

GILDING & TRADITIONAL SKILLS

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Day Two: Raised Gilding with Gesso – Notes taken by Ronnie Cruwys

This is the day that my gold shone and I learn that the real art here is to be able to move into the right frame of mind for illuminating, no matter what's going on in your day.

Laying gesso already prepared

Gilding on raised gesso can be carried out using traditional gesso, and now, an alternative can be used with calcium carbonate instead of plaster of Paris. Both were sampled in the class.

Raising the gesso

It is important to get the gesso to sit proud of the vellum, and avoid it sagging in the middle. If the gesso does dimple in the middle, it can be dampened and more added, then left to harden. It makes a considerable difference to burnishing if the surface is scraped with a round edged blade, to level off irregularities and then burnish hard with the heel of the burnishing tool bringing the gesso itself up to a shine.

Air bubbles

These can pit the surface and arise out of the tiniest amount of stirring. One way to avoid them is to use a quill when applying the gesso which seems to alleviate the bubbles, or use a drop of clove oil stirred into the gesso. A more traditional method was earwax which I have yet to hear whether is a satisfactory option. Careful, slow minimal stirring reduces the problem in the first place and it is best to add a few drops of water to a gesso button a few hours before you need to use it so it is well softened through.

Humidity

This is essential to get right. 63-73% is the optimum level, use a humidity meter.

- Day One: Apply gesso and leave for a day to harden.
- Day Two: Scrape and burnish the gesso. Touch up and trim where necessary.
- Day Three: Apply gold leaf and lightly burnish in place using crystal parchment paper. Check to see that gold has been applied to every visible surface of gesso and re-gild if required.
- Day Four: Check that humidity is not too high that it lifts the gold. Burnish small area through crystal paper and if it holds, try a small burnishing a small area directly

Applying the gold leaf:

Place all your tools close to hand. Have the vellum taped on the plate glass ready. Burnishers beside you, sharp scissors for gilding and small sections of single transfer gold and double leaf gold cut ready to apply. Lean close to the gesso and breathe 3 deep breaths. It is the moisture from the final part of the out breath that provides the key to activating the adhesives in the gesso. As soon as the third breath is exhaled, place the transfer gold on to the gesso, quickly pressing in place with your fingertip.

Lift backing and reapply another layer immediately. Speed is vital here. Then, check that all gesso has been covered *minding edges in particular*. Breathe again and re-apply where it is missing. Still working quickly, breathe deeply and apply the double loose leaf, as many layers as will stick, noting that 4 or 5 layers are needed to provide a really good burnish. Place the crystal parchment over and lightly burnish. Then, leave for a day to set.

Mind not to over-breathe as too much moisture can soften the gesso.

When the gold has fully adhered, try a gentle burnish first with crystal paper and if the gold does not lift, then burnish hard to bring the shine up to a mirror. A haematite burnisher is ideal as it builds up heat which bonds the gold, but it is expensive. In the meantime, use the heel of an agate burnisher remembering to wipe it routinely with a silk square.

Making Traditional Gesso

Four key ingredients: (obtainable from L. Cornelissen, Great Russell St., London)

- Plaster of Paris
- Lead Carbonate (Flake white)
- Seccotine
- Sugar

Plaster of Paris forms the bulk of the ingredients and provides a cushion base for the gold. Slaked Plaster of Paris was referred to as “Gesso sottile” by Cenino Cennini in *The Artist’s Handbook*. Unslaked, the plaster feels silky. Dental plaster gives the finest finish and has no impurities. When water is added, it produces heat and the slaking process removes this heat reaction. Start the process with water, then sprinkle plaster in, stirring constantly until the heat has dissipated. Let the mix settle before straining it through a cotton sheet. Leave it to dry.

Lead Carbonate (flake white) is a very fine powder which fills the small gaps. The lead acts as a fungicide in the gesso.

Seccotine is a fish glue. This gives stickiness for the gold to adhere to and pliability.

Sugar is another element of stickiness but it is also hygroscopic, i.e. it takes moisture from the breath and moves it through the gesso. The sugar must not contain pectin and be ground to a powder in a pestle and mortar.

Proportions of the above ingredients: 8:3:1:1

However, for gilding in optimum conditions and to obtain a very high burnish, increase the proportion of Plaster of Paris to 9:3:1:1.

For drier conditions which calls for a stickier mix use a mix of 8:3:1:1½,
Or 8:3:1½:1½, 8:3:1½:1. However, this does not achieve the same quality of burnish.

When measuring out the ingredients, use a mustard spoon or similar. Measure the ingredients out into piles on a sheet of paper (folded to give a crease line to gather the mixture). Add a pinch of Armenian Bole for colour contrast and grind ingredients in

a pestle and mortar until all mixed well. Use a dropper of water to wash all the secotone into the mix and continue adding water until arriving at a thick creamy mixture. Eventually, any water used in the mix will evaporate.

Using the spoon, pour tiny dots of gesso (aim for 1cm) onto a sheet of tin foil and let it dry. Peel off the dots and store in an air tight jar for later use, labelling it up with the proportions used.

