researched had worked in small firms and all had been exposed to conditions where there was a great deal of dust. Without exception all had worked in their early years without exhaust ventilation, this having been installed in the larger firms shortly before the Second World War and in the others more recently. All the Buckinghamshire patients were exposed to beech, (Acheson *et al*., 1968, p.594). Measures were then taken to reduce so far as possible the amount of wood dust in the air of furniture factories, and workers were encouraged to wear masks. In May 1969 adenocarcinoma of the nasal sinuses in woodworkers in the furniture industry became a prescribed disease under the 1959 National Insurance (prescribed diseases) Regulations (Hadfield, 1970, p.303). The risk of nasal adenocarcinoma was also shown in further studies to exist throughout the British furniture industry and is not limited to the Oxford and Buckinghamshire Region[7] (Acheson *et al*., 1972, p26).

A further study was carried out by Hounam and Williams (1974), to identify the level of dust in the furniture industry in High Wycombe, and the findings of this study showed that dust concentrations varied across a wide range of factories and employees working in them. Most of the air borne dust was in excess of 5μm[8] and

[7] Other areas included London, Birmingham and Leeds.
[8] This is the optimum size of particle that gets trapped in the nasal area.

would effectively be trapped in the nasal passage on inhalation. The study showed that sawing produced the coarsest dust and sanding operations the finest. It showed that much attention had been given to the ventilation on machines, but that the procedure of removing dust from machines, wood surfaces and clothing using a hand-operated jet produced high levels of air borne dust (which was not extracted, it simply put the finer dust back into the atmosphere). Hounam and Williams' study also showed that dust masks were available in the factories studied, but that they were only worn during the dustiest operations. A later study in 1982 suggested that the disease may have reached its peak in men who entered the industry in the years 1915–24 but the apparent decline in incidence in men entering thereafter is not statistically significant (Acheson *et al*., 1982, p.263).

Currently John Capper (ENT surgeon at Wycombe Hospital) has been developing the treatment of the disease with advances in surgical technique (Almeyda and Capper, 2008, p.435). The survival rates of this rare disease have significantly improved since Capper had adopted topical chemotherapy treatment in 1996. According to Capper, woodworker's ethmoid adenocarcinoma is becoming a historical disease in this country. Capper was unsure of the reasons for this, but the combination of migration of factories overseas to areas of cheaper labour and improved legislation on air quality in the UK have been the reasons suggested in making it a rare diagnosis. Less than one case per year have presented to his ENT unit (Almeyda and Capper, 2008, p.439).

1.3.2 Mechanisation & Materials

Kirkham (1980) explained that many historians paid too much attention to the effects of the industrial revolution on the history of furniture making, and she emphasised that furniture making remained a handicraft for most of the nineteenth century. Tools used in the seventeenth century and first half of the eighteenth centuries mostly did their job well and were used throughout the nineteenth century. Furniture making was only beginning to use powered machinery in 1870 when Britain was at the height of its industrial supremacy as the workshop of the world (Kirkham, 1980, pp. 26-28). In Wycombe it took until the twentieth century for furniture making itself to become mechanised as the earliest machines (c1880s) were used only for sawing planks, and pole lathes were in use till mid-twentieth century.

Mechanisation of production was said to be established at the end of the nineteenth century in the cotton mills of Lancashire. But, according to Giedion (1948, p.41), the period where full mechanisation flourished was the period between the two World Wars, around 1920. Whilst the furniture industry was in the handicraft stage in the nineteenth and beginning of the twentieth century, the making of Windsor chairs, according to Sparkes (1979) was the first case of the mass-production of furniture, because of the assembly of standardised components. He represented an industry 'where the parts of the chair were assembled together, so representing an early form of mass-production' (Sparkes, 1979, p.110). This meant that the chair industry was among the earliest to use a form of mass-production to speed up its work, and the 'Windsor chair is a good example of this' (Sparkes, 1973, p.36). Mass production would normally be described as the production of large quantities of a standardised article, often using an assembly line process in which each operator is responsible for a specific step in the process. It could be argued that High Wycombe's furniture industry was not fully mechanised and that not all its products were mass produced, but certain production areas were developing this assembly line method. The furniture industry in High Wycombe was both traditional with small scale workers, some of whom would be making the whole chair or parts of furniture, and some larger companies working in batch production methods. The belief that High Wycombe and the chairmaking industry were prominent in the development of assembly line production was reiterated by Oliver (1966, p.51):

> If Adam Smith[9] had written *The Wealth of Nations* a century later he might well have chosen the making of a Windsor chair instead of the making of a pin as his classic example of a fine division of labour. The chair framer who pieced the chair together drew on the skills of many craftsmen and women: back maker, bench man (maker of sawn parts), bodger (turner) bottom or seat maker, caner or rusher (normally a woman at High Wycombe), carver, maker off (cane splitter, normally a man, the foreman caner), polisher or stainer, set borer, top maker, twister and wicker worker or willower (Oliver, 1966, p.51).

The start of the twentieth century therefore saw a development in the production of furniture in High Wycombe. Reid (1986, p.12) stated that 'the resulting contrast between high levels of mechanisation and the persistence of handicraft in the industry was exemplified by the report of the visit of the editor of the *'Journal of the Cabinetmakers'* to High Wycombe in 1908:

[9] The Wealth of Nations was written by Adam Smith in 1776, looking at productivity.

> He comments on the factory of R.J.Howland with sixty workmen and a machine shop where the machines are separately electrically powered and efficiency is the keynote and contrasts this to a visit to Henry Goodearl & Sons 'who astonished us with the information that they had no machinery whatever' (Reid, 1986, p.12).

The use of machinery in furniture was not new in the 1920s and 1930s. The late nineteenth century had seen machinery especially for furniture making developed; these machines were based on hand processes. The machines developed in the 1920s were by the use of ball and roller bearings and later the increased use of direct electrical drive. Figure 9 shows the surface planer machine showing clearly the shaft and belt, prior to the introduction of electricity. Indeed this image also highlights the lack of extraction and guards on the machine.

Factory building activity was concentrated in High Wycombe at this time, to allow the furniture companies to take advantage of the developments in machinery and production. These developments could only make production more cost-effective if the factory was specifically planned to accommodate the particular advantages of each machine. Naturally not all companies were able to take advantage of the developments, because of finances and/or space and so alongside developing companies were less efficient small firms. Worden (1994, p.127) confirms that:

> Even in 1938 out of the estimated 3000 firms in the furniture industry 1000 employed less than 10 and of the 1000 employing more than 10 only 33 employed more than 300 and only two more than 750...The descriptions of the larger factories show that machinery was making the production of furniture more efficient and making larger scale production possible, and that a steady demand for cheaper furniture led to the growth of many factories in the 1920s. These developments were then consolidated during the 1930s.

Many of the larger factories were therefore developing their production methods for more streamlined facilities. Parker Knoll, E. Gomme and Birch were among some of the companies that introduced mass production methods into the factories at the beginning of the twentieth century:

> To make more use of available space an extensive conveyor system was introduced in several departments at Parker Knoll, linking them and eliminating awkward manual movements. This was one of the first comprehensive conveyor systems in the furniture industry (Bland, 1995, p.123).

Ebenezer Gomme's new factory built in 1909 (In Leigh Street) was made by sinking a great deal of capital into new machinery to extend the mass production methods (Reid, 1986, p.13).

After the diversion of the furniture industry into helping with the war effort of 1914-1918 there followed an increase in mechanisation and factory production methods. It was therefore from the 1920s onward that the industry was to shift more and more into the factory stage (Barker, 1980). New factories were built to accommodate this new machinery. Figure 10, shows the three story brick building surrounding the timber storage area. The size and number of windows is a huge difference to the traditional timber framed factory; this would have been a much lighter place to work. The stack also confirms that the factory was burning its waste to heat the factory. This was not the case throughout High Wycombe, there were many more traditional factories still operated in High Wycombe into the 1950s. Worden (1994, p.124) explained that *The Cabinet Maker* in October 1928 ran an article on 'The Furniture Factories of High Wycombe' describing the unprecedented prosperity which had marked the furniture industry of the town for a longer period than ever before recorded in its history. This prosperity was apparent in the large number of factory extensions and new buildings. The article mentioned the extensions to the premises of 24 firms. Most significant were the new factories built by E. Gomme Ltd., Furniture Industries Ltd. (Ercol), those built by Thomas Glenister, Castle Bros, William Birch, and the Hughenden Chair Works:

> Although mechanisation had started in High Wycombe factories well before the First World War as a response to Scandinavian competition, it is evident that the usual layout of the High Wycombe factory, comprising of two or more stories with the first floor of wood and brick and then wood above was not adaptable to large scale mass and flow production and even extensions to these older factories could only be a temporary and second-rate solution (Worden, 1994, p.124).

It was, though, an unlikely factor which seemed to be one of the foremost helpers in improvement and mechanisation: the before-mentioned factory fires. The result was, in some cases, new buildings with improved facilities, machinery and layout. Of course the results of fire were not always timely: 'In January 1922 E. Gomme's premises in High Wycombe were gutted by fire, destroying much of their new machinery and doing damage to the value of £30,000' (Sparkes, 1973, p.47).

The completion of the National Grid system in 1935 and the widespread introduction of electric power made production layouts much more flexible than the old overhead shaft and belt drive system (Barker, 1980). Even after the Second World War with the changes in machinery and the implementation of modern methods, many furniture factories continued to combine the traditional crafts with automation in some areas. The developments in manufacturing efficiencies at this time led to faster and increased flow-line production in many of the progressive furniture manufacturing companies. Edwards (1994, pp.70-72) stressed that these developments were not always adopted quickly in the majority of furniture companies. However W. Skull & Son Ltd[10] received power from the Wycombe Borough Electric Light and Power Company as Figure 11 illustrates, which could be for lighting or power. The document is dated 1901, supplying voltage to their premises on the London Road. The state of the furniture factories at this time was also changing. Many new factories were being built to accommodate the design of the production process, but many were still of 'multi-storey construction and were very old buildings with small windows and poor lighting' (ibid 1994). Working conditions, Mayes (1960c) reported, remained poor in the small and large furniture factories into the 1930s. Gordon Russell and Jacques Groag, in their book *'The Story of Furniture'*, illustrated simply yet beautifully the differences in the workshops and machinery that were being introduced in the 1940s, Figure 12. The image shows the 'modern' changes to the work, and the fact that each man in the 1940s is working on a single machine and making piece parts for production. He will probably work on this machine all day, every day and become extremely skilled at this individual task. The nineteenth century cabinetmakers workshop shows the hand skills of the workers, probably making the whole chair, with what looks like a child collecting the wood shavings.

Despite considerable growth in the size of the industry, the average furniture plant in High Wycombe remained smaller than that for British manufacturing as a whole. In 1935 some 36.3 percent of employees worked in establishments of under 50 workers (compared to 22 percent for all factory trades), while 51.8 percent worked in

[10] W. Skull & Son Ltd, was a chairmaking company in High Wycombe. Furniture Industries Ltd (Ercol) bought the business in 1934.

establishments of below 200 workers (compared to 32.7 percent for all factories) (Scott, 2007, pp.6-7).

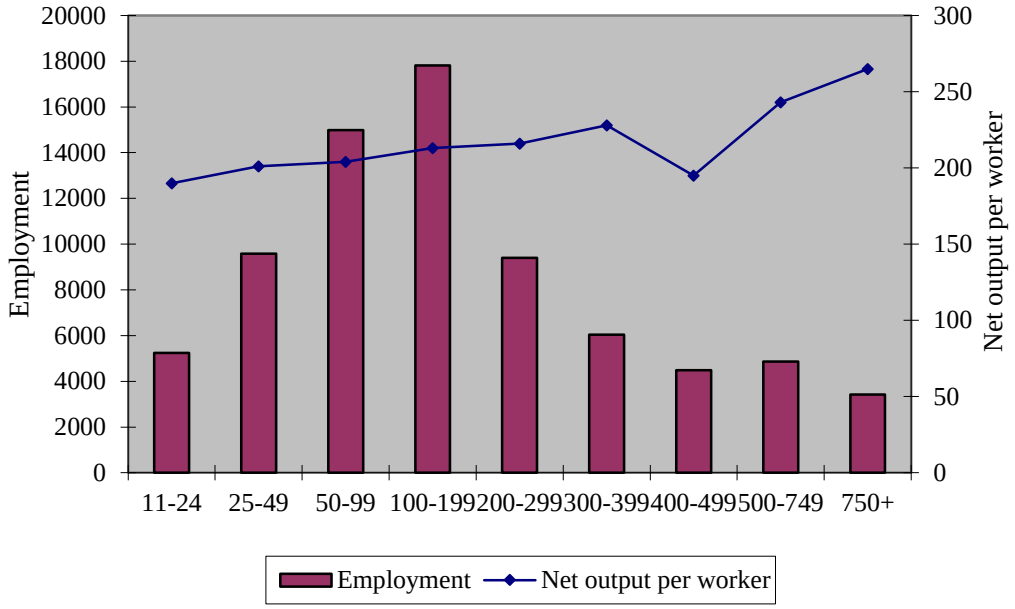


Figure 13 Total employment and net output per worker in furniture establishments of various sizes, 1938

Furthermore, as Figure 13 demonstrates, the sector did not display particularly strong economies of scale and very large firms played only a small role in the overall output in High Wycombe. Scott, in his paper *'Mr Everyman, and the creation of a mass market for domestic furniture in interwar Britain'*, suggested:

> A shift to true mass production was inhibited by the variegated and style-dominated nature of demand and the dominance of retailers over design and branding. Manufacturers branding remained confined to specialist lines, such as the sectional bookcases produced by Minty and Globe-Wernicke, Parker-Knoll and Berkeley easy chairs. Mass retailers opposed producers' branding, generally removing manufacturers labels to inhibit price comparisons. Many tried to give the impression that they made their own furniture, despite most or all their stock being bought from manufacturers. Retailers' control over branding also prevented manufacturers from imposing resale price maintenance, furniture constituting one of the least price-controlled sectors (Scott, 2007, pp.7-8).

E. Gomme's factory in the 1960s shows this; the throughput of 1,000 wardrobes and 12,000 drawers per week (in 1962) meant that automation could be applied to parts of the E. Gomme factory whilst in other parts it still retained some traditional craft elements (the veneer-tailor) (Edwards, 1994, p.80).

A major contribution to the industry was the use of high frequency processes and polyurethane lacquers. During the 1970s, the furniture industry became a growth industry, as interest in the home revived with an improvement in the economic situation. There was a general movement towards rationalisation throughout the industry and there were more mergers and take-overs in the High Wycombe furniture industry (Lowe, 1983, pp.217-218). The most significant changes during the decade were the continual updating of equipment and methods of production, expansion of sites and increased specialisation. One of the most important technological innovations according to Lowe during the 1970s was the widespread use of computers for administration, stock control and production planning.

According to Kirkham, furniture makers were not greatly involved in the development of new materials and techniques which affected the production of furniture. The only furniture makers who were involved were entrepreneur carvers whose role in developing substitutes for wood carving helped put journeymen carvers out of work (Kirkham, 1988, p.122). Most furniture makers showed little concern for the pursuit of innovation and invention even in an age of 'running mad after innovation' (in the eighteenth century), they played no part in such radical innovations as spiral springing or metal bedsteads, both of which had important repercussions for the furniture trade in the nineteenth century (Kirkham, 1988, p.167).

Many of the developments in the furniture industry have been in relation to the materials used and technological advancements. This subject area is important, but as Edwards suggests it is often overlooked:

> Furniture studies in particular have often been based solely on chronological summaries of the great and the good in design history. These works barely discussed the history and scope of technology and materials that have been introduced into the industry (Edwards, 1994, p.1).

As mentioned, High Wycombe like other furniture making areas specialised in the production of furniture from timber, because of its location in relation to the beech woods in the surrounding Chiltern Hills. Edwards (1994, p.8) reminds us that 'wood has remained one of the primary materials of the twentieth century'.

With the introduction of machinery, particularly after the First World War, production soared and the local trade extended the range of its products. The Second World War saw innovations that would later have a major effect on the furniture trade: box springs in upholstery were replaced by foam, staples supplemented woodworking joints, painted foils and papers were used in place of wood in the cheapest models, nitrocellulose could replace French polish, but the most important event was the development of plywood which would soon become widely used (Antique Church Furnishings, 2005).

Indeed it was the introduction in the 1920s of plywood which was cheap and easy to cut to shape and the rapid spread of electrification in the ensuing decade that facilitated the changeover to machine mass production (Kirkham et al, 1987, p.23).

1.4 The Effects of War

The importance of both the First and the Second World War have been alluded to and its impact on the industry was strong. The following section describes the effects on materials, production, labour and furniture design. Edwards (2004, p.71) in his paper *'Technology Transfer and the British Furniture Making Industry, 1945-1955'*, explains that during the first half of the twentieth century prior to the First World War, the British furniture industry was often slow in embracing modern techniques:

> Wartime necessity, however, provided a powerful impetus for change; thereby hinting at the way wartime experiences could encourage the diffusion of new ideas and processes into furniture making firms. Despite the apparent lack of interest in modernising the industry generally, the First World War and its aftermath provided an opportunity for sectors of the furniture trade to raise themselves and their standards to those that characterised modern manufacturers. The underlying development in the case of technological change was the transfer of methods from other industries, allies, and enemies to furniture making. The changes were especially important in relation to the experiences of working to precision tolerances, working with new and composite materials, and the application of new production systems and technologies to furniture design and creation.

