

# The Art of Printmaking

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Mohammed Djazmi

# PRINT PROCESSES - I

by Greg Fox

The range of printmaking techniques used by artists can seem both mysterious and daunting. Commercial printmaking in Europe has a 500 year history and most of the techniques that have been developed in that time have been utilised by artists, who have further developed them as well as adding new craft techniques of their own - so the range of processes is daunting. To make it less mysterious the list can be divided into three 'families' - Relief, Intaglio and Other techniques.

**Relief printing** includes Wood Engraving, Woodcut, Linocut, Potato prints, and many others. What they share is the feature that a material is cut into, then ink is applied to the surface before printing, either with a press or by hand. In the image that results, the surface (or relief) forms the image, and the area cut away forms the white areas.

The way the material is 'cut' into can vary widely. In 'Wood Engraving' a smooth endgrain block of box or fruitwood is cut into with a sharp point (a burin) that is pushed along. Traditionally, similar but larger tools are used to cut into plank wood of every description to produce 'Woodcuts'. In my own work I've used

nails, wire brushes, chisels, screwdrivers, a router and band saw and much more to 'cut' into the wood. I'm also developing a technique of etching wood with concentrated acid. This burns away the wood it touches in a more fluid way than can be achieved by cutting tools.

**Linocuts** are made using a similar range of cutting tools, and can also be etched with caustic soda. Because lino is smooth and has no grain, it is easier to cut than plank wood and often yields finer, more detailed results.

Printing plates made by sticking materials onto a substrate ('Collagraphs') or even etching plates, can also be printed 'relief' by inking up the surface area and printing on paper, either by press or by hand.

**Intaglio printing** includes Etching, Aquatint, Mezzotint, Drypoint, Engraving, and some Collagraphs. The key feature they share is that marks are made on a hard (often metal) surface, ink is rubbed into the marks and cleaned off the rest of the plate. This is then printed under high pressure onto paper that has been moistened to make it softer, and easier to squeeze into the groove on the plate. The various types of intaglio print refer to the

different ways that the marks are made on the plate.

**Etchings** were traditionally made by protecting the surface of a copper plate with a dark wax; scratching the design into the wax with a fine needle set in a wooden handle; then immersing the plate in acid to etch away the lines revealed by scratching the design. The plate is then cleaned, and inked by rubbing ink into the design and cleaning excess ink from the smooth areas of the plate. It is then printed using high pressure onto heavy, moistened paper. The resulting print has the characteristic indentation around the edge of the image, and often has a light grey tone on the background where some ink remained on the surface of the print. More defined tone is achieved by the drawing techniques of hatching and cross-hatching.

**Aquatint** is the process to achieve areas of more defined and fluid tone on etchings with copper and zinc plates (the most commonly used metals). A dust of fine resin is applied to the plate and stuck on by heating. The area of the plate where tone is not required are protected by brushing on a special varnish, and the

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by Greg Fox

plate is etched. The result, when viewed with a magnifying glass, is an area of small etched dots, very much like a modern newspaper picture when viewed up close. So, an 'Aquatint' is a type of etching.

**Engraving and Drypoint** are methods of scratching the design into the plate by hand, rather than using acid to do the hard work. In Engraving lines are cut by pushing a sharp fine point tool (the burin) into the surface of the plate. This produces curls of metal swarf which are carefully scraped away, the plate is polished and then printed in the same way as an etching. This may sound a rather rough technique, but in the hands of a master like Rembrandt (who trained as an engraver) it can be used to produce finely detailed and clear prints. Drypoint is a similar technique where a pencil-like metal tool with a very sharp point is used to scratch directly into the plate. The swarf that is produced as a rough edge to the line is left on the plate, and in fact holds most of the ink, and gives a characteristic 'furry' line on the resulting print. This is a very free way of producing a design, but is hard work on most metals so many contemporary artists use clear

plastic sheet rather than metal. Engravings and Drypoints should not be described as 'etchings', as despite the fact that they look like etchings, no acid has been used in the process.

**Drypoint** on plastic sheet has also been extended by gluing abrasive grit onto the surface of the plastic. Ink sticks in the rough texture and when printed produces the sort of tones achieved with Aquatint. These prints are usually called 'Collagraphs' .

