

Traditions and Trends in Furniture Conservation

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What our great-grandfathers bought and valued (1750 to 1790);
what our grandfathers despised and neglected (1790 to 1820);
what our fathers utterly forgot (1820 to 1850);
we value, restore and copy!

—*John A. Heaton, 1888* [1, p. 5]

ABSTRACT

This review examines the development of the furniture conservation profession from its origin to the early years of the emerging discipline by examining selected relevant literature. Furniture repair and restoration traditionally has been the domain of trained joiners and cabinetmakers. Its strong ties to traditional woodworking have been elemental in shaping the profession as it emerged in the late 1970s and early 1980s in Europe and the United States. From the end of the nineteenth century onwards, in a parallel development, furniture repair also became a popular pastime with amateur woodworkers. Influenced by progress in research, developments in philosophy and ethics, and by treatment strategies of allied conservation disciplines, furniture conservation became an established professional field.

INTRODUCTION

On a rainy day in the late spring of 1845, Edward Jenner Carpenter, a 19-year-old apprentice cabinetmaker in Greenfield, Massachusetts, recorded in his diary that on the morning of Thursday, 29 May he had repaired a desk [2]. This desk presumably was the first piece of furniture that the young woodworker had repaired because all of his earlier diary entries refer exclusively to making new furniture. Carpenter had been an apprentice with the firm Miles & Lyons since April 1842 and the work of this young craftsman was exemplary of a tradition that was centuries old: joiners and cabinetmakers repaired worn or damaged furniture as part of their job [2, 3].

Early records on furniture repair such as the diary of Carpenter are, however, relatively scarce. Although historic documents that list objects or craftsmen are plentiful, these often do not reveal any substantial information on the nature of the repair work and notes often are incomplete and cryptic. Traditionally, craftsmen of every art and trade were involved in repair and restoration work in the area of their expertise. But social changes, beginning in the eighteenth century, caused a shift in labour practices that resulted in (among other things) greater freedom for craftsmen [4–6]. Craftsmen in the New World, for example, often crossed trade boundaries and were ‘jacks of all trades,’ in order to meet growing demands for skills [7, p. 43]. Cabinetmakers, joiners and hobbyists began specializing in repair work, which ultimately led to the development of the furniture conservation profession.

Due to the large volume of material, this review examines selectively trade publications, account books, cabinetmakers manuals and how-to books; and it traces the early development of the furniture conservation profession through a series of articles, published and unpublished, and documents of professional conservation organizations.

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JOINERS AND CABINETMAKERS AS REPAIRMEN

In the second half of the fifteenth century, the sculptor and woodworker Benedetto da Maiano reputedly made two inlaid chests for King Matthias Corvinus of Hungary [8]. According to Giorgio Vasari the chests were transported to Hungary by ship. The high humidity levels at sea during the journey, likely combined with slow travel and inadequate packing methods, apparently caused much of the inlay to fall out. It is said that Benedetto repaired the damage in situ at the Hungarian court [8].

It might be presumed that the first choice for having broken furniture repaired would be the craftsman like Benedetto da Maiano who had originally created it or if he is no longer around for the duty at hand, perhaps a close relative or an apprentice familiar with the master's work. Thus, in 1540 Angelo da Piacenza, a pupil of Lorenzo and Cristoforo da Lendinara, was called upon to do the first documented restoration of the wooden choir in the Duomo of Modena, made by the Lendinara brothers between 1461 and 1465 [9]. According to the chronicler [10], Jacopo De'Bianchi Angelo made the choir chairs look like new with some water that he washed them with and then he varnished them with amber.

Repair work and restoration of wooden objects have continued over the centuries in virtually every culture. This is evident from trade cards, newspaper advertisements, diary entries and account books [11–16]. Many of the records pertaining to the activities of cabinetmakers in the eighteenth and nineteenth centuries reveal that repair work of furniture was a relatively common practice among their daily duties [16–21]. Account books, ledgers, diaries and personal papers, for example, may provide useful information on the nature of repair work. The account book of an industrious joiner in Philadelphia, John Head, shows that between 1718 and 1753 he repaired a wide variety of furniture as part of his daily business [15]. Tables, chairs, cabinets, 'a Looking Glass & varnishen' and 'pict'er' frames were mended for various clients [15, pp.

40, 78]. The account books of the Dominy family of East Hampton, New York reveal that repairs of furniture and household objects were carried out on a regular basis between 1765 and 1820 [22]. In 1775, for example, Nathaniel Dominy II was paid fifteen shillings for 'repairing a Chest of Drawers throu[ghou]t' [22, p. 358], which implies that he must have done a very thorough job. Often, however, it is not clear from account-book entries the extent of repair work, and only occasionally were details of the work written down. Vernacular furniture and royal furnishings alike were subject to neglect, mistreatment, abuse and of course natural ageing, as well as to comprehensive restorations and alterations, which were routinely performed by cabinetmakers in Europe and the United States. George Nix of London supplied a large number of items to the Earl of Dysart in Ham House, Dorset, between 1729 and 1734 [23]. During the same period Nix was also engaged in repairing many items at Ham, which included strong boxes, candle stands, a cabinet with silver mounts, a billiard table and a dressing box [11, p. 649]. He received a payment for 'mending and pollishing a Rosewood Dressing Box, and a New Lock Ketch and key' [23, p. 181; Figures 111, 148]. In 1730 Nix also sliced off the top of a Japanese-export lacquer cabinet, altered and newly gilded the cabinet-support frame, then used the sawed-off top for constructing a new table.

For Sawing the top of an India Cabinet, and putting on a Deale top, and Japaning the top, and New Pollishing the Cabinet and Lackering all the brass work £3.10.0. For altering the Cabinet frame and New Gilding it £4.10.0. For making a Table of the top of a Cabinet and a neat Japaned frame for the Table £2.15.0 [11, p. 649; 23, p. 181].

In Paris, on 29 December 1759, ébeniste S. Joubert delivered a *bureau de travail* to the Cabinet Intérieur du Roi in the Petits Appartements at Versailles for the use of Louis XV [24]. The writing desk was finished with red and gold lacquer and decorated with gilt bronze mounts and a black velvet top. It was restored in 1787, a year after the desk had

changed hands to Louis XV's brother, the Comte de Provence. Three craftsmen were paid for the job 'Pour avoir fait restaurer à neuf un bureau en table,' which implies that the desk was restored like new [24, p. 47]. The craftsmen included Beneman and Gosseling, who were paid 'Pour restauration de l'ébenisterie. Maroquin neuf avec bordure doré.' The metalworker, Galle, was paid 'Pour avoir desgressé les bronzes et les avoir repassés à la couleur de l'or moulu et rebrunis à neuf' [24, p. 47]. Even the celebrated cabinetmaker Jean Henri Riesener occasionally was engaged in cleaning mounts, scraping marquetry and re-polishing furniture for Louis XV [25, 26].