Alternative Gesso Mixture (by Lorna Banbury)

Instead of Plaster of Paris, use calcium sulphate dehydrate (CAS04).

Mix, rather than grind, the ingredients. It can clump and feel more lumpy but follow the same steps as described previously until to arriving at a thick and creamy consistency.

To reconstitute gesso: place a gesso dot into a small jar and add a few drops of water leaving it to soften for an hour or so to reduce the appearance of bubbles. Then, carefully and very slowly, stir up the gesso with as little movement as possible. If bubbles do appear, use a drop of clove oil (dab paint brush end in and out) and mix into gesso. Bubbles can also be popped with a fine needle. The mix should be slightly thicker than top-of-the-milk cream.

Laying gesso: this is best by means of a quill with a slightly longer split which seems effective in dispersing bubbles. Dip the quill in, wipe it on the side of the pot, then paint on. Work each area one at a time pulling the gesso in the direction required. For writing in gesso, dilute with more water and apply generously. The gesso has to be thin enough to lay but thick enough to form a cushion. Humidity above 65% will be too soft for gesso, when below 50% humidity, then it will be ready to burnish hard. Burnishing can be a four day exercise. If it is laid in the morning, leave overnight and then scrape and polish it smooth. Leave another night then gild next day, burnishing the day after. It is not to be hurried!

Quills: The first five flight feathers are suitable (even crows feathers used as mapping pens). The feathers are characterised by their barbs. Shortest barbs on the first feather, all short and even on one side. The 2nd and 3rd feathers have a slight curve and longer barrel, with the 4th and 5th feathers having the longest barrels and even feather barbs, but are not quite as strong. Feathers from the birds left wing are suitable for right handers and vice versa. Trim the quill and barbs to pen length being careful not to strip all the membranes as this weakens the barrel. Cut off the end of the quill with scissors. Use a tiny hook to extract the inner membranes to maximise the length of the barrel. New feathers are soft and need hardening. To 'cure' the quill, use a dutching tool. In the past they would have simply been heated or cured naturally. Heating makes the barrels clear indicating they are cured.

To cut the nib: Using a curved blade, remove the feather tip. Make sure you start with the top of the pen then turn the feather over. Measuring about an inch from the tip of the quill, make a scoop cut half the feather depth. The for a second scoop cut below to form the shoulder of the pen nib, ensuring level and even. Holding the round blade above the nib held flat on to a cutting board, rotate it cut. Turn quill back over then make a slit which ends level with the shoulder. Place the quill top uppermost and make a bevelled cut to nib whilst pulling the pen back.

If quills become soft, wrap them in a damp kitchen roll or water to harden them again. Use a small sliver of aluminium from the side of a drink can to form a reservoir in the shape of an elongated 'S', posting it into the quill.

Keep re-sharpening quills, bevelling and cutting the nibs.

Vellum

Look closely and feel the texture to determine the hair side, which is the side best to write on. The flesh side is smooth, light and waxy, the hair side has more texture. The aim of the vellum finish is a fine suede-like texture which will provide a good tooth for writing.

Pieces of vellum above 150mm square in size require stretching to avoid the finished piece from cockling. Buying a whole skin is an economical way to work but watch where each piece is cut. The vellum is thicker where it was around the spine of the animal, and thins at the shoulders. When stretching vellum, use a piece which is of even thickness.

Preparation: Using a block, sand with very fine 'wet and dry' glass paper. Then shake a small pile of pounce on to the vellum and rub it over in small circles with pads of fingers. The pounce absorbs grease and adds the tooth. Salvage any leftover pounce being careful not to breathe it in as it can cause allergies. Finally, *just before writing*, rub in some ground gum sandarac. Make sure all particles are brushed off.

When preparing vellum for painting only, pounce is the only preparation required. Sanding and gum sandarac are only necessary for writing on vellum.

Stretching: Cut a piece of ply, 6mm or thereabouts, to the size required for the vellum. The vellum must be bigger than the ply by an inch plus the thickness of the ply. Anything less is a false economy. *Make sure you allow enough for the piece of artwork, plus space around it, plus the extent of the ply backing then ply thickness and lastly the inch to form the restraint.*

Prepare work area with a magazine (not newspaper). Using a sponge, wet a piece of acid free blotting paper and place the piece of vellum over it, flesh side down. The writing side (hair) must stay dry. Leave it for about ten minutes until it is soft and floppy. This allows it to bend around the ply easily. Meanwhile, cut a piece of blotting paper the same size as the ply, and stick it to the ply with a dab of PVA glue to each corner. This forms the backing. Lay the damp vellum dry side down then place the ply and blotting paper down over it. Cut the four corners out then stick and fold edges over. Tug the vellum over the ply and glue down. Trim away the triangles of vellum using a sharp blade and use a bone folder to push into the edges. Neaten up the back with a piece of smaller card or thick paper.

28.4.04/Ronnie Cruwys/

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