**Mezzotint** is related manual process that is rarely used nowadays. A metal plate is given an even rough texture using a tool like a chisel with a row of sharp points (the mezzotint rocker). If inked up and printed the plate would produce a dense, even black rectangle. The image is formed by smoothing down areas of roughness - these smooth areas showing as white in the final print. This is a very time consuming labour intensive process but capable of very fine subtle results.

Other Processes include **Lithography** and **Silkscreen**, which are currently the most widely used commercial printing processes today, and which many artists use for their flexibility and vast image-making potential

**Silkscreen** is a stencil process where a fine mesh screen of tough plastic (which used to be silk) on a frame is prepared so that some areas will let ink through and others won't . This is positioned over the paper or other article to be printed, and ink is forced through the back of the mesh with a large squeegee. The screens can be prepared with light sensitive materials which allow photo-based images to be incorporated into the print, opening up enormous potential for artists.

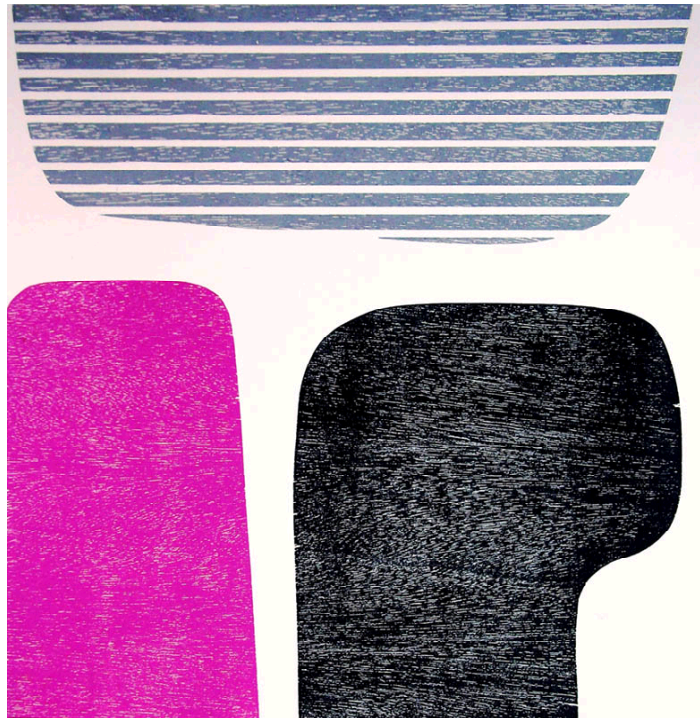
**Lithography** is a technique for making areas of the stone or metal plate used receptive to either water or oil-based ink. So when ink is applied with a roller, the ink will only stick to the image areas and not the background. This is then printed by placing paper over the stone or plate and using a press which scrapes over the back of the paper with a tough high-pressure squeegee. The advantage to the artist is that the prepared stone can be

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by Greg Fox

drawn on directly with greasy litho pencils and tusche., meaning that the energy of an expressive drawing can be transferred directly into print. This feature us retained in modern photo-lithography, where the artist draws on a special film which is then transferred by a photo process onto a lithographic printing plate. This photo step also introduces the potential to include photographic images in the final art work.

In Conclusion I hope this has given you a handy glossary of printmaking processes, and also some gauge of the often centuries old craft and technical skills that our artists have used in making the artworks exhibited.



a difficult journey begins

Greg Fox

woodcut, edition of 10  
75 x 75cm

# PRINTING NOTES

by John Preston

All intaglio printing involves creating an image in a sheet of metal, or sometimes acetate. Ink is then forced into the image, and the surface of the plate is wiped to clean off excess ink. The dampened paper is placed over the inked plate and run through the press. The printed image is reversed from that on the plate. This means that subjects being shown "real" have to be drawn the wrong way round.

**DRYPOINTS** are drawn directly into the metal, with a sharp point such as an engineer's scribe.

**ETCHINGS** are created using acid. This involves covering the whole surface of the plate with a wax "ground", then drawing the image on or through the ground sufficiently to expose the metal to the acid. The depth of the etched line, and hence its darkness, depend on the strength of the acid. Lines drawn through the usual "HARD GROUND" can be very fine and delicate. The alternative "SOFT GROUND" method is much less precise: any pressure on the ground causes it to lift, allowing the acid to bite in sometimes unpredictable ways. Drawing in pencil on

tracing paper over a soft ground is a freer, quicker, but riskier method than using hard ground.

