

Materials and Techniques in Western Painting

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Terms and Definitions

Acrylics

Pigments dispersed with acrylic resin (synthetic resins made by polymerization of acrylic acid esters). A medium for painting introduced during the early 1960s. Acrylic painting offers considerable freedom to the artist. Almost any support can be used, and only needs a single coat of acrylic primer. The colors can be put on with an impasto of upwards of 12.5 mm without danger of flaking or cracking. The acrylics can be diluted with water to simulate wash work. They dry out quickly and may be varnished or not as desired.

Alla Prima

To paint a picture in one sitting, particularly applicable to oil-painting. The French use the term *au premier coup*. It is the wisest method where heavy impasto is to be used. The paintings often have a virile life and freshness of color and effect, not always attained by more precisely planned methods.

Altarpiece

A decorated screen, panel or series of panels, fixed or movable, placed on or behind the altar. Normally it would carry paintings or reliefs. Two hinged panels comprise a **diptych**, three a **triptych**, five or more being a **polyptych**. A fine example of a polyptych is the 'Adoration of the Lamb' (from the Ghent Altarpiece) in the Cathedral of St. Bavo, Ghent, Belgium, painted by Hubert and Jan van Eyck.

Beeswax

Has many uses in art, including: mixed with turpentine to make a wax polish for finishing oils, tempera and alkyds; mixed with varnish and turpentine to prepare a painting medium for oils; as a stiff paste with a small amount of turpentine to assist impasto; mixed with Venice turpentine and resin as an adhesive for relining a painting.

Binder

The cementing ingredient of a paint vehicle, its purpose being to hold the pigment particles in a cohesive coating. It can also describe the gum that holds pastels, watercolor and inks.

Bladder

From the mid 17th century artists' pigments when mixed with oil were stored in small bladders. To use them the painter made a small hole with a tack, squeezed out some color then pushed the tack back into the hole. Towards the evolution of the tube, the bladder was followed by a form of syringe. In 1840 the collapsible tube came into being.

Body Color

Descriptive of opaque colors as opposed to transparent.

Casein

A milk protein used as a binder for casein colors. It is prepared by drying the curd from sour milk, then grinding it into a yellowish powder. Casein is only water-soluble in the presence of an alkali such as ammonia, thus casein paints once dry are waterproof. A type of milk curd glue was used by the Egyptians, Greeks and Romans. It has also served as an adhesive for joining the planks of a panel.

Easel

A wooden or metal stand for holding a canvas, a panel or a drawing-board. It may range from a small, light, tripod sketching-easel up to a large studio easel which will take canvases up to 12ft high and which can be raised, lowered, and canted by worm-gears and winding handles or wheels. There are also small easels for resting on a table that will allow a drawing-board to be almost vertical or gently sloping as for watercolor wash work. It was during the mid-19th century that the *box easel*, typically known as the *French box easel* or *field easel*, was invented. Highly portable easels with telescopic legs and built-in paint box and palette made it easier to go into the forest and up the hillsides. They fold up to the size of a brief case.

Encaustic Painting

One of the oldest methods of painting, being practiced from at least 3000 BC. Some of the finest existing examples are the mummy portraits from Fayum executed about the 3rd century AD. The colors are applied to the support with hot beeswax, either with spatulas or brushes, finally being driven in with a heavy hot iron. The method was more or less abandoned in the 9th century. The invention of electrically heated spatulas has brought a slight revival of interest, but it is a laborious and awkward technique at the best.

Fayum Mummy Portraits

A type of naturalistic portraiture practiced in Hellenistic and Roman-ruled Egypt c.50 BCE - 250 CE.

Fresco Painting

An art started by Minoan and other early civilizations. In antiquity they had the idea of painting fairly small portable frescoes. Some of these have been found in Crete and date from about 1000 BCE. Frescoes are painted with pigments which have been ground in water and which are then applied directly on to a freshly plastered wall, while still moist, this method is known as *buon fresco*. When it is painted on dried-out plaster it is termed *fresco secco*. This preliminary drawing is done on the under plaster, known as the *arriccio*. It is usually brushed in with a mixture of reddish brown clay and water and is termed the *sinopia*. In some cases, if it is an elaborate design, a *cartoon* may be prepared and then transferred. It is then worked out as to how large an area the artist can paint in a day and a top layer of plaster, the *intonaco*, is applied. Into this the artist has to work directly and without mistakes. Fresco secco can be carried out with tempera, glue or casein colors. Before making a start, wall should be well soaked with lime-water. The Renaissance produced a host of the world's greatest fresco painters. It started with Giotto in the Arena (Scrovegni) Chapel in Padua c.1305; continued with Masaccio, in the Brancacci Chapel, Florence, (1425-27); Raphael's frescos in the Vatican apartments (Stanze) (1509-11); and the ceiling (1508-12) and altar wall (1534-41) in the Sistine Chapel by Michelangelo.