It was the impact of the Second World War that was to have a much greater and a more extensive impact with regards to production techniques and materials used. Buckinghamshire was not a front-line county in either of the world wars, but even here the threat from bombs, incendiary devices and later, the doodlebugs were an unpleasant and frightening reality. One Wycombe resident recalls the huge Churchill tanks leaving Broom and Wade, an engineering company, and trundling up the

valley past the park to practice on Downley Common (Buckinghamshire Federation of Women's Institutes, 2001, p.5). High Wycombe's furniture industry was to change drastically during the world wars and its skills and resources optimised.

1.4.1 Aircraft Production

The contribution which the furniture industry made to the war effort during the two world wars was considerable, and all the more effective because of the versatility and the high level of craftsmanship that is traditional within the industry (Gardener, 1980). The most obvious changes to the production of furniture in High Wycombe in both world wars, was the production of aircraft parts. During The First World War some 60 percent of all furniture-making firms in High Wycombe were employed in war work of some kind, perhaps the most significant being aircraft construction. The furniture manufacturing industry had the necessary skills and equipment for making and assembling wooden aircraft parts, and many of the well-known companies were involved in their mass-production (Scott and Simmons, 2007, pp.16-19). Sir Geoffrey de Havilland, who was to become one of the greatest pioneers of the British Aircraft Industry and was influential in persuading the High Wycombe furniture industry to help with aircraft production, was born at Magdala House, Hazlemere, near High Wycombe, on 27 July 1882 (Cole, 2001, p.21).

Edwards (1994, p.58) also stressed the range of war work turned out by furniture factories during 1914-18. The case of E. Gomme demonstrated the range of work that furniture manufacturers were involved with:

> They [E. Gomme] produced simple bomb slings for the safe manoeuvre of bombs from one site to another: they were then sub-contracted to produce air-craft ribs and spars and, eventually, complete left hand wings for the de Havilland DH9. A little later they began real precision work with a contract from Integral Propellers Manufacturing Company for shaping propellers.

The First World War had diversified High Wycombe's industrial base in a limited way. In 1917 the furniture manufacturers Birch & Cox, Cecil Smith, Walter Skull & Son Ltd, and E. Gomme set up the Wycombe Aircraft Company, (situated in the Broom & Wade site) that would provide a factory dedicated to aircraft assembly in High Wycombe. But, although the Wycombe Aircraft Company never made a single aircraft, due to the war ending in 1918 before production could begin, its factories

provided a home for two London businesses, Gilford Motors of Holloway Road and later the stamp manufacturers Harrisons (Rattue, 2002, p.104). Some furniture firms known to have helped aircraft production during the First World War included, G.H. & S Keen, William Bartlett & Son Ltd, The Davidson Aviation Co Ltd, Walter Skull & Son Ltd, Thomas Glenister Ltd and F Parker & Sons Ltd.

The outbreak of the Second World War seriously affected the furniture industry. With High Wycombe declared safe for industry during the Second World War the town and its surrounding areas were used extensively for the war effort. The Hughenden estate conducted mapping intelligence during the war, Strike Command was taking place in Naphill and the American military were stationed at the Royal Air base in Dawes Hill, on the outskirts of High Wycombe in 1942.

The furniture industry was once again chosen to help produce such aircraft as the De Havilland 'Mosquito'. Parts for this iconic aircraft poured out from factories all over the town, fuselages from E. Gomme, wing spars from Dancer & Hearne, and veneers from Bakers (Rattue, 2002, p.104). The production of this advanced aircraft was to dominate virtually the whole production capabilities of some High Wycombe firms until the end of the war. However many Wycombe furniture companies were still making furniture, which they had neither designed nor marketed. During the early 1940s the Ministry of Supply was giving thought to the type of furniture possible under wartime conditions. In February 1941 it announced its range of Standard Emergency Furniture (Utility furniture, which is discussed in detail in this Chapter), intended for bombed-out citizens, or 'bombees' (Dover, 1991, pp.4-5). Other manufactures dealt with the more mundane aspects of war production. For example Ercol produced thirty-six million tent pegs (Ercolani, 1975, p.130), in the first two or three years at the beginning of the war, which involved taking in something like 400 cubic feet of beech every day.

As the war in Europe and the Far East came to an end, so the production on aircraft work ceased in the factories that had been so deeply involved. Geoffrey De Havilland himself visited the Wycombe factories that had made such a contribution and gave a flypast salute to the workers who helped to make some of the total of 7,781 aircrafts (Bland, 1995, p.102). As a result of this war effort High Wycombe

raised its quality and precision manufacturing, which were embedded into the infrastructure of many of the town's furniture companies. The efforts in aircraft construction had benefits that were hugely important to the post war furniture industry. Edwards (2004) explained that transferred knowledge (from the production of aircraft parts) and experience afforded to those manufacturers was used later in Britain to produce the government sponsored Utility range of furniture. The transfer and adoption of wartime plywood technology was one of the key factors in the post-war development of the industry.

Whilst plywood was already in use in certain sections of the furniture trade, it was war-time technical advances, particularly improvements in adhesives for the aircraft industry, that allowed it to be more generally applied after 1918 (together with other composite materials, such as laminates and block board) (Scott, 2007, p.5). High Wycombe spearheaded their use during the war and continued to develop new technologies throughout the twentieth century. With the advent of new synthetic adhesives, there had been great improvements to wood joints and laminates, making them stronger and more reliable (Cole, 2001, p.27). The introduction of plywood into the furniture industry was to lead other composite materials which are now commonplace, including chipboard and Medium Density Fibreboard (MDF). As Edwards suggests: 'The sheer range of materials now available has given the manufacturer an ever wider choice of opportunities' (Edwards, 1994, p.6). Traditionally High Wycombe has retained wood as its major furniture making material, and local companies were heavily involved in developing kiln drying methods which were fundamental to increasing productivity and improving the quality of the timber.

High Wycombe furniture companies and the neighbouring Forest Products Research Laboratory (FPRL) at Princes Risborough were at the forefront of experimental work with timber drying and working with different species of timber. Ercol Furniture Ltd was instrumental in introducing the use of elm into mass machine production toward the end of the Second World War. Ercolani (1975, p.142) explained that:

> Elm had been widely understood to be a tenacious timber subject to warping and shaking even during the process of drying, no matter how long you left it under cover in the open air. The timber had been used for menial purposes for centuries.

> Consequently specialised experiments confirmed that elm could be used satisfactorily and was susceptible to high grade finish of a pleasant colour.

Most manufacturers used a combination of air drying and kiln drying methods, but as late as 1960, a High Wycombe manufacturer, Glenisters of Temple End, still only used natural open-air seasoning (Edwards, 1994, p.9).

Because of the difficulties in obtaining timber in the post-war period, some furniture companies across the UK diversified into using other materials, such as metal and plastics. For example, one Birmingham manufacturer, Restalls Ltd, moved into production of metal and plastic furniture for sports stadia, of which it subsequently became the largest manufacturer of its kind (Potter, 2009, p.4). Other materials being used throughout the furniture industry nationally and even globally were not always introduced into High Wycombe furniture factories. Steel and chromium-plated furniture as introduced by Marcel Breuer, and Mies van der Rohe, were popular in avant-garde circles in this country during the late 1920s but was thought by many people in this country to be too impersonal and only suitable for use in cafés, bars, hospitals and waiting rooms (Harrison, 1971, p.146).

According to Edwards (1994, p.18) 'the attitude of the trade towards the bending of laminated wood was disappointing, especially as it was merely one facet of the furniture manufacturers deeply rooted antagonism to any change' (Edwards, 1994). It is clear that the UK furniture industry waited to be pushed by technology or pulled by demand rather than being at the forefront of change, and High Wycombe factories were traditional timber furniture makers. Plastic laminates were used by Robin Day (ironically Day was born in High Wycombe) for Hille Ltd furniture as successfully as unknown designers used them for inexpensive dinette sets.[11] High Wycombe though, seemingly failed to fully embrace the use of polymers as its primary material except for finishes. An exception would seem to be E. Gomme; an extensive use of plastics can be seen in the catalogues of the 1930s, such as Bakelite heat resistant surfaces and celluloid handles, as seen in Figure 14.

[11] Dinette sets are dining room furniture, tables and chairs.

It is suggested that it may be the fact that other designers were looking to other materials such as metals and plywood, that they progressed (Fiell and Fiell, 2001, p.11). It would have been a huge task to completely change the furniture production in High Wycombe to fabricating metal. 'The furniture industry would have to be retooled to manufacture in metals and would have to rethink the whole design and manufacturing process, which was rooted in woodworking practice' (Edwards, 2001, p.209). Nevertheless there were significant modifications made for the war effort, but mainly for wood. However using metal in its furniture design was not completely ignored by High Wycombe Manufacturers:

> Parker Knoll used aluminium alloy in the frames of the traditionally shaped Toledo fireside wing chair. This model [PK,707, Figure 15], which was based on a traditional armchair format had its frame made by aluminium specialists High Duty Alloys, but was sprung and upholstered in the Parker Knoll factory in a relatively standard way. The frame was painted a wood colour and fitted with kapok-filled cushions and arm pads so that any modern connotations were hidden (Edwards, 2001, p.219).

The aesthetic look of metal was therefore not embraced in High Wycombe, the aesthetic of metal being more widely accepted in hospitals and institutions than the home. Edwards reinforces this by emphasising that in 1931 much aluminium furniture was manufactured and finished so that it was made to look like wood, being made in the same form and upholstered in leather or fabric in exactly the same manner as with wooden pieces (Edwards, 2001, p.212). The Parker Knoll Toledo chair is a good example of this. (Figure 15 shows that there no aesthetic benefit of using the metal and indeed the customer would have had no idea that the chair frame was not wood). The benefits of using aluminium as a metal for furniture, its flexibility in manufacture, the fact that after the Second World War there was a shortage of timber and surplus metal from aircraft production, did not affect the fact that timber was the preferred material for the furniture industry in High Wycombe

1.4.2 Utility Furniture

Utility furniture has been widely researched and much literature on this subject published. This section will enable the reader to appreciate the importance of both Utility to the furniture industry in High Wycombe, and High Wycombe to Utility.

The Board of Trade, a government supervised scheme, first announced the introduction of Utility furniture to the British public on 3 July 1942 (Denney, 1999, p.112). It was the response to a limited timber supply during the Second World War, where food rationing already existed, eliminating any unnecessary waste. All resources were channelled into the war effort and widespread bomb damage meant that there was an increased need for basic furniture. The Utility mark 'CC41' (Figure 16) was patented in 1941 and this had to appear on every Utility article until the scheme ended in 1952. As the image portrays the logo was taken from that developed for 'Civilian Clothing 1941' and it was widely referred to as 'the cheeses'.

By 1942 the Board of Trade had appointed the Utility Furniture Advisory Committee (UFAC) to give advice on the design and manufacture of Utility furniture. The Advisory Committee included influential advocates of 'good design': John Gloag, Herman Lebus and Gordon Russell. Gordon Russell can be seen in Figure 17 with other members of the Design Panel, looking at the working drawings of Utility furniture. Of the drawings submitted to the committee, those by Edwin Clinch of Goodearl Brothers (a High Wycombe furniture company) and Herbert Cutler of the High Wycombe Technical Institute, two High Wycombe men, were eventually to go into production (Kaner and Grover, 2009). Denney (1999, pp.112-114) is keen to emphasise the contribution of these two High Wycombe men to Utility design, and he states that much literature written on Utility gives the impression that Gordon Russell is solely responsible for the form Utility furniture designs took, which he states is inaccurate.

Gordon Russell, furniture designer and manufacturer, was though a key member of the committee who appointed the designers. He was keen to move away from the familiar reproduction furniture, much loved by the public and to introduce simple, well-made furniture, wanting to instil an appreciation of 'good design' on the British public. Attfield (1996, p.185) confirms that this programme of rationalisation introduced during the war, not only dealt with immediate problems thrown up by the state of emergency, but also promoted a design reform agenda of long term planned modernisation. Although an earlier study by her produced contradictory evidence from the High Wycombe Company J. Clarke, that Utility furniture was not 'good design' as the Board of Trade and the Utility furniture design team defined it.

Harrison (1971) in her book *'People and Furniture'* highlights this conflict in design opinion that there was on the UFAC. Some members of the Utility Panel thought that the public should be given 'what they liked' which was imitation antique furniture; others felt that nothing less than modern design would do. Fortunately the latter group won the day, primarily because the shortage of timber meant that there was not enough for bulbous legs or imitation carving. The furniture provided was an enormous improvement on what most people had before. Utility furniture will certainly go down as a milestone in the history of English furniture (Harrison, 1971, p.148-150).

Nevertheless, the result of the Wycombe men's work was the first range of Utility furniture, consisting of 22 items, available in the Utility Furniture Catalogue of 1943. For the potential purchaser of furniture, supply was strictly rationed between February 1943 and June 1948 (Denney, 1999, p.110). The priority groups of newlyweds and 'bombees'[12] were able to buy Utility furniture through a docket scheme. The first collection of furniture designs was aptly called the Chiltern range. High Wycombe men were at the centre of this unique period of design in British furniture history. Prior to this Mr A. E. Barnes of the High Wycombe and District Furniture Manufacturers' Federation was part of a working group writing the 1937 report *'The Working Class Home: Its Furnishings and Equipment'*.[13] Again, this inclusion of a High Wycombe furniture specialist highlights the esteem with which the area was seen nationally.

The Utility furniture collection was divided into five sections: living room, bedroom, kitchen (Figure 18, which shows the Windsor chair, model 4a, developed at Ercol discussed later in this Chapter), nursery furniture and miscellaneous (which included items such as bookshelves and a bed-settee):

> Each piece used minimal materials and was made of strong and serviceable oak or mahogany, with mortised and pegged joints. Veneered hardboard was used for panelling, since plywood was unavailable, and most cabinet furniture characteristically stood on plinths rather than legs. Handles and knobs were of wood, because most metals and plastics were needed for the war effort, although, perhaps

[12] 'Bombees' as they became known, increased the demand for furniture after the blitz began in London in September 1940.
[13] Report by the Council for Art and Industry, London 1937.

> surprisingly, metal screws were specified in Utility construction, which added greatly to the strength of the finished furniture (The Science Museum, 2004).

Each of these articles had carefully prescribed timber content, was manufactured in two qualities, and usually in three designs (Reid, 1986). Over a hundred firms were chosen to make Utility furniture to designs chosen by the Utility Panel. Surprisingly the committee did not initially include any High Wycombe furniture manufacturers on their list to manufacture Utility furniture; this was explained by Joel (1969, p.43):

> The furniture manufacturers who were available to the Board of Trade for license under the control of manufacture as manufactures of Utility furniture at the time the Utility Furniture Scheme was launched, were not, by any means, the finest or the largest-scale manufacturers. Most of these were already fully occupied in the manufacture of aircraft and other war supplies.

The National Amalgamated Furnishings Trades Association (NAFTA) also reported 'that practically nothing was known of many of the firms whose name appeared in the preliminary lists of selected firms for the manufacture of Utility furniture' (NAFTA, 1942b). The preliminary list of designated firms, according to NAFTA, could not be regarded as satisfactory (NAFTA, 1942a):

> Unfortunately practically nothing was known of many of the firms whose name appeared in the preliminary lists of selected firms for the manufacture of Utility furniture, consequently the district organisers had been called upon to make investigations (NAFTA, 1942a).

As a result The High Wycombe Furniture Manufactures' Society complained to the Board of Trade and Wycombe firms were soon producing Utility furniture. 'J.W. Hawkins, Smith Bros & Co, Hutchinson & Edmunds Ltd, and B Cartwright & Son were the first firms in High Wycombe to produce Utility furniture with licence numbers 68-70' (Bland, 1995, p.105). The numbers increased throughout the war years as NAFTA reported in 1943 that there 'was an increasing demand for Utility furniture and additional firms are being designated' (NAFTA, 1943). The number of companies that were allowed furniture production permits during the war was restricted to about 10 percent of the pre-war number. Many skilled craftsmen went to work in other industries that contributed more directly to the war effort such as aircraft manufacture and others joined the armed forces (Davies, 1997, p.42). Figure 19 shows Utility dining chairs, (model 3a from the 'Chiltern' range designed by

Clinch and Cutler) being manufactured at High Wycombe Company J. Clarke. The chair model can also been seen in a room set.

Cutler and Clinch remained part of 'Russell's design team' after 1945, when the first range was replaced by more adventurous designs that it was hoped would be more acceptable to the trade and the public (Rutland, 2001, p.347). It has been widely reported that Utility furniture 'represented a singularly unsuccessful example of Modernism, variously dismissed as unrealistic, ugly, mechanistic, boring, insignificant, dictatorial and outdated' (Attfield, 1999b).