Between 1772 and 1775, John Shaw, a Scottish cabinetmaker who had settled in Annapolis (Maryland) and ran a successful woodworking business, repaired furniture for James Brice, which included a tea table, a mahogany chair, the claw of a table, a bird cage and a gunstock [20, p. 14]. In one instance he was paid five shillings for 'putting a new top rail on a Mahogany Chair' [20, p. 14]. Interestingly, more than a century later in 1892 another cabinetmaker in Annapolis, M.C.K. Basil, repaired a sideboard made by John Shaw, which Shaw had signed and dated in 1796 [20, pp. 112–115].

It seems that it had become increasingly fashionable for cabinetmakers to identify their hand on the furniture that they had repaired, a practice that was not isolated within America. German conservator Erich Werwein restored a late eighteenth-century dressing table by David Roentgen in the 1970s and discovered writing on the construction wood, indicating that it had been repaired twice before: once in 1802 by Ludwig Muntz and again in 1887 by Max Seydel [27, p. 35]. The great French cylinder-top desk at Waddesdon Manor (UK) of circa 1777–1781 was also repaired at least twice in the nineteenth century: once in 1832 by J. Wood and again in 1853 by E.C. Souter, as is evident from their pencil inscriptions [28, pp. 313–314].

During the late 1820s at the court of George IV, a comprehensive refurbishing campaign of the

private apartments at Windsor Castle prompted the repair of many pieces of furniture in the Royal Collection [29]. Nicholas Morel, a successful cabinetmaker who had supplied furniture to Windsor Castle from the 1790s, was charged with the design and execution of this vastly expensive project. Morel first personally inspected the existing furniture and furnishings that were stored at various palaces to determine which pieces could be incorporated into his plans [29, pp. 29–31] and in partnership with George Seddon, their workmen sorted out the holdings, repairing a large selection of pieces. Exceptionally, their work was recorded in fair detail.

To taking off rechasing and regilding the whole of the ormoulu mountings of 5 Indian cabinets, thoroughly repairing the woodwork scraping off the old japanning from some of the panels, and rejapanning them in a very superior style with landscape & other devises of rich raised gold work on a highly polished black ground, restoring the raised gold ornaments of the old parts, adding new black and gold speckled borders & highly polishing the whole refixing the ormoulu mountings, adding new locks... [29, pp. 240–241].

Notes from cabinetmakers of a more personal nature have also provided clues about the dates and circumstances of intervention, and about the craftsmen involved. In 1877 Luigi Rizzo left a note in a concealed pocket within one of the entrance doors to the Metropolitan Museum's Gubbio Studiolo, which was discovered in the mid 1990s during conservation treatment [10, p. 145]. The note identified Rizzo as the principal restorer and indicated that the work had taken place in Frascati, Rome, at the home of the studiolo's new owner. A joyous note written by restorer L. Hatfield was contained in the great desk made for Louis XV by Oeben and Riesener, stating that its restoration had been completed in the Louvre during the week that Paris was liberated in 1944 [30].

Although contextual evidence is plentiful, documentation of work techniques is rather scarce. The materials used for repairs were not generally recorded.

TRADITIONAL REPAIR AND THE DISSEMINATION OF IDEAS

Starting at the end of the seventeenth century, but mostly toward the middle of the eighteenth and throughout the nineteenth century, a wide range of technical books appeared in print, which made trade ‘secrets’ available to a wide audience. These books ranged from recipe and design books to treatises on practical aspects of various trades. The best known publications included Félibien’s *Des Principes de l’architecture, de la sculpture, de la peinture* (1676) [31], Moxon’s *Mechanick Exercises* (1677) [32], Stalker and Parker’s *Treatise of Japanning and Varnishing* (1688) [33], Plumier’s *L’Art de tourner* (1701) [34], Diderot’s *Encyclopédie* (1751–1765) [35], Chippendale’s *The Gentleman and Cabinetmaker’s Director* (1754) [36], Dossie’s *The Handmaid to the Arts* (1764) [37], Roubo’s *L’Art du menuisier* (1769–1775) [38] and Watin’s *L’Art du peintre, doreur, vernisseur* (1773) [39].

These ‘science’ or ‘trade’ publications made their information available to craftsmen and laymen alike and bypassed the eroding guild tradition of handing down information from master to apprentice. According to Weber, ‘Nothing is more calculated to improve the mechanical arts than giving publicity to the various processes used among workmen in their several trades’ [40, iii]. Many trade publications that were popular in Europe found their way across the Atlantic. The gentry and craftsmen in Virginia, for instance, owned and used a large variety of books on building practice, architecture and furniture design in the eighteenth century [41]. In Williamsburg, the cabinetmaker Edmund Dickison owned a copy of Chippendale’s *The Gentleman and Cabinetmaker’s Director* in 1778 [41, 42, p. 67]. While further south, Daniel McBean, a local cabinet, and chairmaker of Davidson County, Tennessee owned the second volume of *The Handmaid to the Arts* and a two-volume copy of either *The Cabi-*

net-Maker’s Assistant or *The Cabinet-Maker’s Guide* at the time of his death in 1815 [16, pp. 324–325]. McBean may have owned one of the earliest known English-language recipe books for cabinetmakers, which was first printed in London in 1809 [40]. This small recipe and methods book, written by cabinetmaker and ‘ebonist’ Peter Weber, has been the source for an astonishing stream of plagiarized copies throughout the nineteenth century and well into the twentieth century, bearing testimony to the need among crafts- and laymen for such ‘secret’ practical information [40, p. xiii].

Trade secrets increasingly became common knowledge among cabinetmakers. Ansel Phelps in Greenfield, Massachusetts printed the first American version of *The Cabinet-Maker’s Guide* in 1825 [43]. Based on Weber’s edition, it contains various directions on mending and cleaning objects, along with methods for removing ‘bruises in furniture,’ for ‘cleaning and polishing old furniture,’ for ‘cleaning and restoring the elasticity of cane,’ and for taking ‘ink spots out of mahogany’ [43]. Some of these methods, it may be presumed, were familiar to Edward Carpenter by the time he repaired his desk in 1845 [2]. Another printing of *The Cabinet-Maker’s Guide* appeared in Concord, New Hampshire in 1827 [40, p. xiii]. Ten years later in London, a ‘new’ version went on sale and now G.A. Siddons was given as its author [44]. In addition to the aforementioned repair methods, the book also contained a newly listed practice ‘to raise old veneers:’

In repairing old cabinets, and other furniture...First wash the surface with boiling water and course cloth, to remove any dirt or grease, then place it before the fire, or heat it with a caul, oil its surface with common linseed oil, place it again to the fire, and the heat will make the oil penetrate quite through the veneer and soften the glue underneath, then whilst it is hot raise the edge gently with a chisel, and you will find it separate completely from the ground... [44, pp. 7–8].