Gesso

In the broad sense it is a mixture of a plaster or like substance and a glue. Its purpose was to present the painter with a smooth, hard, white ground on which to paint. Owing to its hard brittle nature it could not be applied successfully to canvas or metal sheets. It was from the start intended for application to wood panels. The method was to first either size the wood panel or to size down coarse muslin or linen. When this was dry the first coat of the gesso would be put on, the coarse **gesso rosso**. Two or three days later would be put on the fine **gesso sottile**, and nearly always there would be a number of coats of the latter. When the gesso had hardened it could be smoothed flat, if there were any imperfections, with a block of pumice. The resultant surface would have an ivory smoothness and hardness. The earliest type of gesso made in medieval times used parchment glue and well-slaked plaster of Paris. The curds from long-soured milk were also used in place of the glue. Later recipes included rabbit-skin glue and precipitated chalk and whiting. The gesso could also receive the imprint of tools with decorative gilding, and be coated over moldings or other decorations included with the panel.

Glaze

Applied to painting media, the term glazing means the laying of a transparent color over previously laid and dried-out pigments that may be opaque or transparent. With water-glazing only water need be added to the colors, with acrylics just the acrylic medium and water. For glazing with oil-paints, the diluent can be such as: linseed oil, poppy oil, turpentine or white spirit. Glazed colors appear to advance while opaque recede. Very rich translucent effects can be gained; for example, note the extreme richness of crimson in some of Titian's paintings, obtained by glazing over these areas with lake.

Gold Ground

Many of the painters of the 15th and 16th centuries used grounds either covered or partially covered with gold-leaf. The underlying ground would be gesso. On top of this would be brushed a thin coating of a red earth, a **bole**, often the one termed Armenian. Next an adhesive was put down, this was often glair, which was egg white with a little water. Then the fragile thin gold-leaf would be picked up on a wide, soft, hair brush called a tip, and laid in position. Before it was totally hardened, decorative work with patterned iron or steel dies could be done. When completely hardened an agate burnisher could bring up the desired sheen. The most suitable medium for working on the gold was tempera; oil could be used but with this there could arise adhesion problems.

Gouache

In a broad sense it is a watercolor carried out with opaque or body colors instead of just transparent. The earliest signs of the method are traced back to the Egyptians, when they bound their pigments with either gum tragacanth (a natural gum) and/or honey. Durer used the colors in his closely observed nature studies, and it was popular with the French, Italian and Swiss watercolorists who saw the possibilities of the attractive chalk-like finish that comes up when gouache dries.

Grisaille

A type of monochrome painting executed in greys. The results often resemble sculpture. Excellent examples are St. John the Baptist and St. John the Evangelist located on the backs of the two folding sections of the 'Adoration of the Lamb' by the Van Eyck brothers in St. Bavo Cathedral, Ghent.

Ground

The name that is applied to the coating of the surface on which the painting is to be carried out. Thus gesso is the ground for a wooden panel. A canvas is given a ground by sizing and then priming. Painting surfaces such as watercolor papers, boards and parchment act as ground and support at the same time.

Gums

The principal binder for watercolor is gum arabic, it comes from certain acacia trees growing in Africa, Asia and Australia. Gum tragacanth is used as a binder for chalks and pastels; it is procured from a shrub *Astragalus*, a native of Asia Minor.

Impasto Technique

Use of thick layer(s) of paint or pastel; hence *impasted*, or *impastoed*.

Magna

The brand name of an acrylic resin paint, developed by Leonard Bocour and sold by Bocour Artist Colors, Inc. in 1947. It is very different from modern acrylic paint, as it is composed of pigments ground in an acrylic resin brought into emulsion through the use of solvents. Magna paint has more of a shine to it than paints now- a glossier finish. Modern acrylic paint is water-soluble, while Magna is miscible with turpentine or mineral spirits, though both can dry rapidly to a matte or glossy finish. It was used by artists such as Barnett Newman, Morris Louis, and Roy Lichtenstein. Lichtenstein used magna with oil paints.

Mahlstick

A long wooden rod with a pad at one end that is used by the painter to steady his hand when working on fine details. He holds the mahlstick in his left hand and lays the pad on the canvas and then rests his right with the brush on the stick.