Cutler, Clinch and Barnes were not the only Wycombe men to influence furniture design at this time. A representative from the Board of Trade visited Lucian R. Ercolani at his company Furniture Industries in High Wycombe. A contract was offered to research and manufacture a fairly low cost Windsor chair, for the Utility range (this can be seen in Figure 18, model 4a). This was to be the start of the famous Windsor range of furniture in which Ercol would become synonymous; this is discussed in more detail in Chapter 2:

> I [Ercolani] pointed out that I would require twelve months in which to design and experiment with special machines and devices so that the chair could be rapidly made and with a greater degree of perfection that hitherto (Ercolani, 1975, p.137).

Utility is often given an unfair press, as poor quality, simple furniture. Denney also points out that the designs for Utility furniture were not the result of any one particular design ideology, but of a complex scheme of rationing, attempting to meet an ever changing economic and supply problem (Denney, 1999, p.110). Because the shortage of timber was such an issue, the trade turned to the Empire for their sources of substitute timber. Some of these substitutes were extremely fine but others were subject to many inadequacies. Some timbers gave satisfactory results in tests but later proved unstable after having been made into furniture, and this type contributed to the outcries against Utility furniture, which were heard from time to time. Mayes (1960, p.159) points this out:

> In practice there was good Utility and not-so-good Utility. The firms making it also varied in the range and efficiency of their equipment and in the skill of their workers; differences in quality were inevitable but, as usual, one or two tried to 'get away with it'. Unfortunately it is always the bad that makes the deepest impression

> on people's minds and the fact that rubbish was used. The bulk of Utility furniture was sound and pleasant to use and some of it was fit to compete with any furniture on equal terms.

The desire to minimise cost also meant that transportation and distribution had to be rationalised. 'The trade was re-organised and the traditional furniture making that had been concentrated around London, particularly in the East End and High Wycombe, spread to areas that had previously employed only a few people in furniture production' (Dover, 1991, p.14). The production of furniture therefore was spreading throughout the UK, although it was only in High Wycombe that the Windsor chair could be manufactured.

Former High Wycombe trade member Maurice Clarke (the younger of two sons of the John Clarke who founded J Clarke in 1874,[14] whose factory was seen in Figure 19) says that, belonging to the traditional centre of chair-making, Wycombe manufacturers were considerably put out about the fact that, for example, 'lots of people were designated to make chairs from the North, and they weren't very experienced'. Also, 'if you got an inspector from Wycombe you were all right but if you got one from one other of the areas, they'd make you do things that were wrong just because they didn't know' (Dover, 1991, p.51). In High Wycombe at least, the feeling seems to have been that Utility ran the risk of bringing the trade into disrepute because of poor standards reached by firms unused to furniture manufacture (Dover, 1991, p.51). There were some issues of quality in High Wycombe according to Mayes that did have an effect on Wycombe's reputation. Out of one pound there had to be found the costs of advertising and commission, the normal overheads and profits of the club firms plus a generous allowance for bad debts, and what was left was available for paying the manufacturer. Clearly there was little left to produce a quality item (Edwards, 1994, p.167).

Comparisons were made between Utility furniture and council housing (Edwards, 1994, p.183), but the Board of Trade enquiry showed that 65 percent of housewives questioned liked Utility furniture and only 20 percent positively disliked it. An unmerited degree of prejudice had grown up against the Utility designs (Reid, 1986). 'Relatively cheap, well-made basic furniture that didn't look back to the past. The

[14] Clarke, J.R. was a High Wycombe furniture company, ceased trading in 1986.

public weren't as enthusiastic as the designers were' (*Thoroughly Modern Antiques*, 2007). These views from Reid and *Thoroughly Modern Antiques*, do not align with the above Board of Trade enquiry.

There were many changes made to the schedules of furniture between 1943 and 1948 (Denney, 1999, p.113). Early in 1946, after the end of the war, it was decided to increase the number of articles in the Utility range to 266 items in total (Denney, 1999, p.113). In June 1948 the restrictions of the supply of Utility furniture to the so-called priority classes was abolished and it was made available to the entire population (Joel, 1969, p.44). In November 1948 the Board of Trade announced that manufacturers could submit their own designs for Utility furniture, a measure that the trade called 'Freedom of Design', of which a High Wycombe example can be seen in Figure 20. Under the rules of the new scheme, furniture would qualify as Utility if it met quality and pricing rules only. If furniture qualified as Utility, the maker could affix the well-known Utility mark and it was free of purchase tax (Hyman and Braggs, 2007, pp.21-22). Figure 20 illustrates this sudden shift back to 'antique style' as soon as they could and indeed manufacturers (and purchasers) did not necessarily want the 'good design' that had been foisted on them.

Utility furniture was a shock to the tastes of many people when it was first introduced. Stark and austere, it did not conform to most people's ideas of what furniture should look like and few regarded it with affection. Throughout the period of the Utility scheme (1943-1952) there was a debate amongst designers about what furniture should look like once the scheme finished (Hyman and Braggs, 2007, p.19).

In 1950 the Furniture Development Council (FDC) recommended that manufacturers should be obliged to mark Utility furniture with their own brand name, reasoning that adding the maker's name to the piece would increase its quality (Hyman and Braggs, 2007, p.22). The Utility scheme ended in 1952, being abolished by Winston Churchill in December of that year, when at last furniture makers were free to take their own direction (Hyman and Braggs, 2007, p.25).

However, during the years immediately following the war, commonly known as the period of ‘austerity’, the British public grew tired of the socialist-inspired Utility furniture and no longer wished to have good taste dictated to them by the government (Fiell and Fiell, 2001, p.14). Although according to Attfield (1999b, p.209) it was only the Chiltern range that proved popular in the long term, furniture based on the original designs by Clinch and Cutler, which was appropriate to traditional batch production practices.

Four and a half million homes were either damaged or destroyed during the Second World War. New homes were built that were more modern and required furnishing. There was an opportunity for a new start. With people wanting a change, modern design had something to offer. Within a few years of the end of the scheme, it was suggested that the designs of Utility furniture may go down in the history of the furniture industry, irrespective of the economies in raw materials which they affected, as good examples of English furniture of contemporary design (Joel, 1969, p.43). With the advantage of historic perspective, Utility furniture, its production and design, had various perceptions of success. Naturally Gordon Russell wanted it to be the springboard to new designs, looking forward and moving away from the re-production furniture the public had wanted pre-war. Russell claimed the Utility furniture scheme had been a ‘great social experiment’:

> It has proved that people are ready to accept a better standard of design. Its workmanship too, is; on the whole, better than at least 75 percent of the furniture produced before the war. I am one of those who believe that this grading up may well be permanent. I believe that we are again reaching the main stream of sane British furniture making, which we have left for so long. I believe that today we are more likely than we have been for a century to accept the astonishing developments which are proceeding in materials and techniques...It won’t always have to look like ‘Chippendale’ or have a period label (Russell, 1946a, p.94).

The experience of the Utility programme firmly established the philosophy of 'good design' in the rise of the ‘contemporary look’ for élite modern furniture and fittings in the 1950s and early 1960s. For the mass market, its influence can be seen in the same period's ‘repro-contemporary’ style of popular furniture, described by Attfield as 'gorgeous cocktail cabinets and amazing dressing tables'. These were fashionable imitations of good design with the addition of monstrous pieces of ostentation. Ironically, it was this ostentation that both captured the mass market and

differentiated it from the élite taste for 'good design' (The Science Museum, 2004). The issue of whether Utility had any influence on ‘good design’ in the furniture industry was to continue its debate. Davies (1997, p.42) expressed the changes to the industry:

> When the war ended, wood shortages and continuing production restrictions deterred many former owners from attempting to restart their firms, and many craftsmen preferred to remain in light engineering and other firms that offered better wages and conditions of employment. The Utility scheme, which initially required two designers – Clinch and Cutler – also meant that there were few practising designers working in the domestic trade in the late 1940s.

The issue of furniture design and furniture designers was to become an important issue to the future of the High Wycombe industry. Following Utility the COID wanted to continue to emphasise the importance of design, and became involved with the Co-operative movement. In 1957 the COID produced a report on the Co-operative Wholesale Society (CWS) Policy and declared that ‘it would seem that the CWS has fallen behind its competitors in not realising that design is a selling asset…and that a consistent design policy is part and parcel of business management’ (Woodham, 1996).

With the end of the Utility Scheme, Russell was clearly invoking an alternative potential quasi-institutional mechanism for the widespread adoption of ‘good design’. However, Russell’s hope for the sure-footed implementation of an enlightened design policy through the co-operative movement was only realized to a limited degree (Woodham, 1996). The public were not as keen on the modern look furniture and the COID was limited in the influence it was to have on retailers and buying public. As Woodham (1999, p.54) reiterates the aspirations of both the COID and the CWS were never fully consummated, the aspirations of both organisations undermined by the desires of the everyday consumer.

There were many furniture manufacturers who were keen to quickly return to the furniture they had been making prior to the war. Maurice Clarke recalled that ‘it was all Utility or Ministry of Labour. There was no design then, the Utility confined you to the very cheapest of straight things’. Clarke’s definition of design as traditional craftsmanship explains the haste with which the more conservative sector of the

trade he represented returned to applied ornamental carving as soon as it became feasible after 1948 (Attfield, 1996, p.188). Attfield (1999a) also highlights the issues Maurice Clarke had with the National Register of Industrial Art Designers, and the fact that Clarke was often told that architects were the only profession capable of producing good design:

> To add insult to injury the Board of Trade Working Report on Furniture, recommended the use of 'industrial designers and architects' as the ideal type of designers for furniture, giving secondary importance to trade designers.

This enthusiasm Russell had for contemporary furniture design was shown in some part at both 'Britain Can Make It' exhibition in 1946 and continued at 'The Festival of Britain' in 1951. Joel (1969) explains that 'the impact of the Festival of Britain in 1951' and 'the determined educational work of the Council of Industrial Design's retail section', and 'the increasing publicity given to modern design in the press', enabled in 1956 the Council's Design Centre for British Industries to open in Haymarket, giving modern design a powerful boost (Joel, 1969, p.52).

1.4.3 'Britain Can Make It' exhibition and 'The Festival of Britain'

During the post-war years there were two exhibitions that were pioneering for British Design, 'Britain Can Make It' (BCMI) in 1946 and the 'Festival of Britain' in 1951. The 'Britain Can Make It' exhibition was organised by the Council of Industrial Design just three months after the end of the Second World War and less than a year since its own formation. It opened in September 1946 at the Victoria & Albert Museum (V&A). It presented to the public the need for good design and aimed to persuade that the idea of design and designers was a good thing. It therefore showcased the best in British design and included a section on home furnishings, also enabling the public to see what design developments had been made during the war. Its main aim though, was to encourage overseas orders, crucial for the British economy, and to pay for the reconstruction and improvements of infrastructure. Most of what was on display was out of reach of most households, 'many visitors could not afford them then, but it was a taste of better times to come in the 1950s and 1960s' (The Science Museum, 2004).

The more familiar Utility furniture was also on display (Figure 21 shows the Utility Windsor dining chair model 4a, developed and manufactured at Ercol). However faced with what they saw as a surfeit of modernity, some commentators complained about the lack of any traditional furniture in the exhibition. 'British people, constrained by rationing, could not buy most of the products on show, which were aimed at the export market, and the exhibition was nick-named 'Britain Can't Have It'.' (Hyman and Braggs, 2007, p.19). By emphasising that good design and good business go together, the exhibition served as a vehicle for the political programme of the COID (The Science Museum, 2004):

> Each item in the exhibition was carefully chosen by specialist selection committees to maintain the high standards of good design and quality workmanship. 'Britain Can Make It' was a colourful magnet for the ordinary public, despite the fact, picked up by the press, that none of the products to be seen were available in the shops. They would remain that way for several years too. Some manufacturers criticised the exhibition, feeling that their products had been 'lost' in it's over-elaborate infrastructure. Nonetheless, the Board of Trade's main economic aim of boosting Britain's export trade was achieved.

During this time the attitude of 'make do and mend' was still prevalent. This is explained by the popularity of the exhibition by Sparke (1986, p.1):

> Britain Can Make It was without doubt, an enormously popular event. Deprived of new products, with the exception of Utility furniture and fashion, the British public had to 'make do and mend' during the war years.

According to Dover (1991, p.45), there were no radical innovations in the Britain Can Make It exhibition, and High Wycombe's input was disregarded as a quintessential Englishness in the form of references to past craftsmanship, hence the frequent appearance of the Ercol chair (as seen in Figure 21):

> The best contemporary designs often simply mirrored the more advanced output of the 1930s. For example, the eponymous Ercol chair with its overt references to the Windsor chair and the traditional side of manufacture, was everywhere in evidence. It is indicative of the aesthetic reserve of BCMI that even the room created for the young architect and his family was kitted out with four of these chairs (Dover, 1991, p.45).

It may not have been just the design that enabled the Ercol chair to take centre stage in many of the room sets. According to Ercolani, The British Furniture Manufacturer (BFM) had elected him to represent the industry nationally, to advise them on the methods the Government selectors were adopting and to report to the BFM

(Ercolani, 1975, p.151). In his book *'A Furniture Maker'* Ercolani explained that he tried to persuade the High Wycombe manufacturers that the Britain Can Make It exhibition was an opportunity to display to the rest of the world elements of progress and simple novelty, and with no cost. In his opinion the narrow mindedness of some manufacturers was overwhelming, 'what is good enough for High Wycombe has been found to be acceptable the world over'. They were not prepared to show their designs and have them copied before their ordinary customers had seen them. The opportunity was therefore not taken up and according to Ercolani he 'put in some anonymous design ideas, which was the beginning of the Windsor range of furniture' (Ercolani, 1975, p.151).

Some years later these same pieces of furniture were also shown at the Festival of Britain. Sir Stafford Cripps, who conceived the idea for the 'Britain Can Make It' exhibition whilst President of the Board of Trade in Clement Attlee's Labour government, wrote of Britain Can Make It: 'This exhibition will prove that Britain has passed from the years of endurance to the years of achievement and will show the foreign buyer that he can still look to Britain as he has always done in the past for goods of quality, distinction and beauty (Dover, 1991, p.50).

The impact of the Britain Can Make It exhibition was to promote a sense of 'design consciousnesses' in the British consumer and producer. 'In the wake of the exhibition, the industrial designer did emerge as a significant figure in British design culture' (The Science Museum, 2004). Robin Day (1950) noted that good contemporary chairs were the exception in this exhibition. Having for so long left the best adaptations of our fine invention, the Windsor chair, to the Scandinavians, it was gratifying to find a new and highly successful version shown by Furniture Industries (Ercol) of High Wycombe. This has an elm seat with legs, spindles, and bows of beech and is remarkably well finished for a very inexpensive chair (Day, 1950).

In the early 1950s there was a section of the buying public who wanted something more modern and were not content with the traditional designs that were available to buy with hire purchase. 'The Festival of Britain' in 1951 on London's South Bank promised a better future for modern design. Following the exhibition, according to

Hyman & Bragg there was a continued interest in contemporary design (Hyman and Braggs, 2007, p.19).

At The Festival of Britain all aspects of design came together on a large scale. The Antelope chair (by Ernest Race) was an iconic piece from the festival alongside the Festival Chair (by the High Wycombe born Robin Day) which was the official seating for the Royal Festival Hall (*Thoroughly Modern Antiques*, 2007) Figure 22 shows the conservative and traditional interpretations of these designs. The Antelope chair representing a Windsor chair manufactured in steel rod (Garner, 1980b, p.150). The Festival of Britain, unlike the Britain Can Make It exhibition, was seen as a 'milestone in British design' (Harrison, 1971, p.150). Although this seems in contradiction to her thoughts that history seemed to be repeating itself, the intention of encouraging an awareness that design could play a part in everyone's daily life and that high standards of design were available to all, was according to some not fulfilled. Harrison (1971) expresses the unremarkable input of the British manufacturers, 'except for the Ernest Race chair, the actual furniture shown at the exhibition was not remarkable' (Harrison, 1971, p.150). Although success was undoubtedly found in the British design style of 'Lucian Ercolani's revamped Windsor chairs' (Garner, 1980a, p.54) which are still in production today and discussed at length in Chapter 5. Garner (1980) admires the popularity of Ercol, but associated this success to a 'strongly conservative taste' (Garner, 1980b, p.150).

As well as the exhibition, post-war Britain design ideas and prototypes coincided with the reinstatement of television. The Design Council's involvement with television programming resulted in instructive approaches. An illustration of this is Gordon Russell's *'What's in a Chair'* (Jones, 2003, p.309). It was on this programme that High Wycombe's Herbert Cutler appeared with Gordon Russell. Figure 23 shows Russell and Cutler at the BBC television studio, and the interviewer sitting on Bruno Mathsson 1934 'Eva' plywood chair. The Design Archive at Brighton also gave more detailed images on the television broadcast, indeed this broadcast was the only one of its type in the collection. Other related images can be found in Appendix H, Figures H11-13.

1.5 Furniture Design and Education

As well as Utility furniture and the products exhibited following the Second World War, High Wycombe's furniture is not generally showcased for its furniture design history or its pioneering endeavours in design. As the previous section demonstrated High Wycombe designers were inspirational in the Utility scheme, and this seemed to be overlooked in design history.

Weaver (1929, pp.17-21) describes the Wycombe chair designs in the 1920s as having a certain stubborn devotion to the past. He thought that designing with the machine in mind would eventually push the furniture designs of the future into modernity. But he describes the public as being stubborn in its devotion to ancient forms and historical treatments.

