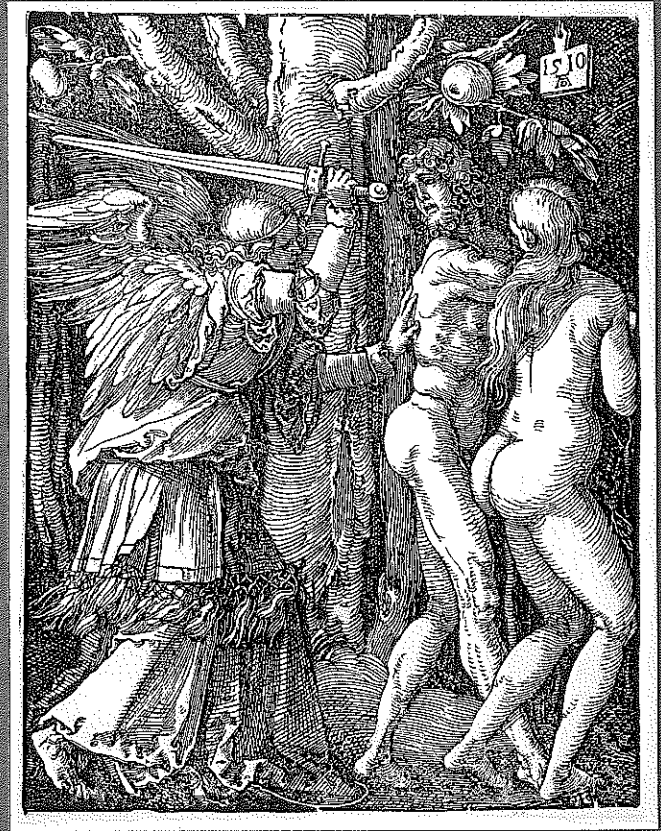


Chapter 4

Relief

Relief printing is one of the simplest and oldest forms of printmaking. The other earth hand-prints found in prehistoric caves are the first examples of relief prints. Simply described, the relief print is created by inking the top surface of a printing matrix, then printing onto a support. The prints made of a newborn's hands and feet, the "past due" rubber stamp on the face of an unpaid bill, or the potato-print wrapping paper made by the preschooler are all simple examples of the relief print. In fine art printmaking, the hand-carved matrix of the woodcut or linoleum cut (also known as linocut) are the most familiar approaches. Additionally, wood engraving—a specialized form of relief printing—utilizes very hard material, which allows for very fine detail. The image is made by carving into a block. The area that is left receives the ink and is then printed onto paper. Stone rubbings were the first expression of a relief matrix.

Woodblock printing had its early origins in ninth-century China. Following trade routes in the Islamic world, the technique spread throughout Asia and Europe. It wasn't until development of large-scale papermaking operations in the mid-fifteenth century that relief printing became economically viable as a means of printing for mass distribution of religious and informative imagery of all kinds.



Albrecht Dürer, *Small Passion, The Expulsion from Paradise*, 1504. Woodcut, 5 × 3/4 in (12.7 × 9.5 cm). Library of Congress, Prints and Photographs Division, Washington, D.C.

Dürer's exceptional skill helped to establish woodcut as a major art form.



Birth record footprints, 4 × 6 in (10 × 15 cm).

Any surface that carries an impression may be inked up and made into a relief print.

Tools and Materials

There are many possibilities for creating a relief matrix. In addition to the familiar woodcut or linocut, artists have explored a variety of materials that can be carved, including plastics, rubber, cast plaster, Styrofoam, and composite boards. Essentially, any more-or-less flat surface that can be manipulated with hand or power tools is an option, as long as the material can safely pass through the printing press.

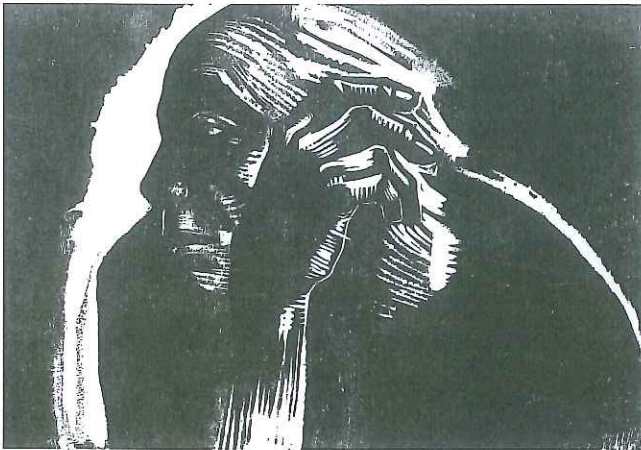
Additionally, matrices normally associated with intaglio printing, such as etched or engraved plates, can be conceived and printed as relief images. Relief prints can also be made from “found” surfaces that carry textured information, such as clothing, fabric, floor tiles, and other objects attractive for the imagery

they carry. These materials are most commonly associated with the collagraph process and will be discussed in Chapter 6.

