GILDING ON WOOD
TECHNICAL STUDY DAY III
30th May 1998

1. An overview of historic gilding practices

Christine Thompson, a partner in Robert Mussey & Associates, who had flown over specially from Boston, set the scene for us with an absorbing overview of the history of gilding on wood from the time of Tutankhamun through the Roman era to the present.

Well-illustrated with excellent slides, it provided the ideal introduction to the day's studies. The fundamental purpose, she said, was to make the wooden article look as if it had been made from gold. Although the main ingredient had always been gold leaf, many variations had been introduced into the two basic techniques of water and oil gilding, including, for example, the use of gold powder in a binder during the early Ching dynasty. She drew our attention to the combination of matt and burnished finishes in 18th century France, and the development there of the technique of incising lines in a thick layer of gesso, often without cutting into the underlying wood, and the use of moulded decorations as a gilded embellishment of wooden articles. In the final part of her talk she described some of the problems encountered in conservation, as for example where more than one technique has been applied to a piece over its life. She explained how modern materials such as acrylics can be used to advantage, for example where it may be desirable to return a piece later to its condition before conservation. She concluded by showing us a photograph of a striking reproduction of a Daniel McIntyre carving which she had personally gilded.

Ivan Turner

2. The Production of Flat Glass and Mirror Frames by Graham Child

The mirror is now so familiar to most of us that we hardly give any thought to its production. Graham Child took us into an extraordinary, dangerous and challenging world of the history of the manufacture of the mirror.

Early looking glasses were of great status as shown in Van Eyck's painting, *'The Betrothed'* and again in the royal scene of Charles II as Meninas by Velazquez. This was not only because of their fragile nature but also the complex and expensive manner of their production.

In the 1500s the mirror was of prime importance; the frame merely a protector. By contrast, an exquisite example from the late 17th century was shown of a beautifully embroidered frame, which helped highlight the mirror.

Technological advances which led to the manufacture of flat glass within Europe can be traced back to the innovations at the Murano glassworks during the 13th century. However the manufacture of flat glass on a commercial basis continued to be a technological challenge and inevitably a closely guarded secret.

The three historical processes, employed to make flat glass up until the early 20th century, were summarised.

Crown glass

This involved gathering molten glass from the crucible on the end of a blow iron which is about 4–5 feet long, 1/2 to 1 inch in diameter. A punty (a solid iron rod) was attached opposite the blow iron, and the blow iron was detached from the body of the glass with shears.

The punty was then rotated rapidly so causing the glass to spread out into a circular disk extending up to 60 inches in diameter. Only small sheets could be produced in this way. When the punty was detached it left a characteristic uneven thickening – the bull's eye in the centre. This was illustrated by slides from Diderot's Encyclopaedia.

Broad Glass

A large cylinder was blown and then placed on a marver. The two ends were cut away with shears and cylinder cut longitudinally and allowed to fall flat. This produced irregular glass by today's standard.

Plate Glass

The plate glass process was developed to make larger sheets of flat glass with a consistent thickness. The earliest method involved the use of cylinder glass which was rolled flat on a table prior to a finishing process involving grinding and polishing.

By 1688, letters patent had been granted by Louis XIV to a number of French innovators to produce plate glass by the casting process. This involved producing molten glass in a furnace, annealing the glass in ovens and pouring the metal onto a large casting table. A process of grinding and polishing followed, using very capital intensive machinery.

An early and spectacular use of plate glass is to be found within the mirrored interior of the Grande Gallerie at Vessaille, which dates from the 1680s.

Matthais Lock used the joining of mirrors as part of his design. Thomas Chippendale and John Linnell ordered their glass from France even though England was making its own plate glass intermittently from the early 17th century.

Graham Child was an enthusiastic and very informative lecturer, covering a broad area. Maybe now we shall appreciate our mirrors more.

Phoebe Shaft

3. Historical Changes in Ground work and clay Bole in England by Martin Body, Director of Giltwood Restorations.

Martin Body's concise lecture started with outlining his own traditional technique for the preparation of 18th century carved mirror frames. To illustrate his talk he brought a wonderful array of gilded and part-gilded examples of period work. Pine was the most commonly used timber for carving. The surface is prepared for gilding by brushing on a coat of hot Rabbit Skin size. Once dry, this is coated with eight coats of gesso, papered and the detail chiselled into the gesso. Three or four coats of clay Bole are applied which are brushed smooth with shoe brushes ready for gilding. The surface is wetted with water to create a surface to which the gold leaf will adhere.