Medium

The method in which an artist works; oil-painting, gouache, pastel, pen and ink, etching, collage, sculpture, etc., are all media for his expression. In another sense medium may be used to describe an additive to the colors when painting, linseed to oil-paints, egg yolk to tempera, gum to watercolor.

Murals

Paintings that are executed directly on to a wall. Media can include fresco (*buon* and *secco*), oils, tempera, casein and acrylics. In all cases the painter must take great care to see that the wall is stable, the surface firm and that it has been prepared correctly for the chosen medium.

Oils

Painters have used an extraordinary variety of oils in their efforts to attain the perfect personal paint consistency and working quality. The chief oil for oil-paints today is **linseed**, although there might be additions of poppy oil if it was desired to slow the rate of drying. In history such as these below have been experimented with, sometimes with injurious effects to the finished painting: walnut, sunflower, hempseed, safflower, rosemary, cloves, pine, poppy, spike and tung.

Oil Painting

This technique was not suddenly invented; the story that accredits its invention to the Van Eyck brothers is incorrect, although they did much to help the evolution of the new medium. Previous to the 15th century the painter had to rely on fresco and tempera, both of which media, as beautiful as they are, lack the power to give the full richness and glow to the pigments. The exploratory steps of adding oil and varnish to egg tempera to raise a brighter, stronger palette were taken by such as Piero della Francesca (c 1410/20-92), Filippo Lippi (c 1406-69) and particularly Antonello da Messina (1430-79). Today the colors are principally ground in linseed oil. Supports can be canvas, hardboard, wooden panels or prepared paper. Brushes are largely hog bristle as they have the strength to control the thick colors; painting-knives are also used for application. The technical procedure is always to start with a lean underpainting and then finish with richer thicker paint if desired. Heavy impasto and glazing can be employed for special passages. When completed and thoroughly dried through, a process which can take up to and more than twelve months, then a resin or wax varnish can be applied.

Paint Brushes

The first known examples are probably those used in Egypt which were simple bundles of thin reeds bound to a handle; the British Museum has one of these and its date is put at about 1900 BCE. Since that time many strange hairs and bristles have been used. Apart from attempts to use human hair; at least the following animals have been tried: horse, cow, ox, black/red sable, kolinsky, weasel, squirrel, ring-cat, skunk, civet, fitch, badger, pony, goat, bear, hog bristle from China, India, Poland, France and the Balkans; and from the sea the Blue, Fin, Sei and Humpback whales have contributed baleen. Plant fibers from Agave, Yucca, Sisal, Bahia, Gumati, Palmetto and Hickory splits have also been used. Broadly stated, hair brushes are for watercolor, gouache, miniature work, inks, tempera while the hog bristle is for oils and acrylics. Brush shapes that can apply to both hog and hair are: round, bright, flat, filbert, sword, rigger, fan or sweetener, mop. In the 18th century small sable or other hair brushes generally set in quills were termed pencils.

Painting Knives, Palette-Knives

Both of these are made of fine tempered steel that is flexible. The palette-knife has a straight handle and is intended for mixing colors on the palette or for cleaning it. The painting-knives have cranked handles to keep the fingers clear from the painted surface; they also have a wide variety of shape ranging from small trowels to long spatulas.

Palette

Essential for color-painting, an artist's palette refers to (1) The instrument the artist mixes his colors on. This may be a traditional mahogany, or other wood, as a rectangular shape or 'hook' or balanced studio. Artists also use metal and ceramic palettes, glass-topped tables, and for outside work with oils there are disposable greaseproof-paper blocks available, which allow a sheet to be torn off and discarded with the color remnants. (2) The selection of colors that the artist uses. In general the early masters used fewer colors than the painters of this century. Partly this can be explained by the fact that the chemist has provided a far greater selection for today's painter; but also the Renaissance masters and those around them normally employed a well-thought-out scheme of underpainting that gave greater scope to the pigments applied on top.

Panel Painting

A popular support until the appearance of canvas during the 15th century. One major advantage of panels, was their very smooth surface, which made them ideal for painting fine detail.

Pentimento

A reappearance of a design, a drawing or a picture that has been painted over. It is a phenomenon particularly associated with oils. It is caused by the medium or vehicle with the overpainting acquiring a higher refractive index and thus becoming more transparent. Some of the paintings by the 17th century Dutchman De Hooch are prone to this condition. He over painted somewhat thinly, and black and white tiles can be seen ghosting through women's dresses and furniture and misty figures appear.