The choice of the most appropriate matrix material will be determined by factors such as the ease of cutting, preferred printing method (by hand or by press), and—perhaps most importantly—the contribution of the material to the interpretation of an idea.

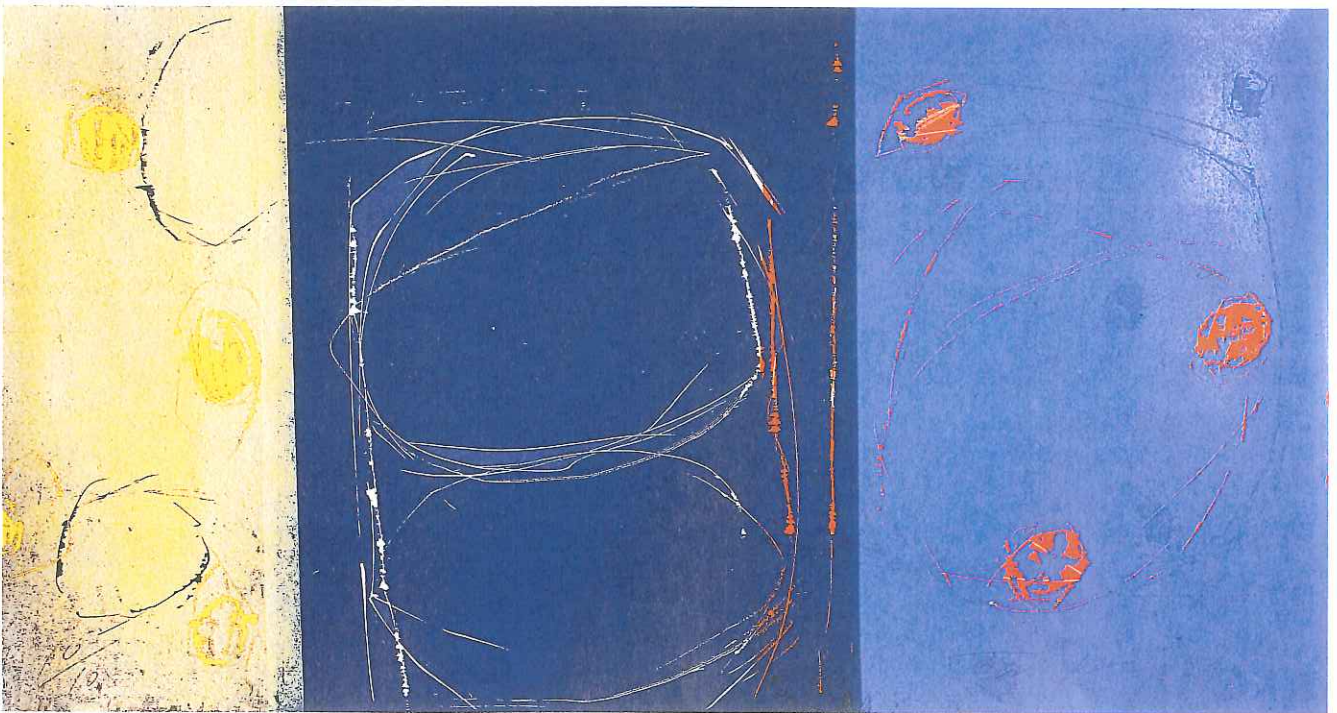
Materials for Woodcut

There are many different kinds of wood suitable for woodcut. Although wood is generally classified into two categories, hard and soft, the actual hardness of any given type falls along a continuum. The choice of which wood to use will depend on



Käthe Kollwitz, *Self Portrait*, 1924. Woodcut, 8¼ × 11⅞ in (20.9 × 30.2 cm). Courtesy of the Ackland Art Museum, University of North Carolina at Chapel Hill. Burton Emmett Collection.

The type of wood and its grain can have a great impact on the strength of the directional movement in the image. In this self-portrait, Kollwitz established the image with clean cuts along the grain to create the strong silhouette. The cross-grain detail cuts add a raw tension to the somber, contemplative mood established by the predominance of black.



Tan Ping, *Untitled*, 2006. Color woodcut, 30 × 45 in (76.2 × 114.3 cm). Courtesy of the artist and Red Gate Gallery.

Cutting against the grain on softer woods with dull tools can leave a raggedy cut. This can be a problem or can be sought intentionally. Chinese artist Tan Ping takes advantage of this quality in his work.

balancing factors such as the grain, the ease of cutting and the ability of the wood to hold detail.