The perception of the quality of High Wycombe's furniture has been mixed over the years. At the beginning of the twentieth century many thought of it as low quality chairs in the 'white',[15] and others the high quality reproduction furniture good enough to equip the most luxurious of interiors, 'In 1874 the firm of Walter Skull made 2500 rush-seated chairs for St. Paul's Cathedral' (Antique Church Furnishings, 2005). This mixture of opinions was fueled by the remarks, as stated earlier, in Parliament by Randolph Churchill (Winston Churchill's father) that Wycombe chairs were 'cheap and nasty'. And so in the 1880s a number of manufacturers decided to diversify into making higher-class and more general furniture. By the end of the 1890s, Birch's in particular was supplying furniture for Liberty and other prestigious London stores (Gillows, Harrods etc), and employing well-known designers such as EG Punnett and George Whitehead to produce furniture that was influenced by Art Nouveau and the Arts and Crafts movement (Antique Church Furnishings, 2005).

Meetings were also being held in High Wycombe in the 1890s to discuss 'How to promote good design in High Wycombe'. It was presided over by Thomas Barnes and one of the points well-made was that: 'Wycombe could claim little more than the machinery used to execute the ideas found in other places' (Rutland, 2001, p.116).

[15] Chairs that are unpolished can be described as 'in the white'.

Yet at the beginning of the twentieth century quality furniture was still sought after from High Wycombe:

> The firm of Frederick Parker [Parker Knoll] had much experience in making fine reproductive furniture, so they commissioned to produce eighty Chippendale chairs to furnish the liner 'The Ophir'. While several furniture firms in the town [High Wycombe] have participated in orders connected directly or indirectly with royalty, the provision of a continuous supply to the Crown has been the privilege of G.H. & S Keen for over fifty years (Sparkes, 1979, p.111).

At the beginning of the twentieth century, the furniture designer within a UK company was more often than not the company owner or director. Worden (1994) explains that 'there were few furniture designers in High Wycombe in 1919 but during the 1920s the technical schools provided more designers and by the end of the 1920s most firms employed someone who could draw' (Worden, 1994, p.201).

This level of training was discussed in the 1927 Committee on Trade and Industry. All the higher class furniture manufacturers employed designers trained in the historical styles of furniture. The training was, however, seldom used as the foundation for modern design (Edwards, 1994, p.121). The report also highlighted that High Wycombe was not alone in not employing furniture designers. The 1927 report also found that the majority of firms employed no designer. Instead designs came from designs made by the large houses which bought the furniture, and also from the verbal instructions of the manager to the shop floor foreman. Edwards (1994, p.124) points out that, throughout the period, the apparent lack of progress or even of any serious concern with 'good design', and the apparent divorce of the designer from the manufacturing process, was what attracted the attention of critics. Some commercial furniture makers realised that most of their work was in bad taste, but they considered that they had found, by experience, what the public wanted. The report made certain recommendations regarding the training of designers, to relate furniture to interiors, to relate to the techniques and materials used in production, and to be trained on a proper course of instruction away from the factory. The English public were very little interested in new designs and leadership in furniture-making after the First World War passed to Germany and Scandinavia (Harrison, 1971, p.145).

During the interwar period, Bauhaus was developing in Germany, Alvar Aalto, in Finland was developing the wooden cantilever chair, and during this period according to Giedion (1948, p.509):

> Following the death of William Morris and the wane of the Arts and Crafts, England began to slumber in architecture and in furniture. The last manifestation of international scope was Mackintosh and the Scottish school.

Quality was still found in the High Wycombe furniture companies, even if contemporary designs were few. Parker Knoll chairs were chosen for most of the rooms and studios for the new BBC Headquarters, Broadcasting House, in Portland Place, London which was opened in 1932. According to Bland (1995, p.81) it was common to see these chairs still in use in the 1950s, after almost twenty years valiant service under exacting conditions and the prestige and reputation of the Parker Knoll chair reached the far-flung corners of the Empire. The chairs were soon sold as 'England's best-selling chair' (Bland, 1995, p.92).

When Pevsner[16] visited High Wycombe in 1934, to investigate the condition of industrial art within the furniture industry, he was told that copying was the main source of supply for the design of Wycombe furniture and that not more than twenty real designers were employed in the town. Most of the designers did not earn more than £200 or £250 although in some of the largest firms designers were paid £1,000 a year or more (Worden, 1994, p.201).

The previous section looked at the Utility furniture scheme, but the more traditional type of furniture was often more valued. Giedion (1948, p.381) reiterates that a quiet and confident line ran through certain English furniture types in the first half of the century, such as the winged armchairs with their high upholstered backs and armrests. The comfortable English types, which took shape around 1700, have remained popular to the present day (Giedion, 1948).

According to the Russell (1946a, p.94) the issues affecting design should have been addressed prior to the implementation of Utility:

[16] Pevsner was a writer on architecture.

> The one thing that was not done was to repeat the methods that made our tradition great. These were, to employ the best available designers, workmen and materials, in the best manufacturing techniques available. If that had been done, and courage and vision could have done it, we should have evolved a first-rate technique of making machine-made furniture by 1939, instead of producing still-born caricatures of lovely things made long ago for other uses, of other materials, by totally different methods.

As the previous section suggests, after the years of strict design boundaries and material restrictions of the Utility years the 1950s eventually opened up the freedoms of furniture design again. Furniture companies could yet again design and manufacture furniture for their customers. Many went back to the pre-war reproduction styles; the COID was trying to steer the public away from and others continued the contemporary style of the simple and functional Utility ranges. The traditional furniture designs in High Wycombe were still able to produce impeccable civic furniture throughout the twentieth century, for example two ceremonial chairs were presented to the Worshipful Company of Furniture Makers by the late Lucian R. Ercolani in 1972 (Figure 24).[17] Images of these chairs can also be found in the HWeFA.

Designs towards the end of the Second World War and immediately afterwards were strongly influenced by Utility standards and later, styles changed dramatically. Chairmakers such as E. Gomme designed the G-Plan system, a range of matched pieces. Ercol did much to revitalise the Windsor chair, while in the field of upholstery and fireside chairs, Parker Knoll have held an important place in the industry since the nineteenth century (Sparkes, 1979, p.112). In 1970, marketing consultants had estimated that 47 percent of the population seem to have wanted G-Plan in their home (Management Today, 1970).

In the 1970s the new science of ergonomics was helping furniture designers to avoid some of the inhuman proportions of the pre-war chairs. According to Harrison (1971, p.151) the young liked movement, speed and change; their parents and grandparents, on the other hand tend to be obsessed with a need for durability and permanence. Long life is only one quality among many others in an object.

[17] Masters chair, 1972, made for the worshipful company of furniture makers. The legend on the outside back of the chairs reads as follows: The English Elm chairs are dedicated to the Worshipful Company of Furniture Makers and were designed by past Master Lucian. R. Ercolani, OBE, and made by two of his most devoted craftsmen E. G. Cann , Cabinet Maker, and A. C. Gray, Carver God Grant Grace.

The inertia of traditionalism on the part of the furniture-buying public is all the more unexpected when one appreciates the extent to which top quality stylists such as E. Gomme have weaned them on to modern designs (Edwards, 1994, p.6). Throughout the century most reports on and analyses of ordinary furniture, have suggested that design has not been used as a tool for changing ideas or introducing new ones. Design in the furniture industry has more often than not been a matter of stylistic adaptation, rather than conceptual change (Edwards, 1994, p.117). Design for mass production consists of juggling with a number of standardised parts, so that mouldings and fittings can be changed round. It was considered unwise to 'rock the boat' if a design was selling well, 'don't upset the sales curve' (Edwards, 1994, pp.128-129). However, according to Tom Dean,[18] Ercolani worked hard to ensure his designs met perfection and modified machinery if necessary to achieve this perfection.

Mass production had necessitated a rational approach to design, but rationalism had led to standardisation that did not meet the needs of a consumer-based popular culture, a culture that would become increasingly demanding over the next few years. The British furniture industry was reluctant to produce anything that was not guaranteed a safe niche in the broad home furnishings market, as Fiell and Fiell (2001, p.56) described:

> There is too little stress laid on product design research in the consumer goods industries, too little initiation of product programmes at the design level, not enough probing of markets and too many curbs on imagination.

Before the Second World War, furniture was unbranded and sold under the retailers name as their own, but Utility in a way had created a furniture brand (Hyman and Braggs, 2007, p.19). Familiar names in the furniture industry became synonymous to High Wycombe and nationally recognisable. G-Plan led the way in selling its brand name and so in the 1950s marketing and branding hit the post war furniture industry. At the end of the 1950s, 20 percent of the population were living in modern homes (*All Mods Cons*, 1997), and G-Plan brought the contemporary look to the masses. Other Wycombe company names are among the familiar brands including Ercol and Parker Knoll. 'These names are on the tongues of everyone in the industry. They are

[18] Author interview with Tom Dean, 03 September 2009.

familiar and they are an invaluable asset, the brand names are inside people's subconscious minds' (Husselby, 1980, p.129).

The history of the High Wycombe furniture industry is also mirrored in its furniture education. Many of the renowned furniture families were educated in their craft at the Science and Arts School, which was to have various names throughout its history. It is now called Buckinghamshire New University,[19] where The National School of Furniture (NSF) is based.

The Science and Art College was opened by Lord and Lady Curzon on 13 December 1893. Once it had arrived it would not be too long before the new Science and Art building was out-grown. High Wycombe training school saw many famous furniture families come through its doors in those early days, the likes of Ralph Tyzack, Walter Goodearl, and Ralph Janes, who was to become chairman of Nicholls and Janes Ltd (Rutland, 2001, p.128). An image of the Wycombe Technical Institute, as it was later named, can be seen in Figure 25. The image shows a group of boys working in a clean workshop, with lathes and a bandsaw in the foreground. The workshop is again showing a drive shaft above the beams driving the lathes through pulleys and belting. Lucian R Ercolani was both educated and educator at the then 'High Wycombe School of Art and Craft'. From these drawing boards came the Chairmasters of Wycombe (Sparkes, 1989, p.3).

As far back as 1936 according to Rutland (2001, p.311) the National School of Furniture was being discussed:

> There was a lot of lively discussion and debate about art, design and technical education in High Wycombe in 1936. A former Liberal candidate for South Bucks, L J Humphrey, suggested the Technical College should become the college for the whole furniture industry. This is the first record of any suggestion that the Institute in High Wycombe could become the national furniture college. Humphrey reminded his listeners that: "the furniture designer is the successor in title to the furniture craftsman of the past and the education of the designer is extremely important to the industry".

[19] Buckinghamshire New University has been called; High Wycombe Science and Art School, The Wycombe Technical Institute, High Wycombe School of Art and Craft, High Wycombe College of Art and Technology, High Wycombe College of Further Education, Buckinghamshire College of Higher Education, Buckinghamshire College of Brunel University, Buckinghamshire Chilterns University College.

The college building on Queen Alexandra Road, the present university site was 'officially opened on 6 May 1963' (Pilkington, 2010, pp.62-63). Furniture and engineering students took up residence at the college some years before the official opening, in September 1954.[20] Gordon Gray was one of the first cohort of furniture students to start on the opening day in 1954 and recalls 'being very excited by the new, clean college, very different from working at Forward and Donnelly'. Other renowned furniture personnel to be educated at the college in High Wycombe include Robin Day who was proudly hailed as a native of High Wycombe, and Donald Pedal (1933-1993) who won a Royal Society of Arts Bursary of £150. Pedal was a brilliant draughtsman and was snapped up by Ercol where he later became Design Director, but died of cancer at the age of sixty. Roger Bennett[21] was another part-time National Diploma student and was placed as 'runner-up' in a competition organised by House and Garden magazine (Rutland, 2001, p.379).

As a College of Further Education it was renowned as having the best-equipped furniture section in the country which was training craftsmen and designers to an extent never known before (Mayes, 1960b). In May 1956 it was announced, by the Furniture Development Council, that there had been a 'most remarkable increase in the number of students attending craft courses in connection with the furniture industry'. The total in Wycombe had risen from 181 to 310. The industry of training designers was also growing (Rutland, 2001, p.395).

The skills required at both managerial and shop floor levels were being developed at this time. Production was being transformed with automatic sanding lines, finishing and drying equipment. With this development in production came the further development of the apprenticeship scheme. The first year of study was a general introduction to all the craft skills of the industry and in the second and final year concentrating on one specific skill. The only exception was the wood machinist, where the 3 full years of training was on this one subject (Reid, 1986, p.167).

The education of Wycombe students in many respects reflected what the industry required from them. Rutland (2001) emphasises that the 'Furniture Department in

[20] Author interview with Gordon Gray, 8 December 2010.
[21] Author interview with Roger Bennett, 10 June 2008.

High Wycombe produced the type of industrial artist that the local furniture industry felt that it required. The fact that many (students) were more original and creative than the industry allowed them to be, could be considered a reflection on the lack of ambition of British industry and a national characteristic' (Rutland, 2001, p.463).

This lack of creativity and design flair is often a nationally held view of High Wycombe furniture companies themselves. Surprisingly, Wycombe was being encouraged to focus on what was perceived to be its strengths:

> The view of many that supported and advised the Institution was that modern furniture was best left to foreign manufacturers and that Wycombe's strength lay in local tradition, craftsmanship and reproducing the past. Study was based on a thorough understanding of the historical and technical aspects of furniture making and practical and orthodox design solutions (Rutland, 2001, p.463).

If indeed this advice was taken and modern furniture development was left to manufacturers overseas, the demise of the industry was started from all corners of the UK furniture industry. Fortunately, furniture design was taken more seriously than thought and although 'avant-garde tendencies were thought best developed at the Royal College of Art' (Rutland, 2001, p.463), modern design was coming out of Wycombe and the outcomes of the student work did not reflect the view of conservative design and thinking. Over the years thousands of students have left and bolstered the town's workforce. This historical link has meant Bucks New University continues as a centre of excellence in furniture skills, but at the turn of the century it was reported that 'of 100 or so students turned out each year with design or production qualifications in this field, fewer than 10 joined a local company (Marsh, 2000a). The Furniture Department is part of a much bigger university profile today. Buckinghamshire New University was granted a university status by charter in 2007. The future of education and the furniture industry has not ended; it is changing. The National School of Furniture was launched on 11 November 2011, and is a partnership between Bucks New University and Oxford and Cherwell Valley College, working together to provide furniture education across all levels (The National School of Furniture, 2011).

1.6 The Workforce and the role of the Unions

In an essay *'The Inter-war Handicrafts Revival'* Kirkham described the role of women in society in the 1920s and 1930s as having an unchallenged ideology. 'In general, men were concerned with metalwork, woodwork and furniture, whereas women were concerned with all the sewing crafts, knitting, weaving, rug-making, upholstery and leatherwork...Some men knitted and some women made furniture, but the gender divisions generally held true (Kirkham, 1989, p.179).

Furniture making was and still is a male dominated industry, as the history of the furniture industry in early sections has shown. The crafts discussed throughout this thesis have shown, for example men working in the woods and throughout the factory. Women have though always worked in the furniture industry, but normally within specific 'female crafts' such as upholstery or cane seating.

The division of labour in the furniture industry has been researched in the main part by Kirkham relating to her work on the London furniture trade. Her work has looked at the acute division of labour relating to women workers, child labour and other minority groups within the trade. She also looked at the division of labour in the various crafts, and found that the division of labour within chairmaking took place largely outside the quality trade. It occurred most particularly in the small East End firms. Relatively simple jobs such as the making of chair legs were done by unskilled workers and apprentices (Kirkham, 1988, p.20). In the East End of London 'in the nineteenth century women were mainly concentrated in upholstery but in the late nineteenth and twentieth century they also worked as French polishers' (Kirkham *et al*, 1987, p.4). It is unsurprising that the more 'genteel' and dust free environment of upholstery was the main area women worked in at this time. It 'was deemed suitable for women because it was clean, respectable and utilised the sewing skills they were taught in the home' (Kirkham, 1988, p.4). Both men and women worked together in this area, as the cutting and covering of better quality items was always done by men. In the French polishing workshop which was also deemed appropriate for women to work, women generally tended to work on the smaller items while the very largest pieces of furniture were reserved for men to polish, 'the implication being that they had more stamina' (Kirkham *et al*, 1987, p.9).

During both world wars the employment in the furniture industry changed, as it did across many other work places. Kirkham described women being brought in during the First World War as emergency workers and except for the unusually heavy work they undertook every process in the trade as and when it was required of them. Once the war was over the jobs done by women were taken over by the ex-servicemen. (Kirkham *et al*, 1987, p.21). There was concern over the ceasing of women working in these areas, but as Kirkham describes in an article from *The Cabinet Maker* 17 November 1917, on women in the trade it concluded:

> 'We shall need after the war a greatly increased and speeded up system of production. The scrapping of the large and skilled army of women is almost unthinkable. The introduction of women, like the introduction of machinery, may cause temporary trouble and lead to a revision of popular industrial ideas, but what the war has utilised as emergency labour the interests of national trade will require as a permanent addition to our labour resources' (Kirkham *et al*, 1987, p.22).