Martin then went on to talk about the development of groundwork from the beginning of the 18th century:

From 1700–1740 Mirror frames were quite cluttered with detail. The surrounds would be of carved wood with areas of flat ground to which were applied up to 30 layers of gesso. Flowers and leaves were carved into this surface in low relief to within a whisker of the wooden substrate. The areas left uncarved were either coated with sand or shallow-decorated with a pattern applied with a metal punch. Thus each frame comprised three quite different methods of applied decoration. At the turn of the 18th century the Bole used was a dark wine red whilst putty colour was used under silver leaf.

1750–1760 With the arrival of the fashion for Rococco, the wood carver began to dominate the work with gesso carving serving to highlight and emphasise the work of the carver. Martin distinguished between French and English Rococco work; the English being rather more relaxed and fluid in execution partly because English carvers & gilders used chisels pushed away from the craftsman whilst the French used scrapers in a drawing action allowing for a tighter, more meticulous discipline.

The Bole colour remains red but sometimes with a yellow underneath to create a more fiery finished colour. Martin has seen pink Bole revealed on worn mid-18th century gilding but believes this colour to be a bloom such as is seen on oil painting when varnish is being cleaned.

1785 Saw a return to shallow gesso carving as he illustrated with a slide of an Adam side table. About this date a grey/blue Bole appears giving a lighter, paler effect to the finished gilding. This colour runs alongside the red for some years, but the two colours are never found on the same piece. At this time 'Compo' is first produced. A widely-used method of moulded, applied ornament made from Scotch glue, linseed oil, white spirit and pressed into firmly carved wooden moulds (wonderful objects themselves). These mouldings were flexible and easy to apply and needed no re-carving.

1810 Martin cited the interesting example of an architectural overmantel mirror at Sir John Soane's home in Lincolns Inn Fields which has a blue/grey over a yellow bole. This period saw the introduction of black bole on the leading highlights of mirror frames and furniture.

By 1830 All English gilding is over a blue/grey bole whilst French work continued to use red as in the 18th century.

Martin finished his lecture on gilding groundwork by touching on some of the 'archeological' problems he faces as a restorer. It is quite common to find pieces which have been gilded two or three times in their history, each level of gilding placed over the last, clogging up the detail, and each with a different colour bole substrate. There was no time to discover the complexities of removing later levels of gilding without damaging the original!

Jeremy Bate

4. The use of Gesso in Parisian workshops by Caddy Woodforde of Carvers and Gilders

Caddy gave an informative talk with excellent slides about her work in the Parisian atelier of Jacques Goujon, a 6th generation gilder and carver. There are 14 people who work in this atelier, recreating and restoring carved and gilded work. Of particular interest was Caddy's discussion of the cutting of gesso with iron hooks. After applying the various layers of glue and gesso, details of decoration are brought out by recarving or chasing with these tooling irons. The use of these tools achieves a crisper line. Parisian woodcarvers would typically leave the details on a gilded piece of furniture, particularly chairs, to the gilder. Once the tooling was completed, the gold leaf could be applied. The gilding could then be burnished or left matt, whichever effect was desired.

Tooling and cutting was very popular in the reign of both Louis XIV and Louis XV. Fine cross-hatching was often used. In the Rococco period, cutting was especially used to accentuate the design. English cabinet-makers used chisels for their cutting.

For a short period, other shades of gold, in addition to yellow, were used. For instance, green-gold would be used for a contrast. With the advent of Louis XVI, very stiff, fine decoration was the goal. Perfection is everything and the tooling design has a metallic feel. The Empire style used less cutting, with bright, clear red clay undergesso.

Caddy's slides and description, even of the smells of the atelier, were very evocative. Her lecture was interesting and informative and dovetailed well with other speakers' talks.

Anne Rogers Haley

5. French 18th century gilding by Colin Jenner

For the second lecture of the afternoon Colin Jenner, Gilding Conservator at the Wallace Collection, introduced us to 'L'Art du Peintre, Doreur et Vernisseur' first published in 1772 by Jean Felix Watin (b. 1728). This practical manual offers recipes and sequences of working for oil and silver as well as water gilding; the latter being Mr Jenner's focus. The emphasis is of course on the preparation of the surface, the use of gold leaf itself being mentioned at stage twelve out of a total of seventeen. The sheer quantity of detailing at each stage precludes their reiteration here, but a notion of the text may be given by outlining the procedures for the initial sizing of the wood to be gilded. It should, according to Watin, be washed with the alcohol extract from the Absinthe plant, 'a good handful', mixed with two or three heads of garlic. This is then reduced to half its consistency and strained through linen, before half a handful of salt together with a fourteenth of vinegar are added. This mixture is used to kill any bugs and wash the wood. A coat of good and hot glue may then be applied with a wild boar hair brush.

