

Ingrid Stricker

Chandelier Restoration

The German word «Lüster» (eng. Chandelier) is used in reference to a historic lighting fixture made of glass or with glass decoration, and is derived from the French word "lustre" = brilliant. This term was coined at the court of King Louis XIV, around 1700, as high-quality decorative pieces as well as everyday objects were introduced. As an expression of the highest luxury, they were among the most expensive pieces of furnishing in palaces and residences. Initially reserved for formal rooms and galleries, other rooms used for the ceremony of court life were later also decorated with such pieces. As with the rest of the room decorations, they were designed by the architect to suit the room size and style. In later centuries, it was not only the nobility who installed magnificent chandeliers to demonstrate their wealth and status.

Abb.1 – historical chandelier after restoration, Emperor's Hall, Residence Würzburg

Abb. 2 (left) The chandelier in an old photo from the 19th C.

Abb. 3 (right) The chandelier before the restoration in 2005

In the 19th C. Baroque chandeliers were frequently re-structured as more light was required. In doing this, decorative vase parts were removed to make more room for extra candles. With the invention of electricity and the Edison lightbulb, the chandeliers had outlived their pinnacle. The candle gave the chandeliers a more festive light but electrical lighting was far easier to use and more practical. The insensitive addition of electrical cables in historical chandeliers lead to alterations, drilling and breakage of glass. Through the two world wars, and then the reduction of trained household personnel, many old chandeliers have been lost. Glass is a very robust material and ages well, but it is also breakable. Chandeliers require complex maintenance in order to retain their beauty and condition. According to whim, they were moved, trimmings were rearranged by unskilled people, taken apart to be cleaned and then frequently incorrectly rebuilt. Broken glass trimmings were disposed of and missing parts simply replaced by whatever one had on hand that more or less fit in the empty space. There are therefore, very few historical chandeliers that have remained unchanged over the years.

The basis of a complete chandelier restoration begins with the time-consuming reconstruction of the original, well thought-out plan for the montage of all the trimmings. An inventory of the existing parts as well as a comparison of similar chandeliers and other sources must be made. A careful analysis of the materials, techniques, forms, surfaces and how they have changed are essential in developing a plan for proceeding with the restoration. Only with the appropriate experience and knowledge can the style, form and size of the missing decorations be deduced from the supporting structure. Understanding the construction and the renovation of the static of the load-bearing parts are of crucial importance. The analysis of the chandelier to be restored leads then to a "blueprint" with numbered sections, and with damages and additions being noted.

Abb.4 – Example of a chandelier "blueprint"

The Renovation

The static of the load-bearing frame is just as important as the restoration of the glass-trimmings. Due to the development of modern adhesives, cracks in glass can be stabilized and broken glass can be almost invisibly glued by the restorer and therefore retained.

Abb. 5 (left) – Glass repaired with adhesives

Abb. 6 (right) Glass trimmings

Seldom is it possible to order replacement glass parts from a catalogue. Therefore, missing glass parts for historical chandeliers must usually be specially produced by an expert glass maker. This is an expensive and elaborate process. Once the missing parts have been determined, the pieces are then sketched in 1:1 scale drawings. A form maker has to then make fire-proof negative copies of the original pieces. Now the experienced glass workers working in small workshops are able to make the replacements using the appropriate techniques. The master glass-maker presses or blows the colourless glass in to the negative form. (Abb. 6 + 7)

Abb. 7 – Negative form, with positive result

Abb.8 – glass cutting

Special techniques are also necessary to attach the glass trimmings to the supporting frame so that the “floating” artworks do not lose any pieces of glass. Especially on Baroque chandeliers, the fine wires that were used to mount the trimmings have blackened and corroded over time and therefore break easily. This can happen during cleaning of the object, but also a draft which causes the trimmings to move in the breeze can result in breakage of the supporting wire and thus glass breakage. These pieces of glass can shatter in to countless shards, damaging the parquet flooring and also of course, harming people. Therefore, it is always recommended to replace all of the wires attaching the trimmings to the frame, using historical techniques. Most of the time, bent and deformed metal framework must also be re-aligned and corroded metal connection points on the frame such as threads, need to be re-cut. Lost nuts in historic form must be made and completed so that the static and load-bearing capacity are restored. This is the specialty of trained metal workers, that require experience in chandelier construction and appropriate special machines for metalworking. Contrary to the supreme premise in restoring of not taking apart works of art, the glass trimmings must all be removed in order to restore the supporting metal frame. The oxidized metal surfaces are treated with solvents, this is done in baths with extraction systems. Likewise, the galvanic surface finishes are treated and then finally an application of transparent protective coatings to protect against renewed tarnishing of the metals. After the restoration of all glass and metal parts, the re-assembly is carried out according to the “blue-print”. This is usually done, as in earlier days, on location in the historic room where the chandelier will hang. Therefore, the fragile glass parts must be packed to protect against breakage and transported. The montage of the glass trimmings is one of the last steps of the restoration. Again, this has to be done according to the type of chandelier in the appropriate historical technique.

Abb.9 – Metal parts, arms and drip-pans

Abb. 10 – wiring of trimmings

Abb. 11 (left) velvet sleeve with cord

Abb. 12 (right) Silk tassel with gold décor

The type of suspension on the ceiling in the room must also be seen as a part of the complete work of art of the chandelier and be treated with academic precision. There were silver or gold-plated chains and textile covered cords, also hangings that were clad with precious fabrics and decorated with elaborate trimmings according to the style of the day and chandelier type. Again, the academic research is a pre-requisite for a coherent implementation and collaboration of the gilder, upholsterer and passementerie maker.

As "furniture of the skies", the chandelier mediates between man and the space in the upper regions of a room. As a valuable work of art, it immediately implies the respective function of a room and the position of its owner in society. Because there are neither chandelier collections nor museums, art history has the art genre "Chandeliers" and historical lighting neglected. Due to the variety of construction methods in each style epoch, the restoration of a chandelier is still a special field of its own: it requires a wide variety of knowledge and work processes from various areas of restoration and special cooperation with artisans. Because of the research work involved and the glass restoration involved, the coordination and management of these crafts-people fall usually within the category of artistic handicraft restoration.

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