However, after the war there was huge pressure on women to return to the home or return to their traditional roles in upholstery and polishing. They had to vacate the 'male jobs' they had worked in for the war effort. The furniture union NAFTA's view was adding to this pressure, and was cautious of employing women as a valued workforce after the war:

> We must act with caution, in the interests of our men, in the interests of our nation, and also in the interests of women, to prevent the sweaters of our trade using the war period, and the plea of patriotism to further their own ulterior motives to secure cheap female labour, to the detriment of the trade, the men employed in it, and the thousands of our members fighting their country's battles in all parts of the world. One doesn't want these men to come back and find their places taken by women at one-half of the rate. Innovation may be necessary; women have to be employed; but to secure proper safeguard is a duty imposed on us all (Kirkham *et al*, 1987, p.88).

Women designers have also never featured prominently in the furniture industry and the majority of firms are run by men, and any fancy cabinetmaking which required the greatest care such as lining jewel cases were given to men (Kirkham, 1989, pp.109-118).

The furniture industry in High Wycombe was much the same as the industry in London. Mayes (1960, pp.42-43) stated that from the 1830s, as machinery took away their livelihood, women and children were deserting their straw splitters and lace pillows to work in the factories as chair-seat caners. This work by women and girls

was not always accepted across the whole of the industry, when in 1857 a meeting was held:

> …to consider what measures could be adopted to correct a growing source of depravity from the constant association of young persons of both sexes in our manufacturing. After much deliberation, it was decided to urge that separate shops be maintained for males and females, and that the latter should leave work half an hour earlier than the men (Sparkes, 1975, p.118).

Women were therefore employed in High Wycombe initially to carry out matting and caning of chair seats, as Figure 26 shows, many of whom worked from home in the late nineteenth and early twentieth centuries. There has been very little written about the role of women in the High Wycombe furniture industry, most of the evidence being photographic that they had a role at all. Mayes (1960c, pp.17-18) explained that with the decline of the lace industry in the area, the women's skills could be used in the delicate and dextrous work of caning. It can be assumed that work in the furniture industry both in the woods and in the emerging factories would have been seen as unsuitable for women as it was in many other industries at this time. The woman's role was 'in the home', and this was therefore where the wives and daughters of many furniture workers would have developed their skills. Mayes (1960c, p.18) stated that bodgers who worked alone, rather than in pairs relied on their wives for two person jobs, an otherwise undocumented female role.

The skills initially kept in the home were transferred to the furniture factories in the area, as the industry grew at the beginning of the 1900s. The women were still working in the traditional areas of matting and caning. This division of labour may have continued for many more years, had it not been for the war years. Figure 27 shows an image of women caners in a furniture factory. According to Mayes (1960c, plate 13) this was a good employer because of the clean, light and pleasant working conditions. Instead of working alone or with another member of the family at home, women were starting to work together in small groups. The image shows that they found novel places to store their hats and bonnets.

As happened in London, the static labour division changed in High Wycombe during the First and the Second World Wars, because of male conscription. Women workers were thrust into perceived 'men only' sections of the factories, such as polishing,

production, packaging and upholstery. Mayes (1960c, pp.113-114) describes the ill feeling towards women taken on in the 'men only' areas of the factory during the First World War. The condition of employment in these positions was to ensure they were handed back to the men once they had returned from the war. According to Mayes, this did not always happen and many women stayed in the skilled labour positions after the war. Towards the end of the 1920s, Mayes reported that local papers carried advertisements for 'Girl for bench work' and 'Strong girl for chairmaking shop'. Maybe this showed a sign of full employment at the time, but it definitely showed the assumption that women would not normally be considered strong enough for such physical work.

As previous sections have shown, the work in the furniture industry changed during both world wars. It was female workers that were working on aircraft and other war products manufactured in the furniture industry, as seen in Figures 28 and 29. Figure 28 shows women working on aircraft production at E. Gomme during the First World War, in cramped conditions. The role of women in the High Wycombe furniture industry, and across the UK as a whole, has been sketchy, but the high proportion of women working in the industry at the time of the First World War can be seen in Figure 29, although it is not possible to make any conclusions of the particular jobs these women had within the furniture factory.

Although Mayes (1960c, p.115) stated that many of the women were said to have stayed in the industry after the First World War they are only shown in photographic evidence as working in the traditional roles laid down for women, usually within the sewing department which is seen in Figure 30. The image shows young girls working at Ercol on the loose cushions that were prominent in the Ercol chairs.

The Government introduced conscription in 1939; all men between the ages of 18-41 had to register for war work, most of the young men being recruited into the armed forces. This created a severe labour shortage in many of the jobs that were seen as men's work. The furniture industry in High Wycombe was no exception to this. From April 1941 only men over 40 and women were eligible to work in the furniture industry, all others being directed into the war industry. Reid (1986, p.160) reported that the union records showed in 1944 that 25 percent of its members were women.

Indeed according to Reid, this proportion was attributed to the 'non-militancy in NATFA' at this time, although men's work did not equate to men's pay. In furniture factories women's wages were fixed at two thirds of the man's rate appropriate to the task. 'This position remained normal practice until the equal pay movements of the 1970s' (Reid, 1986, p.160). The Equal Pay Act 1970 came into force in 1975 providing equal pay and equal rights. There is verbal evidence that women carried out all the tasks which had previously been the preserve of men, with the exception of the saw milling. They were again instrumental in the manufacture of aircraft parts as can be seen in Figure 31. This type of work would have been unthought-of as a female role, but as the image shows the work would have involved lifting heavy laminates but the workshop is well organised and efficiently run. In addition to little being written on women workers in the furniture industry, there has been no bringing together of photographs of women workers in the furniture industry across the UK, or High Wycombe itself.

The role of women in the furniture industry since the Second World War has not been researched in any detail by design historians. The image of the sewing machinists at Parker Knoll in the 1970s (Figure 32) would be the main role of female factory workers in the furniture industry. This role has therefore changed little since it was depicted fifty years earlier by Edwards (1994) in the 1920s (Figure 30). The only differences would have been the developments in the sewing machines and the scale of production.

As discussed, another post war development was the strengthening of the trade union movement by the creation of The National Union of Furniture Trades Operatives (NUFTO) which officially came into being in April 1947 (Mayes 1960c, p.157). All the unions formed a strong group, made up from the largest, the National Amalgamated Furnishing Trades Association (NAFTA), to the smallest, The Amalgamated Union of Upholsters (AUU).

It is necessary to establish the relationship that High Wycombe factory owners had with the trade unions to verify the importance of the trade unions to the furniture industry in the town. The lack of High Wycombe's union presence at the beginning of the twentieth century was a problem for the national industry as Wycombe was

offering low pay for workers working long hours in bad conditions. There must be reasons why High Wycombe was not represented in the unions to any great degree. Perhaps it was the fact that High Wycombe was made up of small family firms, where workers worked alongside brothers, fathers and cousins. Often several generations of workers were employed within a company and the solidarity and pride in their skill was reflected in the absence of industrial strife. Lowe confirms this; 'the prevalence of the family firm within the industry had contributed a great deal to good industrial relations' (Lowe, 1983, p.204). The large number of small companies could have had an effect and the fact that as Mayes describes, the workers were effectively self-employed, hiring their own bench space and supplying own lighting. Tom Dean, an employee of Ercol from 1948-2002, describes Ercol's relationship with the Unions as tolerable:

> Ercol did allow its workers to be a member of the union, and they met monthly. But the Old Man (Mr Lucian Ercolani) did not take kindly to it. He said if anyone had the power to tell him what to do in his factory he would close it the very next day.[22]

Reid (1986) writes extensively on the furniture industry and its link with the trade unions. He emphasises that the largest manufacturing town in the country (High Wycombe) was not only setting a bad example; it was placing in jeopardy the advances in pay and conditions which had been achieved elsewhere in the country. In January 1913, union strength in High Wycombe was no more than 121 members. A massive recruiting campaign was therefore mounted and by June of 1913 that year the unions had 2,321 fully paid up members in the town (Reid, 1986, pp.56-57). This increase of union members did not sit well with many of the local employers, many of whom refused to improve conditions and so the infamous 'lockout' of many union workers occurred in November 1913, where over 3,000 members of the various furniture unions were locked out of work. 'The union and the workers had won a great victory' (Reid, 1986, p.57). With the settlement came improved rates and working conditions.

On the employers' side there was a series of locally based societies loosely knitted into a number of national, regional and trade federations. On the union side, the workers were represented by the three main unions; NAFTA, AUU and the

[22] Author interview with Tom Dean, 03 September 2009.

Amalgamated Society of Wood-cutting Machinists Wood Machinists (ASWM) (Reid, 1986, p.159).

The war years were again instrumental in dictating the development of the furniture industry in this area. The National Union of Furniture Trades Operatives (NUFTO) visited all the factories making Utility furniture and enlisted its workforce without question. Membership had risen to nearly 33,000 by 1920, but with the General Strike in 1926 and unemployment membership dropped to 17,000 in 1931. By 1939 with the union support of the Second World War union membership was 20,000 and by 1947 there were 61,000 members (Reid, 1986, pp.97&156).

In the High Wycombe furniture manufacturing industry as a whole, about 70 percent of the labour force was specialised, all crafts being separate and distinct. Production methods in the industry witnessed radical transformation. Mechanisation and new remuneration systems enabled semi-skilled workers to achieve much higher output than their craft-based colleagues in unionised factories. By the late 1930s, as the official history of the industry's union, NAFTA, notes, unionised workers in traditional factories making furniture for the high end of the market and employed on day rates were earning around 1s 9d an hour. This compared to 2s 6d or more for employees of mechanised plants producing for the mass market and operating payments by results systems, which were opposed by the conservative, craft-based, NAFTA (Reid, 1986). As the war drew to a close, the number of factories engaged in war production was reduced and these were added to those engaged on the manufacture of Utility furniture. As in the case of the first 150 Utility factories, the union grasped the opportunity to apply for and achieve 100 percent membership wherever possible (Reid, 1986, p.161). There have been virtually no disputes in the High Wycombe industry since 1960. This can largely be attributed to the sense of community which characterises the smaller, particularly family firms. Indeed, it could also have been the lack of tolerance by the bosses.

Amalgamation, as discussed at the beginning of this section, was now an obvious desire on the part of the unions concerned in the industry, and was seen as a logical step by the membership. The major amalgamation was that of the bedding and upholstery workers together with NAFTA. The formal amalgamation to form

NUFTO, The National Union of Furniture Trade Operatives, took place on May 1st 1947 and brought 46,522 members of NAFTA together with 10,608 members of the AUU nationally (Reid, 1986, p.163).

1.7 Decline of an industry

The numbers of people working in the High Wycombe furniture industry was as its peak just prior to the Second World War, according to Lowe (1983) and Mayes (1960). Since this time the numbers of people working in the industry and the number of furniture firms in High Wycombe has been declining:

> By 1945 over a third of the furniture factories were officially obsolete and, although Wycombe's staple trade still employed 6,800, its peak had arguably been passed. Businesses amalgamated, and some of the most venerable furniture names were absorbed into super companies (Rattue, 2002, p.104).

This section aims to identify the extent of the decline, when exactly the decline of the furniture industry occurred in High Wycombe and the accepted reasons for this decline. High Wycombe has always had to fight to ensure its place as a respected furniture making town in Britain. As previous sections have shown, Wycombe was full of furniture companies producing high quality products and educating and valuing its furniture designers. However there had often been a disparaging attitude towards Wycombe furniture as Mayes (1960c, p.140) highlighted when looking back to the late 1930s Wycombe firms were making chairs when prices were being 'cut to the core' and so the 'quality suffered.' Mayes stated that if Wycombe had not made it, London and other centres would have jumped at the chance. This gave lever to competitors who could at last fault individual Wycombe productions and they pronounced an overall condemnation of Wycombe made goods. There were rumours of notices having been displayed in northern shops 'No Wycombe products sold here'. Competition has always been ruthless in High Wycombe, hence the beating down of prices of chair legs supplied by bodgers, and the blatant copying of designs. This competition had though, enhanced the profile of the industry over the years and has allowed for an industry to thrive.

There are many factors which have affected the production of furniture in High Wycombe and across the United Kingdom since the post war period. Edwards (1994,

p.106) emphasizes the periodic changes in working time and the status of the furniture industry as a whole:

> A number of problems have affected the industry throughout the twentieth century, first are the cyclical fluctuations: recessions were met by short working whilst the contrary boom times meant extended lead times. Secondly, the dichotomy between the notion of craft enterprise and a full blown business, the third has been the relatively poor reputation that the furniture business has experienced since mid-Victorian times, both in terms of service and design.

High Wycombe was not an exception in the UK. Kirkham, *et al*, (1987, p.35) reported that the whole furniture sector in the East End of London had been in decline since about 1960, with an extreme downturn since 1979. The East End reproduction trade declined at a much faster rate than any other sector. In 1969 it was predicted that the furniture industry would eventually become purely an 'assembly-marketing' operation which only used prepared parts from other makers (overseas). Many Wycombe companies did try and diversify although not always successfully. E. Gomme, for example tried to set up a chipboard plant as an attempt to use the waste wood from the factory, and so, therefore, was doomed to failure. It was discovered, nearly too late, that good chipboard needed a constant mix of timbers, so the chopping up of any available wood waste and trying to convert it to boards was impractical (Edwards, 1994, p.109).

In 1939, 71 percent of the town's industrial acreage was dedicated to the furniture industry. By 1946 this had reduced to 35 percent (Rattue, 2002, p.104) and this diversification continued. After the Second World War the golden age of the 'Furniture Town' was over. Many of the smaller furniture factories and workshops were either demolished or adapted to other industrial uses. Furniture making came largely under the sway of the big factory-based companies who merged and absorbed their way to supremacy. For example E. Gomme took over William Birch in 1954. Ercol, Parker Knoll and Glenisters joined E. Gomme as the biggest four. However in 1954 the largest employer in the town was the engineering firm of Broom and Wade with over 1,400 employees (Rattue, 2002, p.104).

The change in the range of activities was beginning to take place before the Second World War with the arrival of Harrisons and Sons Ltd in 1933, which made stamps and bank notes for countries all over the world and G.D. Searle and Co Ltd a

research and manufacturing company of pharmaceuticals. New industrial estates opened in Cressex following the expansion of industry and factories started to be built there in 1937.

No longer was High Wycombe therefore solely dependent on the furniture trade, important as it was:

> The town was simply doing what it had done since the Middle Ages, ditching the past and moving on with unsentimental but productive entrepreneurship. Pharmaceutical manufacturing, electronics and increasingly banking and financial services were becoming part of the economic bedrock (Rattue, 2002, p.122).

In the 1980s Sparkes (1989, p.4) was commenting that the history of the industry continued to run deep within the people of the town. There was scarcely a family in the town which did not have a direct connection with the furniture trade. Motivation, the will to design and produce beautiful furniture was an inherent feature of Wycombe life, and dear to its craftsmen. But the lure of other growing industries in the town and the competition from manufacturing overseas depleted the skilled labour force in High Wycombe. Competition was also cut throat in the East End of London at this time, and many firms did not survive (Kirkham, *et al*, 1987, p.23). Kirkham also described the working conditions in London as cramped, dusty and dingy, an environment which was not going to allure young apprentices.

Attfield (1990, p.57) reported on the massive lack of skilled furniture makers in High Wycombe during and after the Second World War. She seems to be the only researcher to have brought this reason to the forefront, and also links it to the fact that training on intricate pieces of furniture would have been impossible when all the factories were producing was Utility furniture and other war products. The main reason for the demise of the firm J. Clarke was the disappearance of skilled workers, according to Laurence Clarke, describing his work now as the ‘cheaper types of furniture, we’re actually making money not furniture, if you like. Whereas then we were making furniture, and not money’ Attfield (1990, p.57).

1.7.1 Overseas competition

At the end of the nineteenth century, according to Henderson (1972, p.7) the British played a significant part in the industrialisation of Western Europe in three ways. Firstly, British skilled workers installed new machinery and then instructed foreign workers how to use it; secondly, there are several examples of Britons who were important as entrepreneurs and managers, and finally British investors found some of the money necessary to start important industrial enterprises on the continent. The countries which Britain had helped towards industrialisation passed on their own skills to less advanced countries. Mayes (1960c, p.120) also reiterates British investment overseas:

> High production costs and labour rates in particular led Britons with money to invest, to consider the possibility of setting up factories outside of Great Britain. In Germany and Austria these conditions obtained and with plentiful supplies of timber available, furniture, and in particular Wycombe's old enemy the bentwood chairs, could be produced at a cost which would enable the finished products to be delivered to British ports via the Scandinavian countries at a little more than half the price of competing British goods.

High Wycombe was not the only place to be producing chairs for the mass market economy. Continental Europe had been developing its own cheap bentwood chairs for many years. The Austrian bentwood chairs by Michael Thonet made the most of mass production techniques and were specifically produced for mass production. The chair model number 14, 1859 'remains one of the most successful industrial designed products of all time' (Fiell and Fiell, 1997, p.28). It should be reiterated that no High Wycombe chair designs are in the Fiell's book '1000 chairs'. High Wycombe manufacturers did not try to emulate the Bentwood chair, but tried to win on price, as Mayes (1960c, p.79-80) highlights:

> It [the Thonet Bentwood chair] was not an especially cheap chair nor remarkable for strength and durability but it was 'something different', and was a great favourite in the working-class Victorian homes where it strangely enough seemed never to have been really successfully imitated in Wycombe although it remained a strong rival to local productions for many years; instead the town's answer to its challenge was an even more determined effort to bring down the price of its own chairs and competition got steadily more fierce.