Figure 1. Cabinet, in two sections. French, c. 1640–1660, ebony, ivory, gilt bronze, 189.2 167.6 58.4 cm (74 1/2 66 23 in). Metropolitan Museum of Art, Gift of Mrs Harold Fowler, 1931, 31.66 ab. (See also on p. 2.)

Parts of the original ‘methods’ were recycled in the very popular edition by J. Stokes, *The Cabinet-Maker and Upholsterer’s Companion*, which was reprinted at least fourteen times in Philadelphia between 1850 and 1909 [45]. As well as methods for lifting veneer, the *Companion* also contained some directions for re-polishing furniture.

In order to apply this process with facility, you will find it needful to disunite the various parts of each article. If your job be a wardrobe, take off the doors by unfastening their hinges; remove all the screw nails; take off the cornice; lift the wings or carcasses from the base; and then separate the mouldings and other carved ornaments

from the frames and panels on the doors [45, p. 174].

Such thoroughness has been, and is, a typical characteristic of traditional craftsmen tasked with restoring furniture. Issues, for example, of preserving authenticity—in its many varieties of interpretation—were not obvious concerns. The restored object had to be sound and functional. This ethos has prevailed across many, if not all, woodworking trades.

REPAIR AND COMMERCIAL ENTERPRISE

As woodworking businesses grew during the nineteenth century, large and successful companies were also involved in repairing furniture, ranging from simple vernacular pieces to those of the highest quality. In 1884–1885 the Herter Brothers Company, which was established by the German immigrants Gustave and Christian Herter in New York City twenty years earlier, restored a French cabinet that is now in the collection of the Metropolitan

Museum of Art in New York (fig. 1). From the outside, this ebony cabinet is a beautiful example of a mid-seventeenth-century piece of furniture. However, when viewing the inside from the back and especially after examining the drawers, there is clear evidence of thorough restoration. The fine quality of workmanship suggests nineteenth-century craftsmanship and strongly reflects the Company’s new cabinetwork of that period. The workmen identified their work by marking and dating the back of the cabinet twice (fig. 2). Although, in this instance, the exterior of the cabinet had been preserved fairly well, significant parts of the structure, the drawer construction and elements of the interior theatre had been replaced and/or changed.

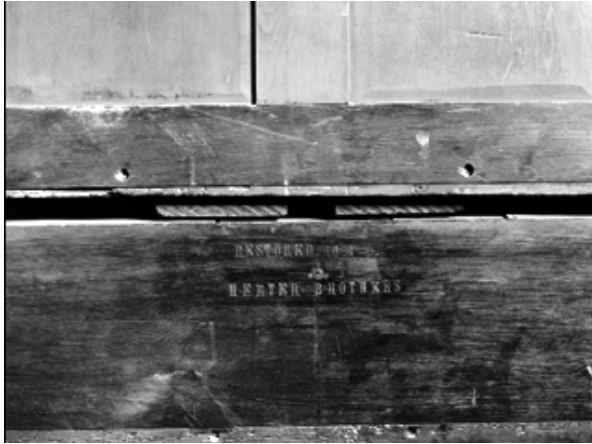


Figure 2. Detail of figure 1. Metropolitan Museum of Art, Gift of Mrs. Harold Fowler, 1931, 31.66 ab

Some new parts of the theatre were carefully integrated with the original elements, demonstrating the sensitivity of the craftsmen to the design elements but not to the importance of the original fabric.

From the second half of the nineteenth century there may have been enough demand for repair work that some businesses began specializing as restorers. In Paris in 1859, Maison Andre was founded as an establishment for the restoration of art objects, including furniture [46]. There was also a corresponding growth in the market for furniture repair in America, due in part to the transport of goods from Europe.

Furniture and wooden objects that crossed the Atlantic in increasing numbers were prone to damage caused by adverse climatic conditions. Charles Leland in 1896 identified transatlantic traffic as the main cause of furniture damage on the east coast of the United States [47]. ‘There is no country in the world in which the art of mending is so much required as in the United States of North America. The reason for this is the extraordinary and sudden changes in temperature, causing the expansion and contraction of cells and fibre, especially in wood, which results in cracks.’ [47, p. 50]

Leland stated in the opening of his book *Mending and Repairing* that ‘he has distinctly shown that



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Figure 3. Chair menders at work, c. 1930.

mending or repairing, which has hitherto been regarded as a mere adjunct to other arts, is really an art by itself, if not a science, since it is based on chemical and other principles...’ [47, p. vii]. He felt that this new art could be learned by those ‘who are gifted with some small allowance of ‘ingenuity,’ tact, art, or common-sense to consider that Mending or Restoring is a calling very easily learned by a little practice, and one by which a living can be made, even in its humblest branches, as is shown by the umbrella-menders and chair-caners in the streets.’ [47, p. xvi] (fig. 3)

Leland’s writing reflected a more general expectation that restored furniture had to be sound, functional and good looking, which prevailed well into the twentieth century. Despite this deep-rooted tradition, during the late nineteenth century a historic conscience emerged with a few professional woodworkers disapproving of dubious practices of antiques dealers and restorers. David Denning complained in *The Art and Craft of Cabinet-Making* of 1891 about the questionable practices of restorers who ‘improved’ or embellished plain oak furniture with carving [48]. ‘That some of these [restorers] may be conscientious in their work I do not deny, but it is a lamentable fact that mostly they do far too much of what can only be called by courtesy restoration and repairing’ [48, p. 20]. Forty years later in 1930, Homer E. Keyes, the first editor of *Antiques* magazine, noted in the fore-

word of Henry H. Taylor's book *Knowing, Collecting and Restoring Early American Furniture* that '...in the restoring of antique furniture there is, or should be, an attainable golden mean, a sensible and temperate procedure, which, without countenancing misguided attempts at rejuvenation, will nevertheless accord to age its appropriate revelation of native vitality and inherent beauty' [49, p. 6]. Overzealous restorers scraping off original finishes had horrified Keyes, and while he also disliked severely deteriorated furniture, he felt the latter to be less disastrous.