Pouncing (Spolvero)

A method of transferring a design from a **cartoon** to the prepared surface of a canvas, panel, or fresco. Holes are pricked along the outlines of the original design, which is then placed over the surface to be painted. **Pounce**, a fine powder of charcoal, chalk, or clay, is then dusted through the holes to mark the surface below. The technique was used for transferring whole compositions but was particularly useful for repetitive design passages, for which stencils were employed. Dotted pounce marks can sometimes be seen on the surfaces of paintings.

Scumble

The applying of an opaque or semi-opaque color over an area of an oil-painting without completely obscuring the underpainting.

Sfumato

Derived from the Italian word for smoked. It is a well-controlled and subtle method for graduation of tone; it leaves a soft hazy effect. Leonardo used the manner most effectively with the 'Mona Lisa'.

Siccative

A substance added to oil-colors to considerably hasten their speed of drying. Faster than driers, it is intended as an accelerating agent only, not as an equalizer across the whole palette.

Sinopia

A red-brown chalk used as underdrawing in frescos.

Stretcher

The wooden frame that is used to strain a canvas when preparing it for painting on. The four corners are mitered in such a way that wedges can be driven into them to increase the tension on the canvas.

Tempera

Broadly put this term implies using pigments which are mixed with substances such as; egg white, the whole egg, egg yolk, casein, glue and gelatine. In the specialized sense it means the true egg tempera where only the egg yolk is used. This is one of the most permanent media available to the artist.

Tenebrism

Baroque painting technique employed by Caravaggio, Ribera, Georges De La Tour, Joseph Wright of Derby and other painters, in order to focus a spotlight on certain areas of a painting.

Varnishes

Protective coatings for oil-paintings, tempera, acrylic, alkyd, gouache and watercolor. Varnishes may be made from natural or synthetic resins, with additions of natural or synthetic waxes to lower the gloss or induce a desired sheen. Desirable properties include, fairly quick drying, some plasticity, resistance to cracking, blooming and yellowing. The natural resin varnishes that have been used for centuries include: mastic, copal and dammar. In general the modern synthetic resin varnishes behave far better than the natural resins, not producing unpleasant optical appearances or impermanent features. The notorious 'gallery varnish', beloved by dealers and at times the Academy, was a brown deep copal which would impart to a picture a feeling of 'age and respectability' but at the same time make it almost unrecognizable. John Constable was one who suffered at the hands of those who liked to brush this disfiguring 'treacle' over paintings.

Walls

A painting made directly on a wall or a ceiling is termed a mural. The surface of the wall has to be carefully prepared so that the paints will have the maximum chance of adhering. For fresco-painting this implies special plastering. For oil-painting the wall will need to be thoroughly isolated and then given an adequate lead priming. For acrylics the surface should be treated with acrylic medium and water to consolidate the plaster. Large oil-paintings on canvas are sometimes marouflaged (attached) on to walls using a variety of adhesives; the traditional one being white lead and oil, with sometimes a little dammar varnish to increase initial tackiness. Several of the modern synthetics have been used, although they may have the drawback that they are not reversible if it is necessary to move the painting.

Wash

The application of dilute watercolor to a support. The paper on the board should be at a slope of about ten degrees. Plenty of color should be mixed up in a bowl and a large mop brush used. Start at the top and continue with horizontal strokes only just touching the paper. While the color is still wet it may be bled into or wiped or mopped out with a dry brush, blotting-paper or a piece of rag.

Watercolor Painting

In the purist sense this implies working only with transparent colors on white paper; attaining many of the color mixes and tones by overpainting again and again; for example, yellow over blue, produces green. As with the term tempera, watercolor broadly includes such as: gouache, poster colors, show-card colors and designers' colors. If paper is the support for watercolor or allied techniques it should always be stretched to prevent buckling during the working of very wet passages.

Wetting Agent

A liquid to be added in small amounts to watercolor to reduce the surface tension and thus increase the flow of the colors. Ovgall has been the traditional agent, but now synthetic preparations akin to detergents have been introduced.

Wooden Panels

Up till the 15th century and the coming of canvas nearly all the portable paintings in Europe were executed on wooden panels. The Flemish and the French painters preferred oak, the Italians white poplar, the Germans pine. But all used the woods of other trees including: beech, cedar, chestnut, fir, larch, linden, mahogany, olive and walnut. Large panels would be made with several planks supported not only by gluing together but also with battens at the back or some system of cradling. All panels would have some form of grounding (see gesso) and isolation if they were to be used for oils. Tempera can be painted straight on to the gesso. As a side-look at economies for the early artists, it is interesting to note that during the restoration of the flood-damaged paintings in Florence, direct evidence came to light that some of the panels must have been made up with timbers that were worm-eaten at the time the pictures were painted.