Visions on Furniture

The growing interest in Modern furniture, which by now can also be of a respectable age, has lent a new dimension to the profession of furniture conservation. New materials and techniques demand new conservation solutions.

By Jurjen Creman

Training

During training as a furniture conservator, the emphasis is often on historical cabinet–making techniques, materials and furniture styles. Students learn a lot about traditional joints, veneer and marquetry techniques, carving, wood species and the many kinds of clear and painted wood finishing.

The profession of furniture conservator lies between craft and science. On the one hand, there are the restorations based on historical cabinet–making techniques, while on the other, there is conservation science with its new materials and techniques. Material–technical research also forms part of the furniture conservator's area of expertise.

20th Century Furniture

Furniture from the 20th century differs in two respects to furniture from preceding centuries made using traditional methods.

First of all, there is often a lot more information available about these pieces of furniture than about their predecessors. The makers and designers are known and are sometimes still alive. There are many documents including specifications and drawings containing information about materials and techniques. A great deal of attention has been devoted to Modern furniture and its manufacture in contemporary trade journals. Furniture manufacturers had catalogues made with a lot of material–technical information and there are many photos, in both black and white and colour that can provide the conservator with information about the history and original appearance of the furniture.

The other point on which they differ is the materials and techniques that were used. The 19th century saw big changes in the furniture industry. The machine made its entry leading to changes in furniture construction and joints. Mortise and tenon joints were machine–made and dowels began to be widely used. New materials were created like plywood, blockboard and chipwood. The hide and bone glue used from time immemorial was replaced by modern synthetic glues developed by the chemical industry, which also fostered the development of many new stains and varnishes. In addition to the machine–made furniture produced by factories, furniture also continued to be made using traditional methods in the 20th century.

Zig–zag Chair

A Zig–zag chair designed by Rietveld in 1932 for the Amsterdam interior design firm, Metz & Co, was restored by my workshop a few years ago. It was made of chromium plated tubular steel with a seat and back made of woven cord. The chair was probably a limited edition, since there are only a few known specimens. Four chairs can be seen in a 1933 photo during the furniture presentation *"Op het Dak"* (On the Roof) in the cupola of Metz & Co. [figure 1].

The *Centraal Museum* in Utrecht purchased this chair. The back was still in place in a worn and very dirty condition, but the seat was missing completely. The chrome was extremely damaged and partially missing. The tubular steel was badly oxidized.

Because of the original condition, it was decided to restore the chair with minimal intervention. The frame consists of two parts, which are joined at seat height. The frame was dismantled at this point enabling us to push the damaged back carefully away from the frame. A textile conservator washed the woven back and bleached unsightly brown stains as well as possible. The cord around the tubes was badly affected by the rusty steel. An almost invisible protective and strengthening layer of tulle was applied. Loose and broken pieces of cord were fixed to the support layer of tulle. Missing pieces of cord were woven in with new material, so that the back looked complete again. The traces of wear remained visible. The new seat was woven with cord matching the original. The photo from 1933 was able to provide a definitive answer about the number of threads to be used.

After consultation with a metal conservator, the tubular frame was cleaned and the rust was removed. It was inevitable that many small flakes of chrome were lost in the process. Several large flakes of chrome were fixed in place with synthetic glue. The frame was polished after the rust had been removed, bringing back the shine of the

< Figure 2. Zig-zag chair after treatment.
Collection Centraal Museum Utrecht. Photo by Jurjen Creman.

Figure 1. Metz cupola with table and zigzag chairs.
Photo from Rietveld *Schröderarchief*/Centraal Museum, Utrecht inv.nr. 192 F 008. Image & copyrights CMU/ Pictoright, Amsterdam.

remaining chrome. It was also treated with microcrystalline wax to prevent the steel from oxidizing and to preserve the shine.

The chair's original material in this restoration was preserved as much as possible. The end result is a chair with obvious traces of wear that gives us an idea of what it once looked like. There is harmony between the badly corroded chrome of the frame and the discoloured seat and back. With this minimal intervention treatment, the chair has lost its functional purpose but gained in expression. The functional aspect is of less importance to museums. They value originality in material and construction.