Educated art historians, mostly born to affluent families with good-quality art collections, were among the first group of professionals to openly vocalize their opinion on the nature and extent of restorations in furniture. Ralph Edwards stated in a *Country Life* article of 1959 entitled 'Repairing furniture from historic houses' that 'Restoration, where more than simple, straightforward repairs are concerned, presents in many cases a difficult problem, involving issues of both ethics and taste' [50, p. 1136]. However, at this time there was neither a general consensus about the kinds of permissible treatment nor agreement on how the authenticity of an object was to be best preserved. Ethical frameworks, such as the American Institute for Conservation's *Code of Ethics and Guidelines for Practice* [51], did not yet exist. Research of furniture materials in general and the specific analyses of materials and techniques for solving particular conservation problems was not the domain of the furniture restorer. The restorer's voice was barely, if at all, considered in the decision-making process, which largely depended on the personal perspectives of curators and administrators. Edwards went on to say that 'It may be agreed that the structure of any dilapidated piece should in general be put into sound condition, and damaged members repaired, wherever possible without renewal; if parts be missing, they should be restored with salient details, carved, inlaid or painted, affecting the design' [50, p. 1136]. Edwards was cautious of preserving original surfaces and gilding; he summarized that '...too little should be done rather than too much'

[50, p. 1136]. An unpublished memorandum of the Victoria and Albert Museum (V&A) in London from 1970 states 'that conservation was seen as an essential technical part of the institution's work, and was subject throughout to the principle that the curator and not the restoring staff had the ultimate responsibility for the result' [52].

FURNITURE RESTORATION—PASTIME AND PROFESSION

Joseph Moxon affirmed in his preface of the 1703 edition of *Mechanick Exercises* that '...it is very well known, that many Gentlemen in this Nation, of good Rank and high Quality, are conversant in Handy-Works: And other Nations exceed us in numbers of such' [32, preface]. Given this observation, it should not be surprising that copies of Moxon had found their way into the various libraries of gentlemen, including the vast collection of Samuel Pepys, who also owned copies of Félibien [31] and Stalker and Parker [53], and that branches of woodworking, especially ornamental woodturning, had been a popular pastime in certain circles of high society and royal families. Aficionados of the mechanical lathe included Tsar Peter the Great of Russia, Queen Sophie-Magdalene of Denmark, George III of England, Louis XVI of France and Friedrich-Wilhelm I of Prussia [54]. Learning a trade had become part of educating princes in the spirit of the Enlightenment and to that end, royals received instruction for improving their dexterity and understanding of mechanics and read books on the subjects of their interest. Peter the Great, who incidentally also had dabbled in ship carpentry, owned a copy of Plumier's treatise on turning [34] and had translations made in Russian and Dutch [54].

Those less privileged but equally dexterous—like Edward Carpenter, the cabinetmaker's apprentice from Greenfield, Massachusetts—spent leisure time 'loafing around,' reading books, taking dancing lessons and attending lectures on a variety of subjects, including phrenology [2]. The growing industrialization and mechanization in the workplace that took place during Carpenter's lifetime

dramatically transformed the social and economic landscape in Europe and the United States [55]. The complex changes were manifold and, among other things, gave birth to a new order of educated middle-class citizens. Shorter working hours meant increased leisure time, which became an economically interesting commodity, especially in the twentieth century. ‘Now, as far as time is concerned, it may be pointed out at once that the most hard-worked man has his Saturday half-holiday and the Bank-holidays, to say nothing of the summer evenings when there is light enough for handicraft work even after 9 o’clock...’ [56, p. 8].

The new middle class gained access to an incredible array of manuals for self-education about the rapidly evolving world around them and for advancing socially and economically. Among these were builders’ assistants, cabinetmakers’ and upholsterers’ guides and carpenters’ companions, written for craftsmen and laymen alike. The French philosopher Jacques Maritain observed in 1958 in *Reflections on America* that ‘Everybody is working, and working hard. In this sense all are fundamentally equal, as working people (and people burdened by mortgages and deferred payment systems) who work to make a living, and who, after their daily hours, busy themselves again with any kind of task-handicrafts, improving their houses...and they are more proud of their hobbies than of their jobs’ [57, p. 155]. Publishing houses discovered a new and copious audience of readers eager to find a practical pastime, capitalizing on the perception that it was sinful to let time pass by wasted. Various popular branches of woodworking were explored and proved extremely suitable for the new ‘home handyman.’ Francis Chilton-Young proclaimed in the preface of *Every Man His Own Mechanic* of 1882 that its pages were seeking ‘...to furnish the Amateur Artisan with hints and suggestions regarding all that he may undertake in Constructive and Decorative Work at home...’ [56, p. vii]. While filled with basic woodworking projects of all sorts (bearing in mind that complicated work remained the domain of trained craftsmen) the amateur was also directed in making his own re-

pairs: ‘Yes, reader, mend your broken chairs and crippled furniture...’ [56, p. 8]. Similar publications aimed at hobbyist woodworkers and professionals alike appeared on the market and included, for example, *Domestic Jobbing* by Paul Hasluck (1907) and *Furniture Repairing and Re-upholstery* by Charles Taylor (1919) [58, 59].

In a parallel progression with professional cabinet-makers, amateur woodworkers began to restore furniture, ranging from the vernacular to high-quality museum pieces. One such amateur was Henry H. Taylor, who was an avid collector and hobbyist restorer of American furniture. Taylor relayed his experience in *Knowing, Collecting and Restoring Early American Furniture* [49], which was published during the Depression in 1930. His perspective on furniture repair and refinishing strongly reflects his personal taste as well as a practical collector’s point of view that antiques had to be functional in the home. Taylor felt that ‘Household furniture will be put to strenuous daily service, while the furniture of a museum is for inspection only’ [49, p. 22]. While he may have possessed the sophistication to differentiate between restoration philosophies based on ownership and might have been concerned with preserving evidence of age, many of his working methods were thorough and ensured that objects were sound and functional after restoration. The various finishing techniques described would have destroyed many original surfaces. For example, Taylor cautions the reader against using lye but then gives several examples of how he used it on his furniture.

Taylor provides some fictive examples in order to show the difference between the ‘wrong and right’ approach in restoring early American furniture. Referring to the ‘right’ approach he commented that ‘The whole table is cleaned with varnish remover, possibly leaving a bit of old paint in the turnings, about pins, or under the top’ [49, p. 108]. After several steps of sanding, light scraping and another rubbing with steel wool, he envisioned the table to be finished with shellac and wax. ‘The result is a table which still appears old, but is clean

and sound, and glows with a subdued and honest finish' [49, p. 108]. Thus the imaginary furniture restored by Taylor became transformed into objects with well-groomed surfaces.

