

The Principal Printmaking Techniques

Relief Printing

In a relief print, all areas that will appear white in the finished print are gouged or removed from the wood block, or whatever surface the artist has chosen to use. The printed image is created from the raised portion left in relief. Ink is applied to these relief areas and transferred onto paper with a press or by hand-burnishing or rubbing. Relief prints are characterized by bold dark and light contrasts. This is the earliest printmaking technique. The primary relief techniques are **woodcuts**, **wood engravings** and **linocuts**.



- **Woodcuts** are printed from blocks whose surfaces run parallel with the grain. The resistance of the grain to cutting makes detail difficult to achieve. With softer woods, the grain pattern itself is often visible and incorporated into the composition.

- **Wood Engravings** are made from the end-grain surface of blocks. This surface has no grain pattern and can afford great precision and detail.

- **Linocuts** are printed from linoleum, usually backed with wood for reinforcement.

Intaglio Printing

In intaglio (pronounced een/TAHL/yoh) printing, the ink is picked up from incised or acid-etched lines and textured areas below the surface. The depressions are inked, and the raised surfaces wiped clean. The image is transferred from the plate when dampened paper is forced into the depressed lines by extreme pressure from the etching press. Many effects can be achieved with intaglio printing ranging from crisp, precise lines to velvety blacks. **Engravings**, **drypoints**, **mezzotints**, **etchings**, **aquatints**, and **collographs** are all intaglio prints.



- **Engravings** are prints from metal plates in which the artist has engraved the lines with a tool called a burin. Clarity of line is characteristic of the process. Tonalities are suggested by cross-hatched lines; modeling of form is created by repeated modulated lines.

- **Drypoint** prints are characterized by soft, heavy lines which result from scratching a drawing on the plate with a steel point.

- **Mezzotints** have soft tonalities ranging from gray to black. This quality is achieved by a serrated tool called a rocker that is systematically rocked back and forth across the surface, pitting it with thousands of minute indentations with raised burrs. Highlights are the result of smoothing out the roughened surface with a burnisher.

- **Etchings** are prints in which lines and tonal gradations are the result of chemical processes. For lines, the metal plate is covered with an acid-resisting ground through which lines are drawn with an etching needle or other sharp object. The plate is then submerged in an acid bath which "bites" into the exposed metal to create lines that are typically facile and free but capable of great detail. Photographic images can also be transferred and etched into the metal plate.

- **Aquatints** combine a special resist technique and chemical etching to create values ranging from light to dark. The plate is first dusted with varying densities of an acid-resisting powder called rosin, heated to glue consistency, and then put into the acid bath which etches around each rosin particle.

- **Collographs** are made when a variety of objects, such as string, lace, or crumpled tissue, are glued onto cardboard, varnished, and then treated as an intaglio print.

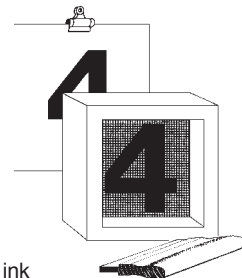
Lithography

Lithographic printing does not rely on surface elevation or indentation as in the relief or intaglio techniques. Instead, it relies on the incompatibility of grease and water. The artist draws or paints with a greasy substance called tusche (pronounced toosh) on lithographic stones (a fine-grained limestone from Bavaria) or aluminum or zinc plates. The surface is chemically treated, sponged with water, and then inked. The greasy images drawn or printed on the stone accept the oil-based lithographic ink while the untouched areas moistened with water resist the ink. The inked image is transferred from stone (or plate) to the paper by the pressure of the lithographic press. Stones or plates can also be processed to accept photographic imagery.



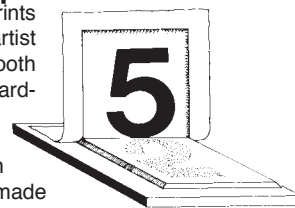
Screenprinting

Screenprinting (serigraphy, silk screen) is a versatile printing process based on the stencil principle. A fine woven fabric, usually a monofilament polyester, is tightly stretched and attached to a metal or sturdy wood frame to create the printing screen. A stencil is created on the screen by applying a "blockout" (glue, paper, hand-cut film, or photosensitive emulsion or gelatin film) to all non-image areas. Ink is then squeegeed across the entire screen forcing the ink to pass through the open area of the stencil onto the paper or other material. Of any single technique, screenprinting provides the most options in making fine prints.



Monotypes/Monoprints

Monotypes/Monoprints are two names for prints that have an edition of one. Typically the artist draws or brushes ink or oil paints onto a smooth surface such as plexiglas, metal plate, or cardboard coated with varnish. A unique print is then achieved when dampened paper is placed over the printing surface, and both are run through a press. A print can also be made by burnishing the paper with the back of a spoon.



This is a revised version of *Some Basics of Printmaking* © 1983 San Francisco Museum of Modern Art. Illustrations by Susan Schneider.



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PRINTER/PUBLISHER OF FINE PRINTS SINCE 1980

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