Scandinavian furniture was first being imported from Denmark in the late 1940s and was sometimes labelled 'modern historical' because it reflects both modernist and traditional influences. The furniture being imported can be seen in Figure 33 a

Windsor chair made by Fritz Hansen and a stick back chair from the Danish Cooperative Society designed by Borge Mogensen. (Davies, 1997, p.42). The models were derived from Thames Valley vernacular models. Indeed the very chairs Wycombe was renowned for, the UK was importing.

Competition from overseas was only going to increase in severity, and initially this was again to come from Europe. UK furniture companies such as G-Plan were inspired by Scandinavian design and many of these designs were their most successful ranges. This inspiration was going to change the face of the furniture retailer on the British high street. A stumbling block for traditional furniture retailing had been the problem of delivery time, which became longer and longer as manufacturing became increasingly mass-produced and as a result less flexible. This may be seen as ironic since mass production is generally considered to be expedient. With this aim in mind Terence Conran opened his first Habitat store in the Fulham Road in 1964. Habitat offered attractive designs at moderate prices to a young middle-class market, with many 'off the shelf' furniture products (Garner, 1980b, p.188).

IKEA, a Swedish firm expanded internationally and this had a huge affect on the British furniture industry. Williams, (2006) suggested that 'when IKEA reached Britain in 1987, it shook the furniture manufacturing and retailing by radically transforming how the majority consumed furniture' (Williams, 2006, p.8).

The British furniture industry was proving ill-equipped to deal with the huge impact IKEA had on the furniture buying public. The fact that, in the main, the British furniture industry was poorly equipped to supply increasing demand at a time of economic expansion, meant a healthy business environment for an importer (Davies, 1997, p.42). Kirkham *et al* (1987, p.23) was reporting on bad management with little or no attention being paid to product development and design within the furniture industry. She reported that in the 1970s, foreign imports of well-designed and efficiently marketed products stood at over 30 percent of UK sales. The main problem facing furniture manufactures in the 1980s, she reported; was low productivity and profits, inadequate premises, cash shortages and poor marketing

resources as well as lack of capital investment in machinery or new product lines, design initiatives and skilled workers.

Within the past ten years, however, the industry has continued to change, with furniture production being increasingly manufactured in the Far East and China. As far back as 1980 it was reported that 'organised well-equipped units have developed in parts of South East Asia. These combine high productivity and low labour rates to produce a significant cost advantage. They are ultimately vulnerable to rising labour costs, but this is not likely to happen before substantial inroads have been made into the European market' (Metcalfe and Carson, 1980, p.167). Metcalfe and Carson also highlighted the fact that 'the third world is not about to invade Europe with limitless quantities of impeccably produced and irresistibly priced furniture. Daunting problems faced most developing country producers wishing to export to Europe; principally a lack of skills, lack of finance for investment, and distance.' These problems, daunting as they were to Asia have proved anything but a stumbling block to success. The potential of India exporting to Europe was not an immediate concern in the 1980s either. Europe is often not of immediate interest to third world furniture producers. India has a potentially vast home market and for export looks to neighbouring Middle East countries. The fact that Asia, China and India were not a threat to either the European or US market in 1980 is astonishing; as much was to change within the following 10 years, and into the 1990s.

The start of this sea-change of furniture production in the UK and High Wycombe in particular was happening around the late 1980s, with small items of furniture being imported: 'to manufacturers, the opportunity exists for the importation of components or whole items which form part of a larger European produced range, allowing greater flexibility of scope' (Metcalfe and Carson, 1980, p.167). At this time it was reported that:

> In the production of cabinet furniture for volume sales, third world countries provide no competition for European producers. Not only are quality standards difficult to maintain in what has become a precision engineered product, but prices of panel materials are normally high in developing countries. Developing countries provide a source of machined components at a low cost, in species of timber which might not otherwise be available in Europe. This provides the opportunity for greater competitiveness by cabinet companies which are prepared to buy from overseas.

Throughout the 1980s the UK furniture industry was still seen as being in a comfortable position and one which was not under threat from foreign imports:

> The inevitable penetration of the European market in specific market areas should not necessarily be seen as a threat to the established furniture industry in Europe. It provides an opportunity for merchandise. In the UK particularly, a combination of competitive pricing and more interesting furniture could make a major improvement in the appalling low priority currently given to furniture spending. The Orient might yet wake us up to take furniture seriously once again as an accessory to the pleasure of living (Metcalfe and Carson, 1980, p.168).

Where we are now with regards to Habitat and IKEA, in relation to room sets of furniture is all down to these companies in the 1950s battling to make modern furniture affordable. It took a lot of effort to get to where we are today (*Thoroughly Modern Antiques*, 2007).

1.7.2 High Wycombe Employment

To understand the reasons for the decline it is necessary to determine when the decline occurred and the number of manufacturers that were involved. There is also a need to ascertain the declining data for both the UK as a whole and High Wycombe specifically, to determine a correlation.

It has proved very difficult to research the exact and definitive figures for both the number of companies manufacturing furniture in the UK, and High Wycombe and the number of people working in the furniture industry in the UK and High Wycombe. This was because the British Furniture Manufacturer (BFM) once stored the High Wycombe figures and this paperwork no longer exists. The figures available for this section have been taken from a wide number of sources, including J.L. Oliver's *'The Development and Sturcture of the Furniture Industry'*, published in 1966. It is mainly an analysis of the locational changes in the industry in the nineteenth century, but it also give some useful early statistics. Figures for High Wycombe's furniture industry go back as far as 1798, where a census of men in Buckinghamshire, between the ages of fifteen and sixty, listed a total of seven hundred and twenty workers in the Borough of Wycombe and in Wycombe Parish (Lowe, 1983). The following table (Figure 34) gives the number of firms engaged in

activities associated with the manufacture of furniture[23] in High Wycombe from Lowe.

Year	Total number of firms	Of which are chair manufacturers
1844	44	23
1864	50	35
1883	88	69
1895	110	78
1903	205	113
1907	176	108
1915	154	92
1927	265	134
1928	256	134
1931	262	138
1935	223	130
1939	249	128

Figure 34 Number of firms engaged in activities associated with the manufacture of furniture in High Wycombe

To understand the furniture industry in High Wycombe after the Second World War, Oliver (1966) gives a good analysis of figures for the furniture industry of the 1950s and 1960s. 'The number of furniture manufacturers in Britain registered with the Furniture Development Council at its inception in 1950 was 2,824. In 1961, it had fallen to a total estimated at 1,625' (Oliver, 1966, p.98). According to Oliver, at the end of 1962 about 79,000 men and 20,500 women were in employment in the British furniture and upholstery industry (Oliver, 1966, p.99).

According to Oliver (1966, p.101) the most significant change in the weight of regional distribution of the furniture industry was in the Southern Region, where the share of High Wycombe increased from 8.9 percent to 13.4 percent of the turnover of Great Britain between 1950 and 1961 (Oliver, 1966). Oliver also stated that 9,096 people were employed in the furniture manufacturing industry in 1939, in High

[23] Firms included are saw mills, upholstery, cabinet makers, timber merchants, wood carvers and turners.

Wycombe (Oliver, 1966, p.105). Subject to omissions and errors of sampling the employment figures for England in 1961 may now be summarised. London led, and High Wycombe was a good second (Oliver, 1966, p.105). Figure 35 highlights the fact that High Wycombe was the only furniture town to be listed separately, indicating its importance and contribution.

To quote estimates in round figures, the number of operatives employed in the furniture factories in 1961 in the Lea Valley was 12,000, in High Wycombe 9,000 (Oliver, 1966, p.105). The total number of furniture manufacturing units in the whole of the High Wycombe area in 1980 was in the order of 110 (Lowe, 1983, p.15).

Standard Region	**Percentage of Great Britain**	**Percentage of Great Britain**
	1950	**1961**
Northern	4.1	1.8
East and West Ridings of York	5.3	4.1
North Midlands	3.3	4.0
Eastern	3.2	4.5
London and South-eastern	46.4	45.0
High Wycombe	8.9	13.4
Rest of Southern	2.7	3.2
South Western	3.4	2.9
Wales	2.2	1.4
Midlands	4.0	4.7
North Western	11.1	10.1
Scotland	5.4	4.9

Figure 35 Distribution of the Furniture Industry by Turnover, in the Standard regions of Britain, 1950 & 1961

Year	Number Employed
1950	7450
1951	7980
1952	7760
1953	7700
1954	7600
1955	9940
1956	8340
1957	8470
1958	8990
1959	8800
1960	9370
1961	8600
1962	8640
1963	8400
1964	8260
1965	8200
1966	7750
1967	7560
1968	8000
1969	7740
1970	7120
1971	6530
1972	6050
1973	6260
1974	6150
1975	6100

Figure 36 Table showing the approximate number of people employed in Furniture Manufacturing in High Wycombe between 1950 – 1975

Source	Year	Number of UK Furniture companies	Number of HW Furniture companies	Numbers employed (UK)	Numbers employed (HW)
(Scott, 2007)	1923	923	n/a	45,100	n/a
	1930	1133	n/a	63,500	n/a
	1935	1106	n/a	75,500	n/a
	1938	997	n/a	75,900	n/a
(Reid, 1986)	1950	3148	n/a	n/a	n/a
	1957	1987	n/a	n/a	n/a
(Oliver, 1966)	1950	2824	n/a	n/a	n/a
	1958	n/a	n/a	n/a	9096
	1961	1625	n/a	n/a	9,411
	1962	n/a	n/a	99,500	n/a
(Lowe, 1983)	1939		249	n/a	10,000
	1952	n/a	n/a	n/a	7,760
	1958	n/a	90	n/a	8,990
	1959	n/a	n/a	n/a	8,800
	1975	n/a	n/a	n/a	6,100
	1979	1400	n/a	75,000	n/a
	1980	1270	110	64,000	n/a
	1982	n/a	92	20,000	5,618
(Rattue, 2002)	1945	n/a	n/a	n/a	6,800
(Andrew, 2005)	1924	n/a	155	n/a	n/a
	1939	n/a	151	n/a	n/a
(Mayes, 1960 c)	1939	n/a	n/a	n/a	10,000
	1958	n/a	100	n/a	8,000
(Edwards, 1994)	1946	n/a	n/a	100,000	n/a

Figure 37 Summary of UK and High Wycombe furniture figures collated by the author (n/a = no figures available)

Very little has been written about the furniture industry of the High Wycombe area since the mid-1960s and there is virtually no written information on other industrial developments (Lowe, 1983, p.274). The table above (Figure 36) shows Lowe's figures of the number of people employed in the High Wycombe furniture industry.

Figures 36 and 37 bring together the available figures from the Literature Review for the number of UK and High Wycombe furniture companies, and the numbers employed. The figures are difficult to compare because of the different dates used, but some comparisons can be made. The following graphs use the information from both Figure 46 and 47 (Figure 38-41).

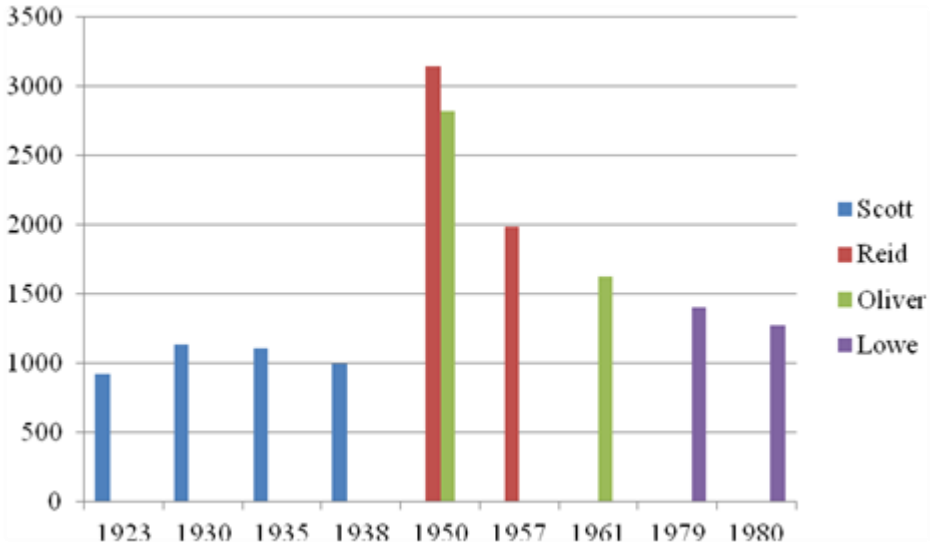


Figure 38 Graph to show number of UK furniture companies 1923-1980

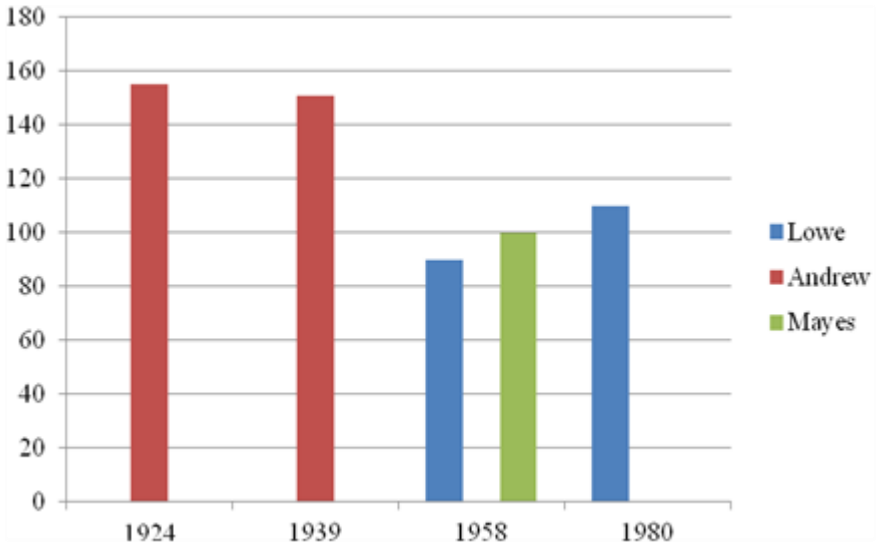


Figure 39 Graph to show number of High Wycombe furniture companies 1924-1980

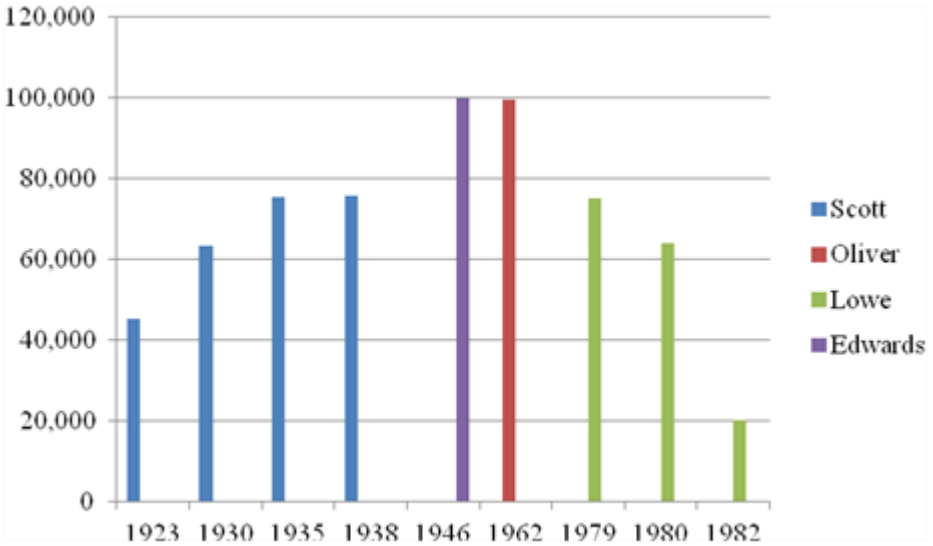


Figure 40 Graph to show the numbers employed in the UK furniture industry 1923-1982

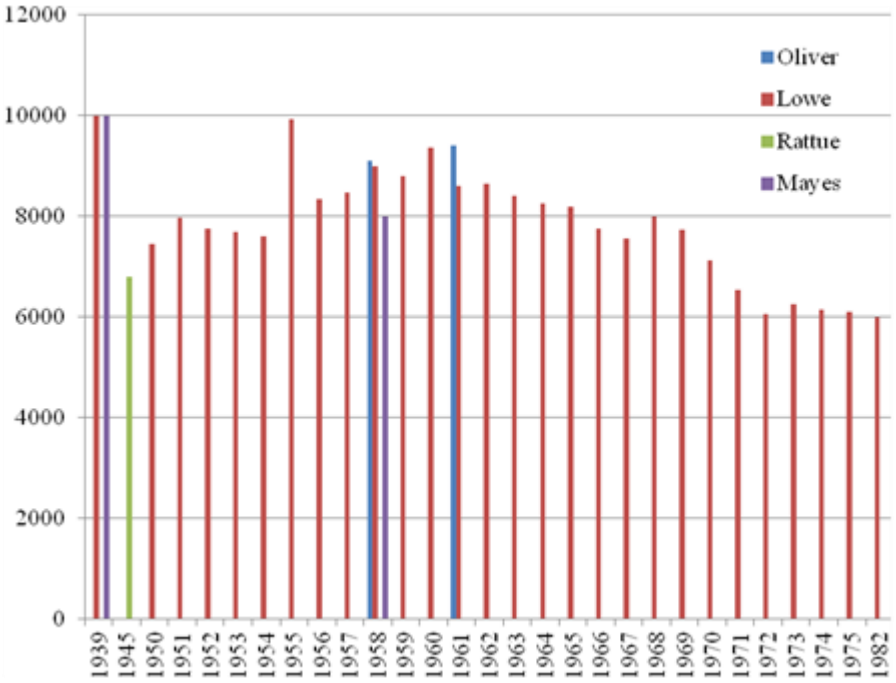


Figure 41 Graph to show the numbers employed in the High Wycombe furniture industry 1939-1982

The graphs above show that the peak for UK furniture companies was in the 1950s compared to the 1920s and 1930s in High Wycombe. The number of people employed in the UK furniture industry was at its peak between 1946 and 1962, compared to the more extensive figures from High Wycombe showing the peak was prior to the Second World War and then again in 1955.