Around the same time, between 1936 and 1939, Edward Minns published a series of articles in the *American Collector*, which were then combined in a book entitled *The Art of Restoring and Refinishing Antique Furniture* [60]. Minns, a professional cabinetmaker who had received 'rigorous' training in England, was deeply rooted in his trade and he appears to be less understanding of antique furniture as historic objects than Taylor. 'Such pieces [in museum collections] should simply be thoroughly cleaned-oiled-wood-filled-waxed, and kept waxed' [60, p. 3]. Minns' book was also aimed at amateur woodworkers and his concepts were comparable to those set forth by Taylor. However, there were some marked differences. In contrast to Taylor, for example, he did not recommend lye for removing finishes because he found it difficult to wash off and he warned correctly that it darkened wood [60, p. 74]. It is interesting to observe that both Taylor and Minns expressed concern with keeping the 'age' of furniture that they had refinished, but their practices betrayed that ideology: '...the idea of refinishing is not to make it look like new but to retain the appearance of age, consistent with being in clean and usable condition' [60, p. 9].

While the books by Taylor and Minns serve as fairly isolated examples from the 1930s, growing economies and post-war optimism prompted a flurry of publications for professional and amateur furniture-makers and restorers. The publications are given in Table 1, not as a complete record, but as examples of the industry between 1943 and 1978.

Whether written by a hobbyist or a by a professional cabinetmaker, the books listed in Table 1 are largely the synthesis of Taylor's and Minns' earlier publications [49, 60]. The common denominator of all the authors is their analysis of restoration problems without respect for the intrinsic historic value or cultural significance of the object. There is

Table 1 Publications from the furniture-makers and restorers, 1943 to 1978

<i>date</i>	<i>title</i>
1943	Revive Your Old Furniture [61]
1948	How to Restore Furniture [62]
1949	How to Restore Antique Furniture [63]
1949	Care and Repair of Antiques [64]
1965	The Complete Book of Furniture Repair and Refinishing [65] (multiple reprints)
1952	How to Restore and Decorate Chairs [66]
1955	Repairing and Restoring Antique Furniture [67] (multiple reprints)
1955	The Care of Woodwork in the Home [68]
1957	Cabinetmaker's Manual for Amateurs and Professionals [69]
1959	The Easy Expert in Collecting and Restoring American Antiques [70]
1962	The Furniture Doctor [71]
1973	Collecting & Looking After Antiques [72]
1965	The Homemaker's Guide to Refinishing and Restoring Antiques [73]
1969	Rénovez et réparez vous-même vos meubles et objets anciens [74]
1969	Restoring and Preserving Antiques [75]
1970	Comment restaurer les meubles antiques [76]
1970	The Encyclopedia of Furniture Making [77]
1971	All About Antiquing and Restoring Furniture [78]
1971	Is it Genuine? [79]
1971	The Practical Handbook of Furniture Refinishing Restyling and Repair [80]
1972	Mending and Restoring Furniture [81]
1974	Restoring Antique Furniture: A Practical Guide [82]
1975	Restoring Antique Furniture [83]
1976	Antique Furniture Repairs [84]
1976	Restoring and Renovating Antique Furniture [85]
1976	Collecting & Restoring Wicker Furniture [86]
1976	Off Your Rocker – The Art of Repairing and Refinishing Antique Furniture [87]
1977	Care and Repair of Furniture [88]
1977	Gamle Møbler – en Bog om Bevaring og Restaurering [89]
1977	How to Restore, Repair and Finish Almost Everything [90]
1978	La Restauration des meubles rustiques [91]
1978	Restoring Furniture [92]

an absence of material analyses and a lack of consideration for future use and/or restoration needs. The treatment descriptions are generally very thorough and emphasize usability above all else. Examples of restoration cover all aspects of furniture, such as wooden elements, hardware, clear and painted finishes, upholstery, gilding and Urushi lacquer surfaces. Some of the authors (Kinney [65] serves as a good example) were not averse to embellishing furniture, to changing proportions and hardware and to complete refinishing. Many of the authors were professional cabinetmakers with plenty of experience in beautifying or altering. A demonstration of how a Victorian chest of drawers could be transformed into Sheraton(ish) piece was given by Crawley in 1971 [79, pp. 75–99]. It is important to consider that the literature was essentially the only material available to restorers working on high-quality furniture in private and museum collections until the late 1970s.

THE ONSET OF CHANGE

The development of the museum conservation profession has been a direct consequence of rapidly expanding—and at the same time—deteriorating collections in Europe and the United States during the nineteenth and twentieth centuries [93–100]. Chemists, artists and craftsmen became engaged in various aspects of restoration, while many larger museums with extensive furniture collections employed cabinetmakers as repairmen and restorers. In the early days of the museum conservation profession, attention was predominantly directed at preserving antiquities, architecture, archaeological material, paintings and sculpture. Restorers formed professional organizations such as the International Council of Museums (ICOM) Committee for the Care of Paintings, which was formed in 1948. The International Institute for Conservation of Historic and Artistic Works (IIC) was founded in 1950; the Arbeitsgemeinschaft des Technischen Museumspersonals (ATM) in 1956; the International Centre for the Study of the Preservation and Restoration of Cultural Property in Rome (now called ICCROM) in 1959; and the American

Institute for Conservation of Historic and Artistic Works (AIC) in 1972. The *raison d'être* for each was to provide a forum for sharing information on research, scientific study and treatments, as well as for discussing philosophical issues. In addition to the aforementioned disciplines, other groups such as paper, textiles, musical instruments and ethnographic material were also included. Furniture conservation, however, lagged behind in development.

Norman Brommelle, a metallurgist and painting conservator and the first Keeper of Conservation at the V&A in London (1960–1978), stated in 1963 that a much-needed study of the technical history of furniture was about fifty years behind that of paintings [101, p. 2]. Furniture restorers worked in isolated basement workshops and were generally not integrated with the restoration laboratories that began to take shape in museums in the first half of the twentieth century. A notable exception was the V&A where, under Brommelle's direction in the early 1960s, the 'art workshops' were reorganized. The newly created Conservation Department fully integrated furniture conservation. Many of the furniture restorers at the V&A had been recruited as 'repairers' from the joiners' shop in the late 1950s, with little or no training in conservation. In 1967, however, they had gained sufficient knowledge and skill to be part of an international conservation effort to restore wooden objects that had been damaged in the Florence flood [102, 103].

It was not until the early 1960s that an international effort was made to bring the field of furniture conservation onto an equal footing with other conservation disciplines. During the joint meeting of the ICOM Committee for Scientific Laboratories and the ICOM Sub-Committee for the Care of Paintings in Barcelona in 1961, an investigation was initiated in the Deterioration and Conservation of Furniture [104, p. 1], which was later referred to as a study of the Conservation of Woodwork [105]. 'Woodwork' was divided in four categories: 1) interior woodwork, particularly furniture; 2) movable wooden sculpture; 3) fixed wooden structures; and 4) waterlogged wood.

