

Background Information

Calico printing was an important part of the finishing process in the textiles industry and Lancashire played a major role in its development. Early experiments in the use of wooden hand blocks took place in the 1760s. Machine printing was introduced in the 1780s and gradually superseded hand block printing during the mid-nineteenth century. Print works were built throughout the region wherever a suitable water supply existed.

Printmaking Techniques

A print, in its simplest form, is an image that has been created by a process or processes that allows the image to be repeatedly reproduced. It is an impression made by an object (usually the plate or block) on the surface of another (usually paper). Once the block has been created, a similar image can be printed several times.

Prints are generally created by employing pressure to force the image from the block onto the paper. This can be done in various ways, from using the hand or rollers, to more complex printing techniques that require a press. Each print method offers different qualities dependent on the materials used and the image required. Most printing techniques are reverse processes so the print tends to be a reverse image of the block.

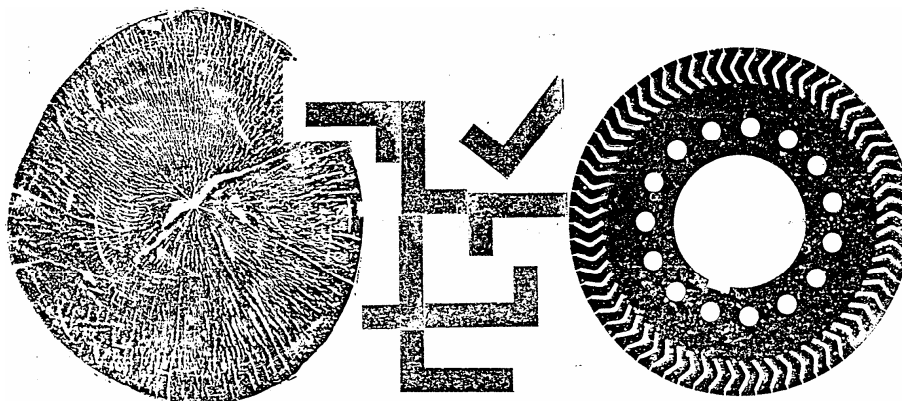
There are a number of major types of printmaking technique:

- Relief Printing
- Screenprinting
- Monoprinting
- Lithography
- Intaglio

Relief Printing

Surface printing

This is the simplest way of creating a print. Any object with a textured surface can be used to create a print. Natural objects such as wood or leaves as well as manufactured objects like string or flat metal objects can be inked with rollers, separately or collectively and then used to print on paper.



Card printing

Cut out card shapes can be assembled and glued onto a base of thick card into precise or haphazard arrangements. This can then be inked using a roller and printed by placing paper over the block and applying pressure by hand or roller.



Collagraph

Collagraph plates are constructed in a similar way to card prints by assembling a collage of different materials. These are firmly glued to a strong base board. The materials used can be anything with shape or texture such as card and fabric through to hardened PVA adhesive. This block is then inked, wiped and used to print onto damp paper to create a variety of lines and shapes. A press is usually used for best results.

Woodcuts

Woodcuts are normally produced on fairly soft wood between 1cm and 2cm in thickness. The print design is either drawn directly onto the block or traced from a transparent stencil fixed to the wood surface. The block is then cut and carved leaving the lines of the design raised from the surface. After cutting the block is inked by roller and printed by hand or press. The white areas of the print are those that have been cut away on the block.



Lino cut.

A Linocut is a relatively recent development from a woodcut. The same techniques are employed as used in woodcutting. The areas of the Lino that are not to be inked are cut away. Lino tends to be cheaper and easier to cut away than wood and is therefore ideal for schools in conjunction with oil-based or water-based inks for printing.

Henri Matisse Lino print

Screenprinting

Screenprinting is a variety of stencil printing. A stencil of the required shape is made and placed on the underside of a tightly stretched gauze screen. Then ink is poured on top of the screen and forced through the gauze with the aid of a squeegee onto a piece of paper placed under the screen. The stencil masks the screen and ink is only transferred through the open exposed mesh. In its more sophisticated form photographic techniques are used to transfer stencils to light sensitive screens. Colour silk screen prints can be printed, using a different screen and stencil for each colour. Other techniques can be employed using chalk and oil pastels.

Monoprinting

Monoprints are a combination of painting and printmaking. An image is painted with greasy ink on a smooth surface, such as glass or metal. Then paper is placed on the top of the painted image and a print is produced by applying light pressure to the back of the paper with the hand or a spoon. Depending on the depth of ink used 3 or 4 prints can be pulled, becoming more ghost-like in appearance. Many different variations in monoprint technique can be used.



1. Thick painting directly onto glass to produce a print on paper as above.
2. Tonal print by rolling up a thin layer of black ink, then using turps to produce lighter tones and tools to expose lighter areas.
3. Tonal print by rolling up a layer of black ink, which is then covered by a piece of paper. A print is produced by drawing lightly onto the back of the paper. The pressure of the line takes up ink onto the front of the paper.
4. Use of stencils to combine drawn and stencilled shapes.

Monoprint using technique no2 Degas

Lithography

Lithography is a complex print technique that relies on chemical processes and requires sophisticated printing facilities. The design is drawn onto stone with a greasy lithographic crayon or liquid. The stone is then treated chemically to stabilise the drawing. Then the stone is inked so that the ink adheres to the greasy drawing. The stone and printing paper are then passed through a flat-bedded lithographic press, thus producing a print.

Intaglio

The word is derived from the Italian *tagliare* meaning "to carve." An intaglio print is made from a design incised or etched into the surface of a plate. The ink lies below the surface of the plate and is transferred to the paper under pressure. The printed lines of an intaglio print stand in relief on the paper.

Drypoint

Drypoint is a line drawing on soft metal, normally zinc, copper or aluminium. The term "dry" is used as no acid is involved in the process. The line is incised directly into the plate with a sharp point. The action of the tool creates furrows and a raised burr on the surface of the metal, along the edge of the incised lines. When printed the burr, which holds a large amount of ink, appears as a heavy pronounced black line. The furrows and incised lines print as lighter lines. Lines and textures can be created by crosshatched lines, changing the depth of line and stippling.

Etching

Like drypoint etchings are produced on metal, but the line is bitten into the steel using dilute acid. Etching tends to be a less labour intensive technique than drypoint. The plate surface is initially covered with a protective layer of melted wax, through which the line of the print is

drawn. The depth of line required is dependent upon exposure to acid. Drawings can also be registered onto the wax surface with tracing paper. Various types of grounds can be used to produce variations in line, and techniques such as aquatint and open-bite can be used to produce tonal areas.

Metallic card prints

This technique is similar to drypoint etching except that it is produced on metallic card. Lines incised into the card by pointed tools are inked, wiped and printed with the aid of a press. Various materials can be used pressed into the card to vary the tones and patterns produced. Only a few prints can be taken before the card is exhausted. Metallic card prints are ideal for schools as the card is relatively cheap and prints are produced quickly and easily. A press is however a necessary part of the process.