The stages continue with the usual layers of gesso, smoothed with dogfish skins and further refined with shaped sticks and stones. Any carving is redefined using gesso hooks; such work to be carried out by the most regarded craftsman of the peintre-doreur, the reparer,

accounting for up to a third of the overall cost. Smoothing with Prele (wet reeds) is followed by the application of yellow size (not clay as in England) all over; sparingly to maintain the re-cut details. Burnishing clay with additions to assist colouring, ranged from the use of soap to burnt bread. After wetting with melted ice (to avoid reactivating the glue) gilding commenced. Gum arabic dissolved with Gamboge, Anatta, Centres Gravelees or Dragons Blood is applied to deep areas of the decoration, to give 'fire and glint to the gold', and finally a protective layer of glue size overall is applied. As well being an author, Watin was a 'Vendor of Colours Golds and Varnishes'. In discussion the question was mooted as to whether his detailed text was to benefit tradesmen, as he claimed, or himself. Were the recipes genuine, and if so, what was the role of the guilds? With access to Watin's materials being limited, replication poses problems. Mr Jenner continues his researches and will make available his facsimile of the book to those interested. Our thanks to him for this generosity and for a most stimulating lecture.

William Vincent

6. The Decorative use of Gilding in Japanning Techniques – Margaret Ballardie, Freelance Conservator and Lecturer

This was the last lecture in the series and the attention of a flagging audience was quickly attracted by the dynamism and enthusiasm which Margaret brought to her subject. She launched into an introduction to the art of japanning and explained the origin of the materials used. She taught us to distinguish between shellac-based lacquer work and the *urushi* lacquer which uses the sap of the tree *rhus verniciflua*.

Margaret produced some very interesting slides, beginning with examples of Chinese work of 250 BC. She pointed out that early decoration did not involve the use of gold and colours were limited to vermillion and black as many pigments cannot stand up to the acidity of the *urushi*.

Turning to examples of Japanese lacquer work, Margaret explained how small decorative pieces were prepared. The design is painted in lacquer and sprinkled with metal powder while it is still wet. This technique involves the use of small bamboo 'dusting tubes' to deliver the gold dust and 'rat-hair' brushes which are extraordinarily fine and shaped like a pencil.

Other slides were used to illustrate techniques where the design is first executed in gold and then covered with several layers of lacquer of the same colour as the background. These layers are then polished away until the design reappears flush with the new background.

Margaret then turned to Europe and the importation of lacquered panels and pieces with Chinese subjects and the development of japanning. Referring to a slide of a cabinet, she showed how the designs had been interpreted from Stalker and Parker's Treatise on Japanning and Varnishing, first published in 1688.

During the second part of her talk Margaret showed slides relating to her own work. Beginning with an

explanation of the techniques she used, she demonstrated how her tools varied from the traditional Japanese ones and how the work required the ability to adapt methods to suit different size projects.

A good example of this was a commission to restore an incredible room with no less than forty panels of japanning. Once a large mansion house, it had been used by a girls' school for eight-year-olds and the panels had been badly scratched by the young girls' feet. One panel was peppered with drawing pins and one part of the ceiling had been scraped bare. The original panels were executed c1860. Lined in silver, they had been shellac'd over so that when the sun came out they lifted in the light. The room was to be transformed into a bedroom with ensuite bathroom. In the restoration process, Margaret used aluminium leaf in place of silver with gamboge or dragon's blood on top of the aluminium. She pointed out that a similar method had been used in the Wurtsberg palace where silver had been coated with green glazes. Conserving as much of the original as possible, she skilfully restored the damaged areas.

Finally Margaret recommended that we visit the branch of Barclays Bank opposite the Ritz Hotel in London. Originally built for Wolsey Motors, it was taken over by the bank when Wolsey were no longer able to show their cars in the West End. Margaret suggested obtaining access to the offices upstairs to see the remarkable combination of camels and chinoiserie decoration.

A lively speaker, the breadth of Margaret's experience and knowledge was evident in the variety of examples she brought before us. This was a very satisfactory conclusion to a most illuminating day.

Ann Erkut