The study was conducted under the direction of Norman Brommelle, because, as he stated, the V&A possessed 'one of the largest collections of furniture in the world, with a staff of seven furniture restorers' [105, p. 1]. Brommelle collaborated for some of the research with his wife Joyce Plesters, Conservation Scientist at the National Gallery of Art in London (1949–1986), and with organic chemist Tony Werner, Keeper of Conservation at the British Museum (1959–1975). Anne Moncrieff and Josephine Darrah, retired research scientists at the V&A, compiled bibliographies relating to the nature and behaviour of wood. Progress reports were presented at various joint ICOM Committee for Scientific Laboratories and Sub-Committee for the Care of Paintings (later renamed ICOM-CC) meetings in Leningrad and Moscow (1963) [101], Washington and New York (1965) [104], Brussels (1967) [105], Amsterdam (1969) [106] and finally in Madrid (1972) [107].

The first report of 1963 focused on the conservation of interior woodwork, but it also put an emphasis on furniture [101]. Fluctuating humidity levels were recognized as the main contributing factor of deterioration in furniture. Brommelle stated that 'The conservation of interior woodwork is dominated by one factor, namely the shrinkage and swelling of wood under the influence of its gross- and micro-structure and the stresses induced by methods of assembly' [101, p. 1]. Biological degradation was seen as a subsidiary factor and as 'easily controllable' by modern methods. Interestingly, considering that man is an agent of creation, restoration and destruction were not considered when defining the problems of conservation in furniture and woodwork.

In the early 1960s, the craft tradition in furniture restoration also dominated the conservation of museum objects. Brommelle observed that furniture restoration was a disappointing field for the museum scientist since the materials and methods of traditional craftsmanship seemed adequate for conservation [101]. The committee viewed the main responsibility of furniture conservators as

hands-on-restorers, stating that 'The chief tasks of the furniture restorer, apart from the treatment of loosened and broken joints and the replacement of missing parts, are the treatment of cracks and warping' [101, p. 28; 108, p. 104]. This perspective of the committee members on the furniture conservation field was further underscored by Brommelle, who stated that, 'It is pointless to apply science where science is not required' [101, p. 1]. Despite this prejudice, the main areas for research in furniture conservation were identified as: 1) the history of techniques and materials as an aid to conservation and art-historical research; 2) the chief forms of deterioration; and 3) the principles of restoration [101, p. 1].

None of these three areas, in fact, were studied systematically as Brommelle had envisioned. Although progress had been made, during the Madrid ICOM-CC conference in 1972 his frustration can be sensed. 'There is still no reasonable comprehensive book on the restoration of furniture as it is practiced by a museum restorer conscious of the objects both as an example of applied art and as an authentic historical document' [107, p. iii].

In the mid 1960s, Paul Philippot, Adjunct Director/ Director of ICCROM (1959–1977), circulated a questionnaire to museums and private restorers concerned with 'woodwork of all types,' including furniture restoration. The questionnaire was aimed at gathering information about the general nature of collections, environmental control in storerooms and exhibition spaces, the chief forms of deterioration encountered on objects, and the methods and materials used in the restoration of wooden art objects. This author has not been able to establish how many questionnaires were mailed. However, thirteen recipients responded and some suggested useful reference material, which included (among other books) the works by Taylor, Sloane, Lorini, Ormsbee, Kinney, Blanchard, Pinto and Rodd [49, 61, 63–68, 106]. The response by conservation staff at the Metropolitan Museum of Art in New York included references to Roubo, Watin, Hinckley and Klatt [38, 39, 106, 109, 110], which indicates

that there was an interest in historical research. The summary of answers in the questionnaire shed further light on practices of the day. Eight respondents kept records of documented restoration interventions. Five institutions kept records of examination and repairs that were accompanied by photographs. According to the survey, wood to wood repairs were glued with a variety of adhesives, including animal glue, gelatine, casein glue, PVA (PVAC), PVC, wax and resin mixture, unspecified synthetic glues, urea resin glues, contact cement, polyester resin and epoxy resin. Wood to metal bonds were created with animal glue, with or without garlic juice, cellulose acetate cement 'Duro' and 'Durofix,' epoxy resin, PVA (PVAC) emulsion, synthetic rubber adhesive 'Evostick' and 'Tetrabond 404' [106]. Warped panels were treated by humidification and clamping, attaching veneer to one side, 'enlarging and filling of grain on back of panel,' impregnating with a mixture of shellac, ethyl glycol and methylated spirit, sawing the back and filling with wood slivers, and by applying dovetail cleats or keys [106].

In 1969, the annual conference at The Henry Francis du Pont Winterthur Museum in Winterthur, Delaware entitled "Country Cabinet Work and Simple City Furniture," included a formal discussion concerning the preservation and restoration of furniture, which mostly focused on problems with finishes [111]. Jonathan Fairbanks, who was then Associate Curator in Charge of Conservation at the Winterthur, opened the panel discussion with the observation that 'Theories about furniture care are as varied as the numerous waxes, varnishes, oils, and miracle polishes currently on the market. Insofar as a systematic study is concerned, this is a neglected area that needs a great deal of basic research...' [111, p. 294]. His remarks reflect Brommelle's earlier view of 1963, but they were more focused on the philosophical and practical concerns of furniture care and conservation. Fairbanks raised four main points as initial guidelines for furniture conservation:

- 1) treatment should increase the lifetime and stability of all components
- 2) materials should be reversible
- 3) thorough documentation should be kept, and
- 4) restoration should unify an object and not deceive the viewer [111].

At the end of his comments Fairbanks posed a valuable question, asking 'How far should we go in trying to restore an object to what we believe was its original appearance, fully aware that in doing so we may unconsciously be imposing our twentieth-century values and taste?' [111, p. 295]. In the field of furniture conservation this may very well have been the first time that this important issue was raised in a public discussion. In the discussion that followed the conference participants covered a variety of subjects but focused on finishes, which must have been a heated topic at Winterthur at that time. The furniture restorers/conservators at the museum had been using a linseed-oil mixture, known as furniture reviver, between 1946 and 1967 for their annual maintenance of the collections [111, pp. 303–304; 112, p. 59]. Considering the history of such revivers, this was a serious issue for the preservation of furniture collections worldwide. The debate marked a departure from traditional approaches in furniture conservation and laid the foundation for alternative cleaning methods, which were developed at Winterthur during the 1980s.