These numbers are compared to industry figures from FIRA, in Chapter 4, indicating that Oliver was giving a true account of the industry figures. Chapter 4 includes figures from 1950 to 2007, giving a more up to date account.

> Between 1944-1947 Harris Lebus tried unsuccessfully to get the firm to produce a standardised range of basic modern designs. As soon as 'freedom of design' was granted (1948) the firm no longer had any interest in producing what was perceived by the trade as unpopular, returning to ornamental styling to create the variety and novelty demanded by the retail trade (Attfield, 1996, p.187).

This decline had not yet affected the industry in Wycombe: E. Gomme's business, by contrast, was thriving and the firm rode out the difficult year with apparent ease (Hyman and Braggs, 2007, p.73). However, it was a short lived survival, as Hyman & Braggs, 2007 indicate, imports of furniture was increasing as Britain joined the Common Market and the oil restrictions in the autumn of 1973 caused a three day week in the industry (Hyman and Braggs, 2007, p.72). This was the beginning of the end of the marketing revolution instigated by G-Plan in the early 1950s that had started a totally new approach to furniture buying (Hyman and Braggs, 2007, p.72).

1.7.3 The Industry Today

Today High Wycombe is a lively town, but the links that families had to the industry are naturally not as strong as they were. The biggest change is the fact that the furniture industry has almost ceased in the town. Only specialist firms like Stewart Linford, Verco Office Furniture, Hands of Wycombe, Greengate furniture and a few smaller ones survive. A total of 26 furniture firms survive in the town whereas in the peak there were over 400 furniture firms, plus many hundreds of sole traders (Wycombe Museum, n.d.). The decline of the furniture industry in High Wycombe is seen around the town today, with its peppering of empty factories and new developments have been built on old factory sites. Photographs have been taken by

the author during the course of the research, capturing these sites, some of which can be found in Appendix F, Figures F1-F8.

By the 1990s the decline of the furniture industry was embedding itself into the economy, with negative effects on employment seen on High Wycombe society. The decade saw much change with the recession claiming the huge G-Plan factory in 1992 with the loss of 700 jobs; the closure and subsequent demolition of Glenisters, the oldest surviving furniture making company; and the decision by Parker Knoll to stop making furniture in High Wycombe. In 1999 High Wycombe's largest furniture maker, Ercol, announced that it was moving to Princes Risborough.

High Wycombe provides a typical example of the changing face of industrial Britain. Marsh (2000a) provided figures for the industry, reporting that due to intense competition from furniture makers in lower-cost countries, the surviving companies retain about 2,000 employees roughly a tenth of the figure in 1970. Chapter 10 will cover the numbers employed in the industry up until 2007.

The current wave (in 2013) of nostalgic revivalism is producing a keen interest in furniture and interiors of the post 1945 period and ‘antiques’ now date back to at least the 1960s and are referred to as ‘vintage’ or ‘retro’ furniture. Furniture made after the Second World War is appearing in antique shops at a greater rate than ever before. A great deal of design history concentrates on well-known designers and furniture history is no exception. Yet an emphasis on ‘classic or seminal pieces’ and a concentration on a ‘great name’ approach to history leaves out the bulk of furniture which remains anonymous (Kirkham, 1987 p.64).

The speed at which furniture is consumed has increased since the 1960s, when people generally expected the bedroom, living room and dining suites they bought for their first home to last a lifetime. Today advertising techniques and manufacturers interests such as ‘planned obsolescence’ along with the consumer’s obsession for novelty encourages a shorter life span for furniture, and to change domestic interiors much more frequently than in the past. Stores such as IKEA, that are able to offer low-priced goods requiring less financial or emotional investment to buy them, can thrive in such a culture. IKEA defeat competition and persuade

customers through their size, economy of scale, speed of delivery and above all else, cost (Williams, 2006, p.151).

1.8 Literature Review Findings and Gaps in Knowledge

The Literature Review gives an historic account of the UK furniture industry and covers the history of the High Wycombe furniture industry in detail, from its traditional beginnings to the declining scene at the beginning of the twenty-first century, which Weaver, Mayes and Sparkes attributed to extensively. Much has been written about High Wycombe during the war years, and the changes that occurred in labour, design and manufacturing. The close connection with the Windsor chair in High Wycombe and the value of chairmaking and furniture production to the town is prevalent. The vernacular beginnings changed with mechanisation and the traditional Windsor chair was being produced in large numbers.

The working conditions in the factories are noted as being poor, with reference to factory fires and lack of Health and Safety in the workplace. There were no guards on machinery and belts and Wycombe furniture machinists would often have fingers missing. Apart from papers written by Hadfield and Capper, little has been written about the dusty working conditions and the impact this had on the health of furniture workers, especially as production levels increased with the introduction of electricity. Capper suggests that nasal cancer (attributed to workers breathing in hardwood dust) could be in decline, although the figures for those working in the furniture industry were not available after the 1980s.

The war years have been widely covered in the history of the High Wycombe furniture industry. The role of the furniture unions is discussed by Reid in detail. The diversion of production to aircraft manufacture for both world wars is extensively covered by historians including Edwards, as is the impact of new composite materials and adhesives from this industry. Probably the most widely published area is the impact of Utility furniture, although little attention seems to be made of the fact that three High Wycombe men were instrumental in the designs: Cutler, Clinch and Barnes. Denney and Attfield report on Wycombe companies prevalent in the manufacture of Utility furniture and Ercol furniture was active in developing the Windsor chair as the Utility model 4a. The design and development of furniture after

the Second World War is also discussed and the links with both the BCMI and The Festival of Britain highlighted. The fact that Wycombe furniture models are seldom found in UK furniture design books is compared to the popularity of the well-known brand names, such as Ercol, G-Plan and Parker Knoll. Furniture design was seen as an important factor in the education of furniture makers. As well as the reproduction furniture Wycombe was well known for producing there were companies developing contemporary designs for the mass market.

Kirkham is a furniture historian who has researched the London furniture industry and its decline in detail, and offers a good comparative study with High Wycombe. She emphasised the differences in working conditions within the various crafts of furniture production. The division of labour and the employment of women is an area that she brings to the forefront, as is the role of oral history as a useful addition to any research relating to the furniture industry. The division of labour and the role of women in the furniture industry in High Wycombe especially during the war years are covered, although much of this is photographic evidence, and none of it gives specific numbers of workers. The role of the unions regarding division of labour is also reflected in the Literature Review.

The Literature Review also shows some figures relating to the number of workers in the UK furniture industry and the decline in the number of employees in the furniture industry working in High Wycombe. There is also reference to the number of furniture factories in both the UK and High Wycombe. Many of these figures are disjointed, (and are collated here for the first time) but they show the decline of the industry, in terms of employment and number of factories in the town. There are no employment figures for dates after the 1980s recorded in furniture history. Factors associated with the decline, such as competition and new industries coming into the town are highlighted.

The Literature Review has therefore brought together the work written to date on the furniture industry in High Wycombe, and has identified gaps in the knowledge that require further study.

Key gaps identified are:

- Up-to-date research on the companies, G-Plan, Ercol and Parker Knoll, using the disparate archives identified in this research which have High Wycombe furniture company information. This will bring the role of High Wycombe's furniture industry from 1952-2002 into context, identifying both design and production issues, including its contribution to design history and its overall reputation nationally.
- A full assessment of relevant press coverage, including *The Cabinet Maker*, and a full evaluation of the Furniture Industry Reports and Statistics that will shed light on the issues surrounding the decline of the industry.
- Employment figures for the UK and High Wycombe furniture industry since the 1980s, ensuring the latest statistical data is identified and analysed, and merged with the figures already identified in the Literature Review.
- A comparative study of High Wycombe's furniture industry against UK manufacturing in general, and to compare with a similar manufacturing town.
- The changes in the working conditions in the industry (especially dust) post the 1960s, and the effect these had on the health of its workers, in relation to nasal cancer. (Linking the industries decline to the improvements in mechanisation and production technologies).
- The changes in the labour force in High Wycombe, especially the issues of division of labour.
- The level of imports from overseas competition, giving an accurate figure detailing this commonly perceived link to the decline of the industry with imports from countries such as China.

Figure 5 Jack Goodchild with a finished Windsor chair, 1940

Figure 6 Chair arch in High Wycombe to commemorate Queen Victoria's visit in 1877

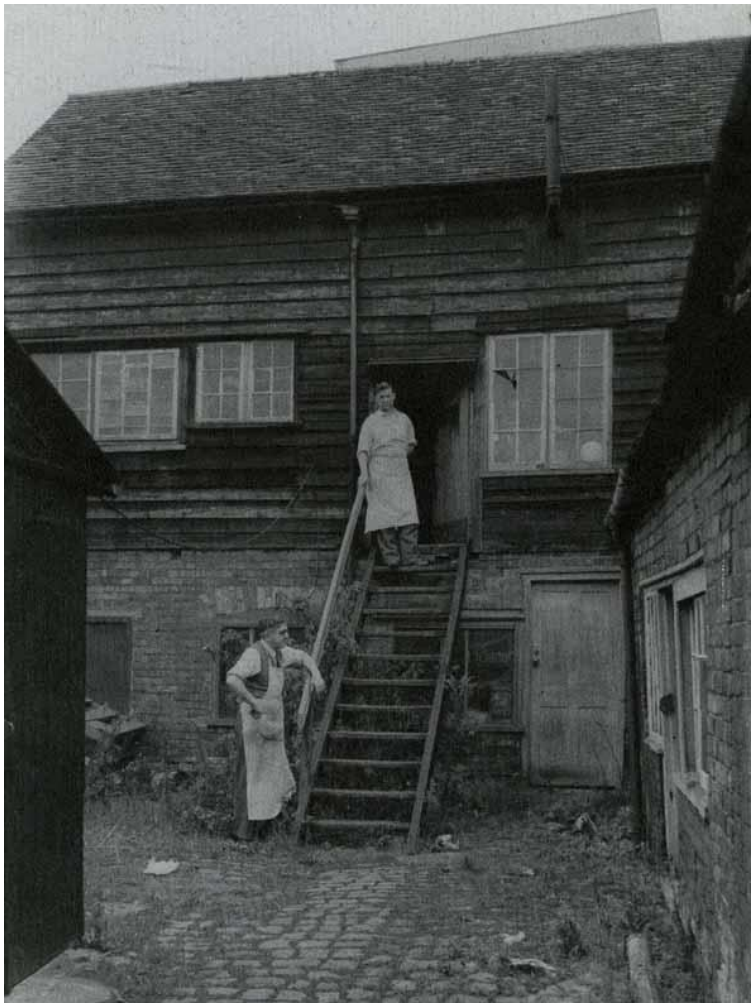
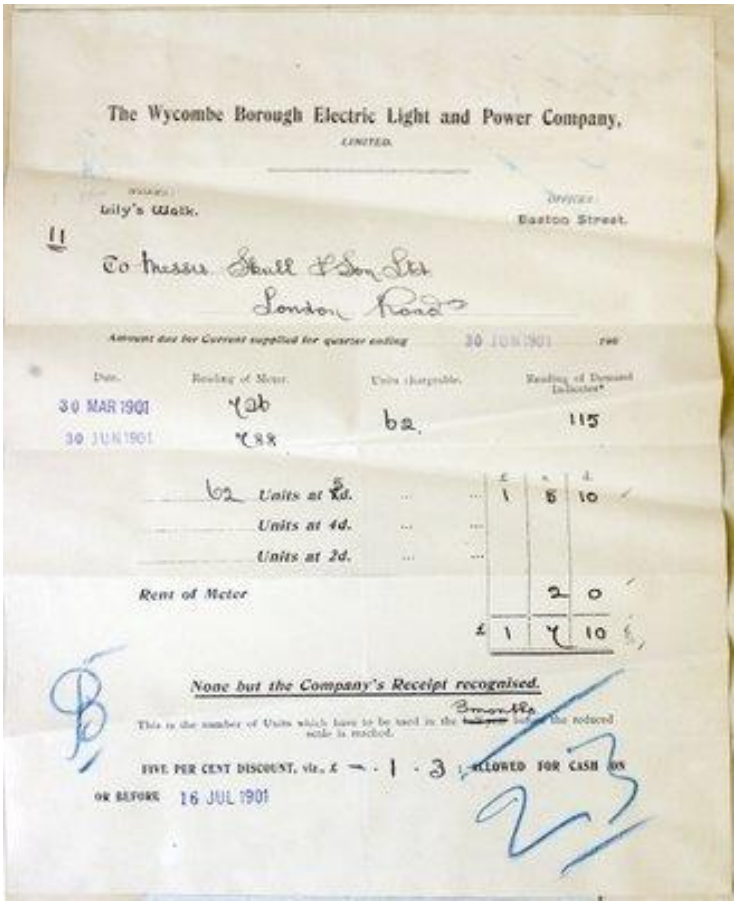


Figure 7 A small traditional chair factory in High Wycombe, 1957 (Nicholls and Janes which was formerly Widgington's factory, it survived until 1959: this is now the site of Bucks New University)

Figure 8 The wreckage of Castle Brothers chair factory, Desborough Park Road, 27 November 1923

Figure 9 Apprentices at work at E. Gomme (machinery before the introduction of the National Grid) c.1910

Figure 10 Birch's, a state of the art factory moving away from old fashioned workshops towards production on a grander scale c.1920



The Wycombe Borough Electric Light and Power Company,
LIMITED.

Lily's Walk.

Easton Street.

11

To Messrs Skull & Son Ltd
London Road

Amount due for Current supplied for quarter ending 30 JUN 1901 190

Date.	Reading of Meter.	Units chargeable.	Reading of Demand Indicator*
30 MAR 1901	488	62.	115
30 JUN 1901	588		

	£	s.	d.
62 Units at ½d.	1	5	10
Units at 4d.			
Units at 2d.			
Rent of Meter		2	0
	£ 1	7	10

None but the Company's Receipt recognised.

This is the number of Units which have to be used in the ~~month~~ month to the reduced scale is reached.