This chair is now missing the crisp, clear design it had directly after manufacturing. Only a replica can show the novelty of the design in pristine condition. The restored chair can serve as an example for a replica and can be kept in its present condition [figure 2].

Paintwork

My workshop has a lot of experience with furniture designed by Gerrit Rietveld, mostly painted furniture from the Interwar period. The underlying principle with all of our restorations is maximum conservation of the original materials with minimal intervention. A lot of the restored furniture comes from collections and will no longer be used in the future. This means that the treatment can be particularly conservational.

Paint analysis is often carried out prior to the restoration. Paint samples are taken from several places from each piece of furniture. By using UV light on cross-sections of these paint samples, we can determine what the first coat of paint looked like. We can also determine by means of various analysis techniques, which pigments and binders these first coats of paint consisted of [figures 3, 4].

Since painted furniture is subject to wear, it was often repainted a number of times. The coats of paint that were applied later differed from the original coats in colour, texture and gloss.

Material-technical and archival research shows that the original coats of paint were applied in a particular way and with a specific purpose. Rietveld often applied the paint directly to the wood. As a result, the texture of the wood remained visible through the coat of paint. Parts of a piece of furniture were also stained and varnished or waxed. He used these techniques deliberately to accentuate the wood. Many of Rietveld's drawings mention using these specific surface treatments [figures 5, 6].

When furniture is repainted, the effect of the first coat disappears. If a decision is made during a restoration to go back to the original finishing phase, this can only be achieved by removing the overpaintings and exposing the original surface. Applying a historically sound new coat over the overpaintings will never approach the effect of the first coat applied directly to the wood. Stripping a piece of furniture and applying a new finishing coat is not an option either, because the original material disappears as well.

Unlike buildings, furniture hardly ever appears to have been stripped before it was painted over. In many cases, they have scarcely been sanded or degreased. This means that removing overpaintings can sometimes turn out surprisingly well. The exposed original finishing coats give us a good idea of what the furniture once looked like, even when these finishing coats are badly damaged. Removing overpaintings, however, is a very difficult and time-consuming treatment.

Future

There are unfortunately very few examples of old furniture remaining that are still in their original condition. They have often been restored or have undergone structural changes. Original finishing coats and upholstery are a rarity. We do, however, regularly come across examples of 20th century furniture in completely original condition. These are unusual pieces that together with their documentation form an exceptional ensemble.

The challenge for the furniture conservator in this case is to perform the work in such a way that valuable information does not get lost, but, instead remains accessible to future generations. Sound knowledge of new materials and techniques is indispensable in these cases. This means that even more research will have to be done to be able to identify materials.

Buildings and interiors are often designed together

with the furniture. Since furniture suffers less than buildings, we can sometimes find materials and finishing coats on the furniture that have long disappeared from the building. The restoration of buildings should therefore go hand in hand with the restoration of interiors and furniture. And yet we often see a difference in how the work is done. Good cooperation between the conservators involved is essential for a well–balanced final result.

References

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Jurjen Creman

Born in 1964, he is a furniture restorer/conservator who specializes in the restoration, conservation and study of 20th century furniture. He was involved in the retrospective of Gerrit Rietveld's work in 1992–93 and in the restoration of Huis Sonneveld, a Modern house in Rotterdam. He has been researching and restoring Modern furniture and interiors in his own workshop since 1997, with special attention being paid to their material and structural properties. Jurjen's speciality is furniture made by Gerrit Rietveld.

Figure 3. Back of high chair. Collection Centraal Museum Utrecht and Stedelijk Museum Amsterdam.

Figure 4. Detail of back with original ultramarine blue paint and partly (dark blue) overpainted. Collection Centraal Museum Utrecht and Stedelijk Museum Amsterdam.

Figure 5. Zigzag piano stool. Private collection, The Netherlands.

Figure 6. Detail of zigzag piano stool with brushed wood grain and whitewash. Private collection, The Netherlands.

Photos by Jurjen Creman.