Residues left by the reviver mixture, which generally consists of equal parts of raw linseed oil, turpentine, malt vinegar and some methylated spirits, tend to darken over time and form a layer that is difficult to remove [112]. Many variations of reviver exist, sometimes incorporating boiled (heat-bodied) linseed oil and occasionally including different amounts of methylated spirit. Furniture revivers of varying formulas have been popular with cabinetmakers and furniture restorers since the nineteenth century for revitalizing deteriorated finishes [45, 113–117] and they are recommended 'for modest use' in Plenderleith's *The Conservation of Antiquities and Works of Art* (first edition 1956), which for many generations of restorers/conserva-

tors was the most authoritative literature in the field [118, 119]. ‘For cleaning polished furniture, of whatever kind, a suitable emulsion can be made by shaking together, vigorously, half a pint each of linseed oil, turpentine, and vinegar, to which is added a small teaspoonful of methylated spirit. This mixture is comparatively inexpensive; it removes dirt and polishes in the same operation, and is harmless if applied in moderation’ [118, p. 133; 119, p. 141]. Furniture reviver continued to be used in major museum collections on both sides of the Atlantic at least until the early 1980s, despite the serious drawbacks and warnings against its application [112].

MATERIALS RESEARCH FOR FURNITURE

The ICOM meetings held in the 1960s and 70s had not gone unnoticed by conservators in Western Europe and the United States. Tentatively, furniture materials and furniture conservation techniques became subjects of research. Wood-species analyses, for example, had been recognized as a valuable means for identifying unknown wood types in art objects. Wood identification in furniture had been discussed during the seminar addressing the “Application of Science in Examination of Works of Art” in Boston in 1958, although according to William Stern it was antique dealers who had predominantly requested it [120]. It should also be noted that despite the increasing use of wood-species analysis by conservators of polychrome sculpture, musical instruments and wooden archaeological material, furniture conservators working in museum collections were less inclined to take advantage of this analytical tool.

Then in 1974, Dietger Grosser published an important article in *Maltechnik Restauro* on the applications of wood species analyses entitled ‘Holzanatomische Untersuchungsverfahren an kunstgeschichtlichen, kulturgeschichtlichen und archäologischen Objekten,’ in which the author discussed panel paintings, wooden sculpture, musical instruments, ethnographic objects and archaeological material, but significantly, excluded furniture [121].

Wood-species analyses had been carried out on furniture in isolated instances, but at this time it certainly was not a common practice. In 1973 an article by Hans Michaelsen on the restoration of the Haldenstein room, a Swiss interior of 1548 [122], included a useful section on wood analyses (see below) and in the late 1970s, identification of furniture woods was employed in the examination of English-Canadian furniture as part of a scholarly study [123]. In 1975 and 1976, Grosser published more articles on wood-species analyses of European woods in *Maltechnik Restauro*, although there continued to be a clear focus on wood used in panel paintings and sculpture [124–126]. Nonetheless, these excellent contributions were beneficial for all conservators working with wood, including those working on furniture. Eventually, by the early 1980s the identification of unknown wood types had become a fairly standard practice in the furniture conservation field.

Dating as far back as 1953, there had been some published case studies of furniture conservation, but these mostly dealt with surface problems of painted furniture and panel paintings, such as *casone* fragments [127–131]. Edwin Gorton, Chief Furniture Conservator at the V&A, first discussed the restoration of case furniture; he described the repair of an eighteenth-century mahogany writing table in *Studies in Conservation* in 1961 [132]. In this same article, V&A Furniture Restorer J. Jarosz is said to have removed dents from the surface of a mahogany desk using a century-old method of applying steam to the recessed areas [132]. This method for removing bruises from furniture had appeared in print as early as 1825 in Phelps’s edition of *The Cabinetmaker’s Guide* [43, p. 13] and has appeared in virtually every copied version since. Holes in the writing table were filled with ‘boat-shaped’ mahogany patches, selected for colour and grain with the preconceived goal to make them blend in with the existing wood, a practice described by Kinney in 1950 [65].

DEVELOPMENTS IN CONTINENTAL EUROPE

In former East Germany, restorers/conserva-

tors were active in restoring important war-damaged furniture, especially at Schloß Köpenick in Berlin. The work and articles of Manfred Becker and Hans Michaelsen, published throughout the 1970s in *Neue Museumskunde*, made substantial contributions to the development of the profession [133–135]. Becker's article on the restoration of an extraordinary cabinet of c. 1780 by David Roentgen made for Wilhelm II of Prussia was exemplary for its clarity and description of process [133]. During the two year restoration period, historic materials and marquetry techniques were researched (no material analyses was reported) and the restoration process was comprehensively recorded. Hans Michaelsen's publications of 1973, 1975 and 1978 cover various pieces of European furniture as well as the Haldenstein room; they also demonstrate a strong interest in researching historic materials and techniques [122, 134, 135]. For example, microscopic wood identification was performed on structural and decorative timber of the Swiss room so that replacement woods could be accurately matched with the original material [122].

In the former West Germany, several broadly trained art historians/conservators began publishing the results of their research on historic furniture materials in *Maltechnik Restauvo*, encouraging furniture restorers to write about their treatments. In 1978 Thomas Brachert, Head of the Institut für Kunsttechnik und Konservierung at the Germanischen Nationalmuseum in Nuremberg (1974–1993) published a series of articles on historic furniture finishes [136–139]. Brachert had trained as a cabinetmaker before his studies in art history and painting conservation, hence his interdisciplinary interest [140]. Brachert has been a driving force in the development of the furniture conservation field in Germany and indirectly of the field at large. He encouraged several of his staff in Nuremberg to publish on furniture history, materials used in fine furniture, historic wood stains, the use of tortoiseshell and on a variety of conservation treatments in *Maltechnik Restauvo* which, due to their popularity were bundled in a book in

1986 [141]. The museum also began formally admitting students to their workshops for a three-year training program.

In France, curator Daniel Alcouffe published *Restauration du mobilier* in 1977 [25], which was simultaneously made available in German and English and which incorporated some important principles, although restoration practices hinged on a traditional approach. '*La restauration oblige souvent à décaper la surface du meuble du revêtement dont on l'a pourvue afin de le décorer ou de la protéger*' [25, p. 35]. The furniture reviver mentioned by Alcouffe, for example, contained alcohol, turpentine, oil, sulphuric acid, vinegar, tripoli and benzo-in [25, p. 80]. Alcouffe expressed concern that too much restoration or refinishing of wood surfaces would create an imbalance between other aged furniture elements, such as bronzes and fabric: '*Il faut respecter ce vieillissement naturel qui fait partie de la vie et de l'histoire de l'objet. En outre, si l'on rajeunissait trop le bois, il ne serait plus en accord avec les matériaux qui l'accompagnent éventuellement et ont passé aussi: bronzes, garnitures d'étoffes*' [25, p. 12]. Alcouffe's book was one of the first publications on furniture conservation to include a section on care and maintenance, and to summarize measures for climate control. The bibliography included references to traditional literature such as Roubo [38] and Watin [39], contemporary conservation sources such as Kühn [142], Moncrieff [143] and Plenderleith [118, 119], as well as the books by Rodd [67] and Wenn [83].