Creating tonal effects in etching involves biting dots or other patterns to different depths. Steel has a naturally pitted surface, suited to this approach. Zinc and copper require AQUATINT, a layer of resin dust heat-sealed to the surface of the plate. The acid bites around the resin grains, which remain as light dots against the darker bitten background. Areas of the plate to remain white are varnished over, then the plate is put in weak acid for (e.g.) 5-10 seconds to get a very light tone. The acid is washed off, the plate is dried, and the next lightest areas are varnished over. The process is repeated for successive areas (like watercolour in reverse!), until only the areas of the plate to be darkest are left exposed (by which time they could have been in the acid for an hour or more). This process involves much work, a long time and a great deal of suspense: it is not until all the varnish is cleaned off and the plate is printed that the results can be seen. Plates can often

develop minds of their own, and once a mark is created it is very difficult to erase.

A particular challenge of aquatint is that darker parts of images are defined by working around their edges, not drawing them directly. This can be overcome by using SUGAR LIFT Aquatint. This involves painting a saturated sugar solution on to the aquatinted plate, then pouring a liquid etching ground over the whole plate and allowing it to dry. Very hot water is then poured over the whole plate; this lifts the ground from the areas painted with sugar solution. The result is a positive image of (in theory) pure tone, but as with so much in etching, it can be unpredictable! Etchers have to be flexible, and able to respond where their plate leads...

"Where there's plate, there's hope"  
(Sir Frank Short)

# COLLOGRAPHY

by Jill Ogilvy

**'Collography'** (sometimes misspelled "collagraphy") is a printmaking process in which materials are applied to a rigid substrate such as cardboard or wood.

The word is derived from the Greek word koll or kolla, meaning glue and graph, meaning the activity of drawing, which could explain the common misspelling collagraphy. The plate can be intaglio-inked, inked with a roller or paintbrush, or a combination of these. Ink or pigment is applied to the resulting collage, and the board is used to print onto paper or another material using either a printing press or various hand tools. The resulting print is termed a collagraph.

Substances such as carborundum, acrylic texture mediums, sandpapers, string, cut card, leaves and grasses can all be used in creating the collograph plate. This variety of materials can help create many different textures and effects, making collography a very versatile process. In some instances, leaves can be used as a source of pigment by rubbing them onto the surface of the plate.

Different tonal effects and vibrant colours can be achieved with the technique due to the depth of relief and differential inking that results from the collograph plate's highly textured surface.

Collography is a very open printmaking method. Ink may be applied to the upper surfaces of the plate with a brayer for a relief print, or ink may be applied to the entire board and then removed from the upper surfaces but remaining in the spaces between objects, resulting in an intaglio print. A combination of both intaglio and relief methods may also be employed. A printing press may or may not be used.

# FAQs : ORIGINAL PRINTS

by Valerie Sims

## What is an original print?

An original print is one that was always intended to be a print, and does not exist in any other format.

## What is a limited edition print?

This is a print that is one of a specified number of identical prints, never to be increased.

The print's number and the total number in the edition should be clearly marked on the print, along with the artist's signature.

## How is an original print made?

The artist creates an image on a plate or a block (metal, wood, lino, plastic, card) a lithographic stone, a silkscreen or by using computer software.

Plates and blocks can be cut (wood engraving, woodcut, linocut) etched with acid (etching) or built up (collagraph, carborundum).

Monoprints are made by creating an image on a flat surface and are always unique.

The matrix can be inked in different ways – an intaglio print has been inked in the cut areas below the surface, a relief print has been inked on the surface, leaving the cut areas white.

Collagraph plates can be inked differently at three levels.

The artist 'proofs' the matrix by using different colours, ways of inking and papers, in order to discover its potential.

Original prints are usually printed on a press by the artist using specialist printmaking paper.

# MOHAMMED DJAZMI

My drawings and etchings are based on social and political themes, mainly portraying the general effects of politics on society.

I decided on etchings to originate my subject images after experimenting with techniques across a wide range of media during my Masters in Printmaking at the Cambridge School of Arts, Anglia Ruskin University.

To produce tones of grey and black in order to contemporise my ideas I needed to use aquatint. However, respiratory problems meant that this was not going to be realistic, but through experimentation I realised that I would be able to replicate the effects of aquatint by exposing my drawings on zinc with an exposure unit, then to use hard ground and soft ground etchings to create the image.



Rise and Fall 4 (one of series of 6 images)

Etching, 80 x 70cm each