FIVE PER CENT DISCOUNT, viz., £ — . 1 . 3 ALLOWED FOR CASH ON OR BEFORE 16 JUL 1901

Figure 11 Skull's Purchase receipt from Wycombe Borough Electric Light and Power Company Ltd, 1901

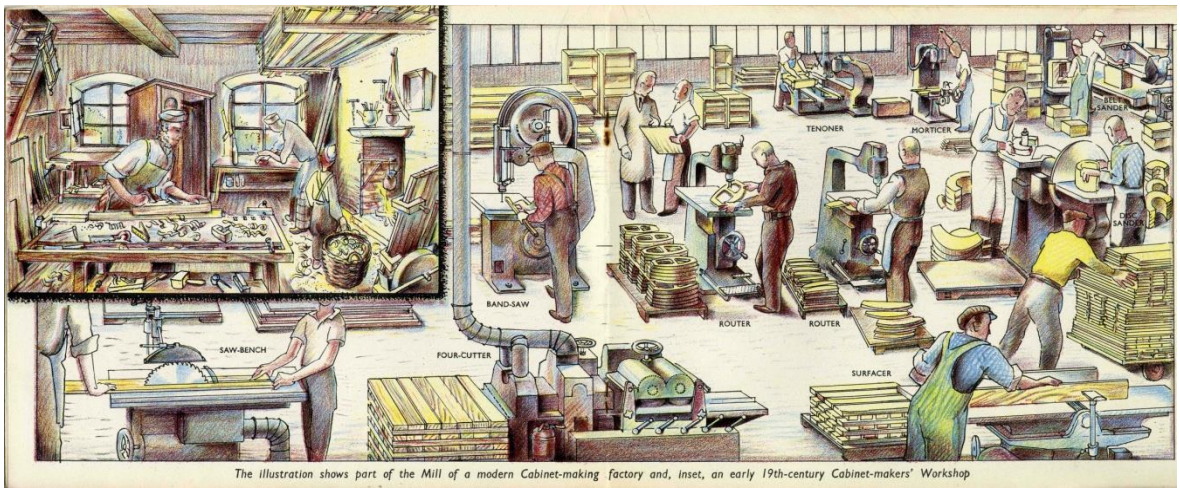


Figure 12 Illustration from 'The Story of Furniture' children's book co-written by Gordon Russell and Jacques Groag, showing part of the mill of a modern cabinet-making factory and inset, an early nineteenth century cabinet maker's workshop

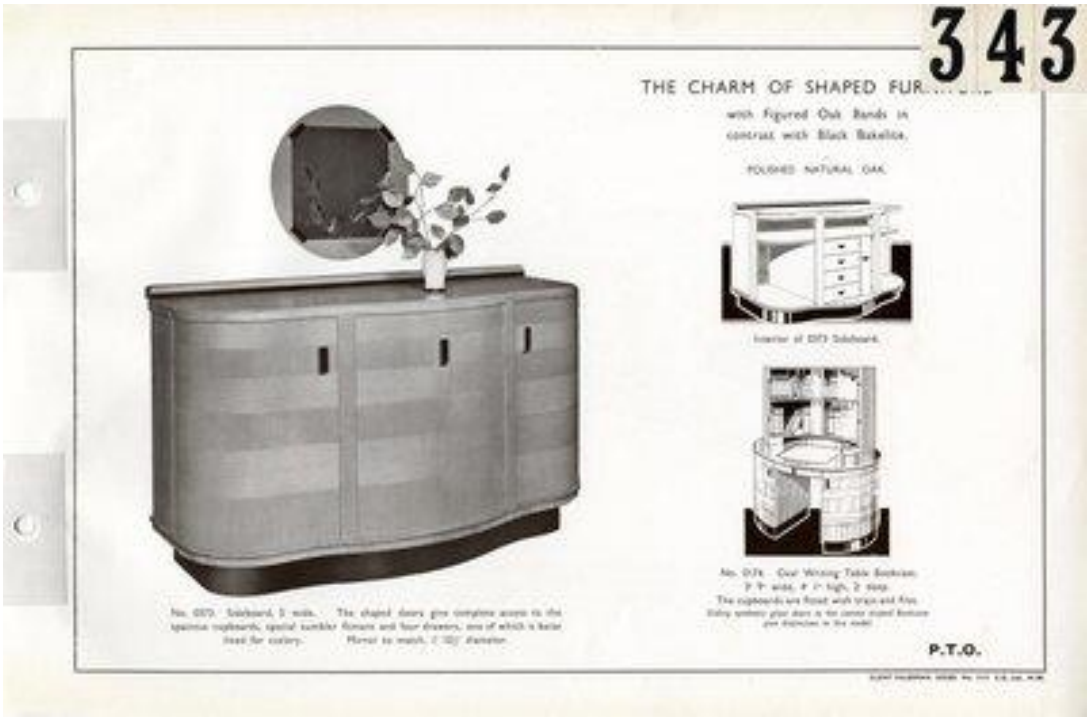


Figure 14 E. Gomme Dining Room Furniture, Silent Salesman Catalogue, page number 343, showing: Sideboard (0373), Oval Writing Table Bookcase (0174), in figured oak and black Bakelite c1933

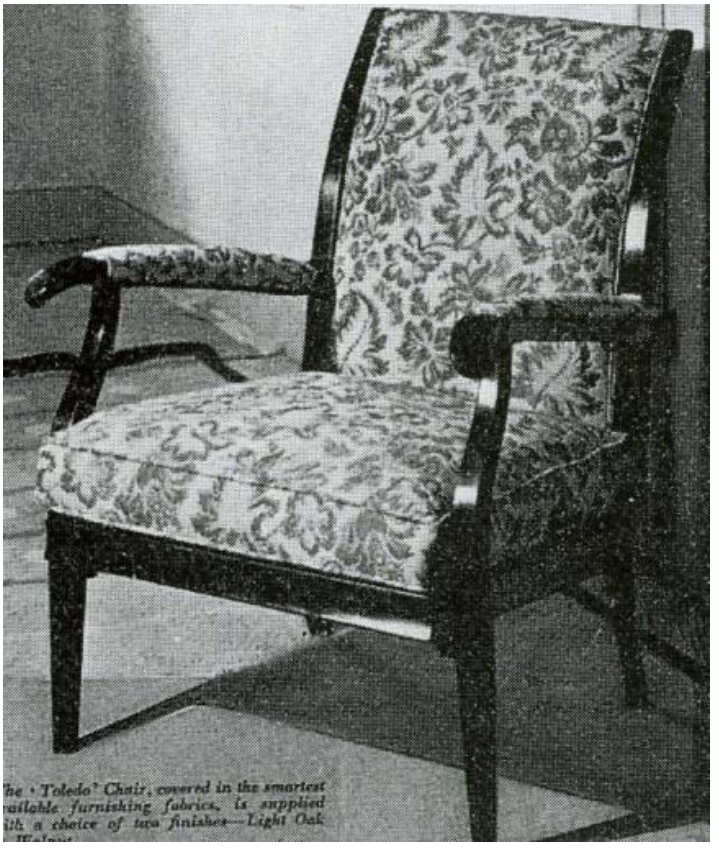


Figure 15 Parker Knoll's PK707 Toledo chair with aluminium frame, 1949

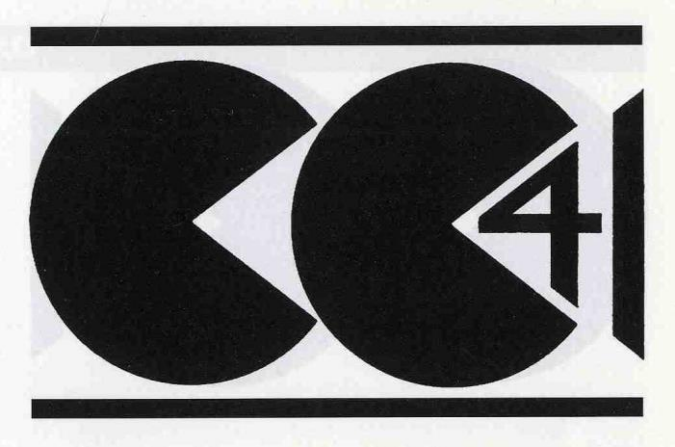


Figure 16 Utility Mark

Figure 17 Sir Gordon Russell (in shirt sleeves), with members of the Utility Furniture Design Panel. Centre Prof. R. D. Russell (Gordon Russell's brother) and Prof. R.Y. Goodden, c.1940s

Figure 18 A page from the 1943 Utility catalogue

Figure 19 Left: Production of Utility chairs at J. Clarke, High Wycombe. Right: British interiors showing range of Utility furniture from the late 1940s

Figure 20 Oak ‘joint stool’ manufactured by William Bartlett and Sons, High Wycombe, produced during the ‘Freedom of Design’ period from 1948

Figure 21 Room settings at the Britain Can Make It exhibition 1946

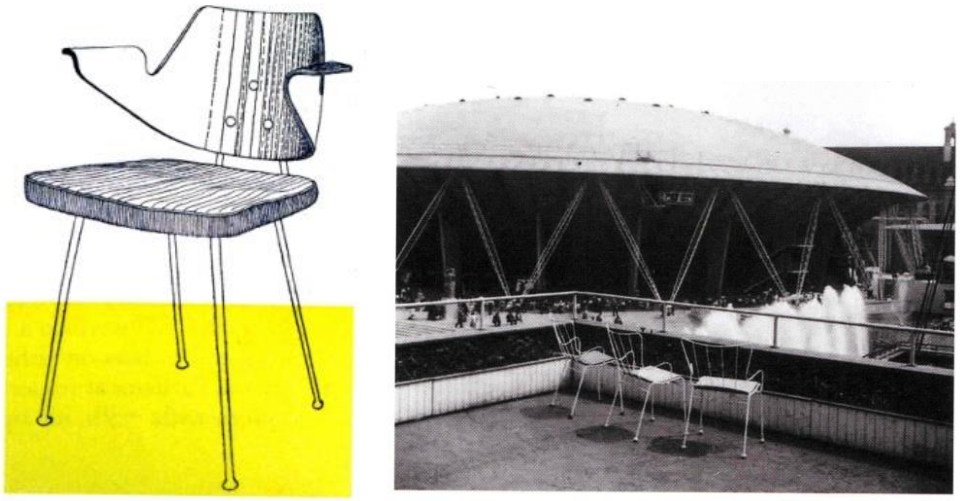


Figure 22 Left: The Festival Chair by Robin Day, Festival of Britain 1951. Right: Antelope Chair designed by Ernest Race.

Figure 23 'What's in a Chair' BBC Broadcast in conjunction with the Council of Industrial Design. Left: H. Cutler, Centre: G. Russell, Right: Frank Austin.

Figure 24 The Worshipful Company of Furniture Makers Master Chair (centre) and Wardens Chairs, designed by Lucian R. Ercolani, awarded the Guild Mark numbers 48, 49 and 50, 1972

Figure 25 Wycombe Technical Institute c.1922-1924.

Figure 26 High Wycombe: as the cottage lace industry declined, women began working on cane seating at home c.1900

Figure 27 Caning chairs in the factory, 1900

Figure 28 Women workers at E. Gomme factory in the First World War (c.1914-18), working on a wing span

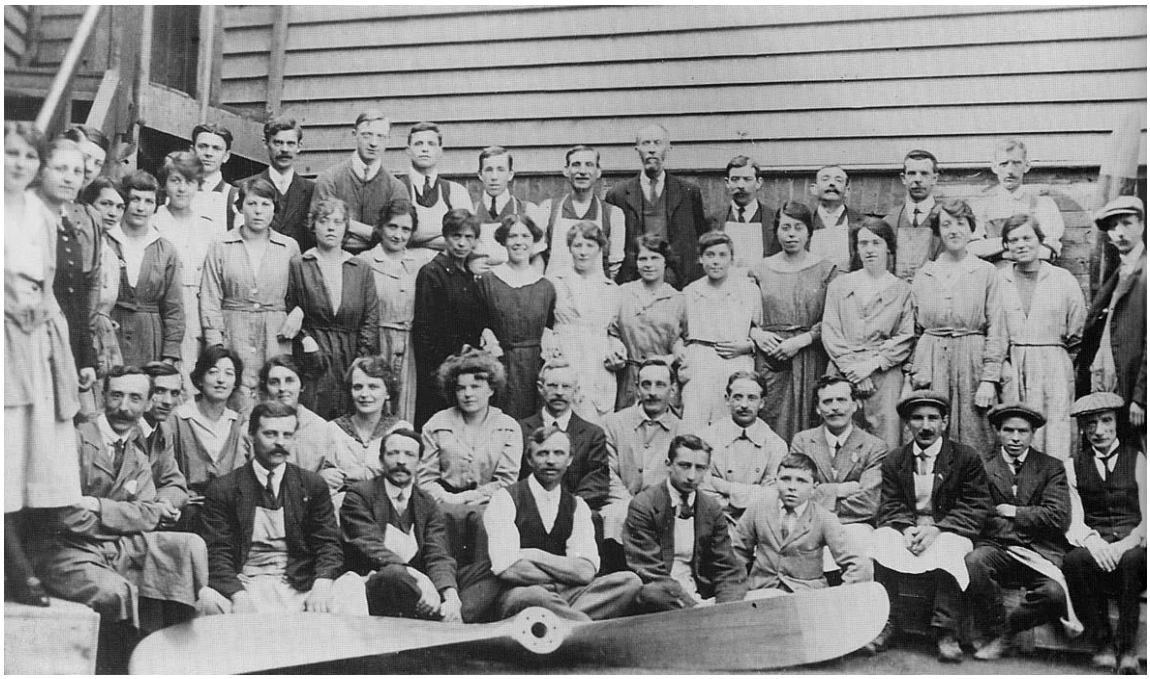


Figure 29 View of the workforce engaged in aircraft production during the First World War , behind a two-blade aircraft propeller, outside a furniture factory. High Wycombe. 1917

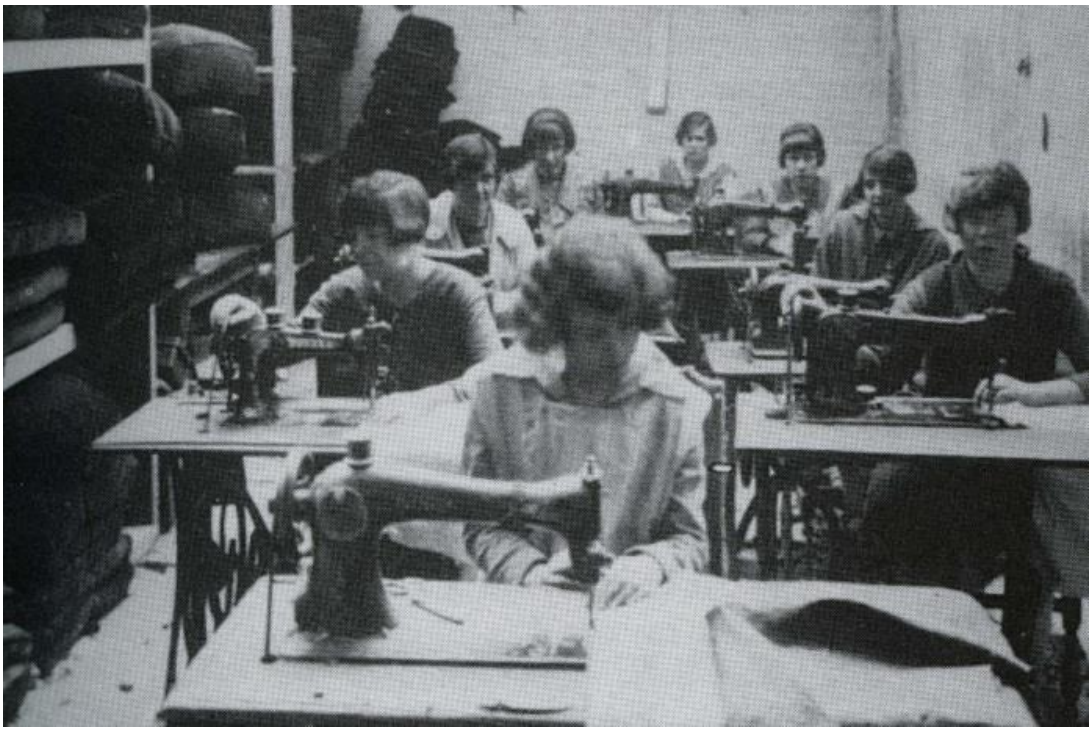


Figure 30 The sewing room at the Ercol factory, 1925.

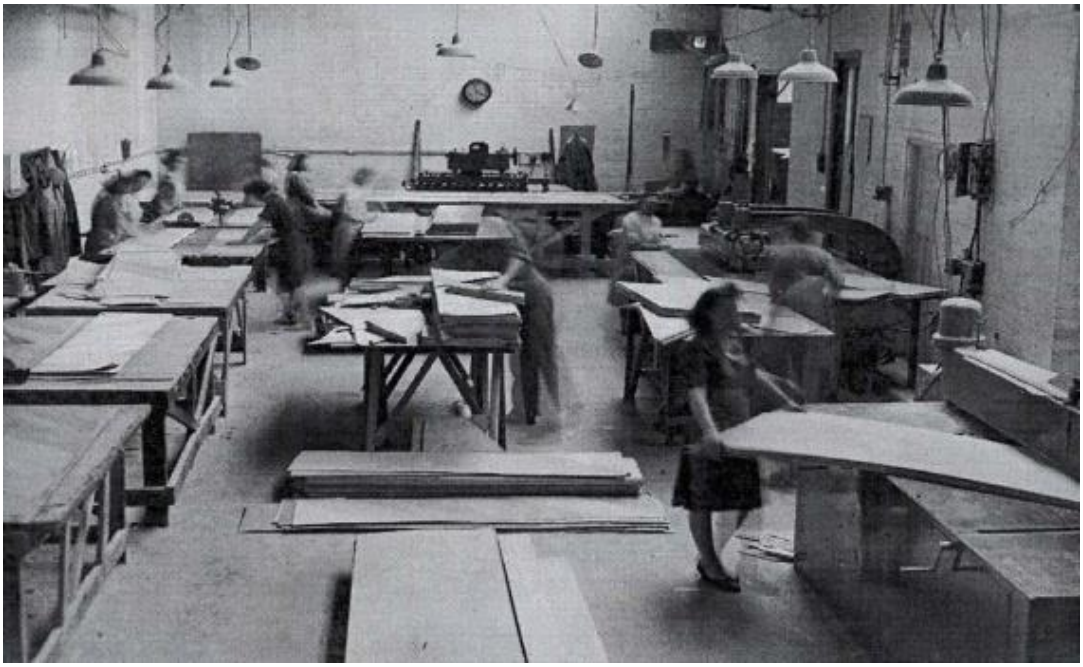


Figure 31 Women workers at Walter Baker Ltd in High Wycombe, cutting birch laminates for aircraft parts, (c.1939-1945)

Figure 32 The Cornwell Norton (Oxfordshire) sewing shop, Parker Knoll, c.1970

Figure 33 Left: Fritz Hansen Windsor chairs; Right: Stick back chair designed by Borge Mogensen, 1949