CONFERENCES

The IIC Congress in 1978 in Oxford, entitled "The Conservation of Wood in Painting and The Decorative Arts," was in many respects a landmark meeting. It was the first time that furniture conservators from major museums, cultural institutions and private practice delivered case studies for an international audience of their peers [144]. Sporadic reports of furniture conservation had been previously published in *Studies in Conservation*, *Antiques*, *Neue Museumskunde* and *The Connoisseur*, but never had there been an international as-

sembly of furniture-conservation experts as there was during the Oxford Congress. However, the papers presented by the furniture conservators during the meeting illustrate that Brommelle's three points—those discussed during the ICOM–CC Leningrad Conference—for research had been largely neglected. While the furniture papers were informative, little consideration was given to the history of techniques.

Although some thought was given to the chief forms of deterioration, some principles of museum conservation (such as reversibility) were largely ignored. For example, S.N. Hlopoff describes the flattening of a fairly thin pine panel that had been veneered at one side with mahogany by cutting a series of grooves and filling them with slightly tapered strips [145]. This method reflects a traditional solution for warp reversal that had been the subject of discussion and experiments in panel painting since the 1940s [146]. Victor von Reventlow's solution to correct warping in the substrate wood of a small nineteenth century Italian marquetry table top involved replacing the pine boards with a piece of mahogany multi-ply [147].

The great merit of the Oxford Congress was the exposure of furniture restorers to other professionals whose shared concern was the conservation of wooden objects. The influence of other conservation disciplines was already noticeable. Several of the participants described the use of such relatively novel materials as B-72 in their treatment [147, 148]. Von Reventlow used it to adhere tiny strips of 'facing' tissue on a small marquetry table that had been damaged during transport at sea. B-72 had been introduced as a polymer for various conservation applications in the 1950s and was rather belatedly applied to furniture. Also notable was the application of high magnification microscopy—visible light, UV-fluorescence and scanning electron microscopy (SEM)—for examining stratification layers and coatings, which would become a highly visited topic with furniture conservators from the mid 1980s onward [149].

In former West Germany, a first gathering of professional furniture conservators took place in the Stuttgarter Landesmuseum at the initiative of Martin Marquard in 1979. This national meeting was significant because it marked the formation of the Fachgruppe Möbel und Holzobjekte within the Arbeitsgemeinschaft des Technischen Museumspersonals (ATM) renamed in 1984 as the Arbeitsgemeinschaft der Restauratoren (AdR), and incorporated in 2001 into the Verband der Restauratoren (VDR) [150, 151]. While no written proceedings resulted from this meeting, furniture conservators began publishing regularly from 1980 in the *Arbeitsblätter für Restauratoren*, a professional journal founded in 1968 [152].

The next international gathering, held in July 1980 at the Canadian Conservation Institute (CCI) in Ottawa, was a two-day meeting that dealt exclusively with the conservation of furniture and wooden objects [153]. Papers were presented on a variety of subjects and, much more than in Oxford, attention was given to the three aspects of research proposed by Brommelle. Robert Mussey presented his research on 'Transparent furniture finishes in New England 1700–1820,' which made an especially important contribution to the understanding of finishing materials used in the northeastern United States [154]. In the closing address of the conference Philip Ward, then Director of Conservation Services at CCI, stressed the importance of collaboration between scientists and conservators. However, he also emphasized that skill and craftsmanship are paramount when it comes to the conservation of furniture. 'Although no different from any other aspect of conservation in its need for scholarly support from scientists, connoisseurs and historians, it has always depended—and one hopes it always will—upon a core of traditional craftsmanship, skill and experience which can never be replaced by any of the sophisticated tools which are now available to us' [153, p. 147]. There had certainly been progress, even since the late 1970s, when conservation science and conservation practice in the field of wooden objects and furniture conservation were

separate. It is clear that during the 1980s the disciplines had rapidly become more integrated.

PROFESSIONAL TRAINING FOR FURNITURE CONSERVATORS

During the late 1970s and early 1980s graduate-level training programs specifically dedicated to the conservation of wooden objects were launched across Europe and in the United States. Non-degree training courses in furniture restoration had begun in Europe as early as the mid 1950s. The Goering Institute in Munich, for instance, began in 1953 while in England in around 1956 furniture-repair classes were offered at the headquarters of the Rural Industries Bureau at Wimbledon Common [50, 155]. In his article of 1959 Ralph Edwards observed that ‘At this workshop two highly-skilled craftsmen with long experience conduct the instruction classes, and are also responsible for carrying out, under my supervision, the restoration of furniture in what may be called the museum category from historic houses...’ [50, p. 1136]. The ICOM questionnaire (discussed above) indicates that the restorers at the Rural Industries Bureau practiced conventional restoration techniques, using both traditional and contemporary materials [106]. They were familiar with John Rodd’s 1955 book [67] and kept written and visual documentation of their work [106]. Since the 1960s, the conservation department at the V&A has offered training in conservation for its own staff and has accepted up to six student internships for a four-year period [52].

It was typical throughout Europe in both museum-based and academic training programs that older and highly skilled craftsmen/restorers assumed responsibility for training young conservators. Practical instruction was combined with a curriculum that included a wide variety of courses such as art history, applied science, chemistry and conservation ethics. By the late 1970s, several formal undergraduate and graduate-level (furniture) conservation programs had been introduced by various institutions across the globe—including those offered through The Henry Francis du Pont

Winterthur Museum and the University of Delaware, The London College of Furniture, L’Opificio delle Pietre Dure in Florence, the Institut Français de Restauration des Oeuvres d’Art (IFROA) in Paris (recently renamed the Institut National du Patrimoine (INP)), and the Opleiding voor Restauratoren in Amsterdam. As a result, graduates from such training programs began to appear in the field in the next decade. Whereas older generations of furniture conservators had worked in a fairly isolated environment, the new wave of academically-trained conservators sought the stage with confidence, aiming to become equal partners in discussions with art historians, curators, administrators and conservation scientists.

CONCLUSION

For centuries furniture repair and restoration has been the domain of journeymen, cabinetmakers and amateur woodworkers. Influenced by progress in emerging conservation disciplines and with the support of professional organizations such as ICOM, IIC, ATM and CCI, furniture conservation firmly established itself during the late 1970s and early 1980s. It is the intention of this author to review developments in the furniture conservation profession from c. 1980 in a subsequent contribution to this journal.

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