Since the cutting takes place on the grained, or plank, side of the wood, the coarseness and direction of the grain can be a factor in the overall aesthetic of the work. There is a tendency to cut with the grain, especially with softer and coarse-grained woods.

Softer woods that have a variety of hard and soft areas are best used when this kind of grain-dependent cutting is desired.

As a rule, the harder the wood and the more even the grain, the more detail it is capable of holding. It is also true, however, that the harder the wood, the more difficult it is to cut and the more frequently tools must be sharpened.

Materials for Carving

Attribute	Material	Advantages	Disadvantages
Soft and easy to cut	Soft woods: pine (white or sugar) Linoleum—softer grades now on market specifically for relief printing MDF (Medium Density Fiberboard)	Good for beginners	Require more care or, possibly, preparation to avoid dents Less durable and break down faster Pebbly texture of some softer linoleum which can also be crumbly if old
Moderately easy to cut	Poplar, a close-grained softwood excellent for medium detail Pear and linden (lime), two popular hardwoods Shina plywood, a specialty linden-faced product for woodcutting Linoleum—traditional “battleship” gray linoleum Plastics: Polyvinyl chloride foam board (PVC), HIPS (High-Impact polystyrene)	Good for beginners Reasonable durability Linoleum is easier to cut if warmed slightly on a heated pad or warm hotplate	Shorter shelf life of linoleum, which can become dry and flaky with age
Hard and very durable	Solid hardwood: maple, oak	Most effective for finely detailed work Holds up for many printings	Usually more difficult to cut, requiring sufficient time and strength
Smooth	Cabinet-grade wood Linoleum MDF Plastics: PVC, HIPS	Little influence of grain or texture on the image Curved cutting is easier	Lacks the “character” provided by natural materials with more visible grain
Grainy or textured	Softwoods (pine) with varying grain densities that can be enhanced with a wire brush Oak Lauan plywood Linoleum with pebbly texture or burlap impression that can be sanded out	Texture can add an overall visual component to the image Strong wood grain that can dominate the directionality of the cut, adding movement and rhythm	Cutting across grain often difficult, causing splintering Varying pressure needed when hand cutting, due to inconsistent density of wood grain, resulting in tools “slipping” when moving from harder to softer grain Strongly grained wood unsuitable for curved cutting
Inexpensive (Note: More expensive materials are not always better)	Softwoods, PVC, HIPS, MDF	Less inhibiting, promoting experimentation (unlike more expensive materials which may encourage greater deliberation)	May encourage waste
Available in large sheets	Plywood, up to 4 × 8 ft (1.2 × 2.4 m) Pieced solid boards Plastics: PVC, HIPS Linoleum, available in very large rolls MDF	Facilitates larger work Facilitates “on-the-block” registration (kentō and T and bar) and bleed prints Economical because several pieces are attainable from one block	May require assistance to handle Power saw required to cut block from large plywood sheets Curl in linoleum makes cutting more difficult
Thin	Linoleum PVC HIPS Thin lauan (door skin)	Good for jigsaw color or simple cutting to support background color Inexpensive	May warp (thin plywood or veneered boards) May be unable to hold up to vigorous cutting

Other Materials

In addition to the continuing love affair with wood, contemporary printmakers have expanded the range of matrix materials to include a myriad manufactured composite materials, rubber, and plastics. In contrast to wood, most of these materials are smooth and impose little of themselves on the final image, leading to a greater fluidity of cutting.

Linoleum, the most familiar of these materials, is made from ground cork and resin. MDF (medium-density fiberboard) is fast becoming a popular choice. Thin plastics with strong followings include HIPs (high-impact polystyrene) and PVC (polyvinyl chloride) foam board. Both come in a range of thicknesses and can be used in many ways. PVC is especially good because drawing directly into the surface with

a ballpoint pen dents the material sufficiently to create a printable mark.

As with wood, the choice of the most suitable material depends on the function or effect that the material needs to deliver. The chart here (page 77) organizes material possibilities according to these attributes.

⊗ Safety Watch!

Because most MDF is made from compressed wood fiber dust and formaldehyde, the dust created when sanding or using motor tools can be dangerous to inhale. Under these conditions, a dust mask should be worn.



◀ American artist Tom Huck at work on the block for *The Transformation of Brandy Baghead*. Plywood allows work to be made at much larger scales. Tom's personal preference is very fine-grained marine-grade plywood. His unique style of carving the block in a vertical orientation is an ergonomic consideration, given that he will carve several hours each day for many weeks as he develops the image.



◀ Durability can be increased if the wood is prepared by rubbing a coat of shellac thinned with alcohol into the surface. Since the moisture from the solvent will raise the grain slightly, sand the surface back with very fine sandpaper before cutting.

Cutting Tools

The traditional woodcut involves the use of a knife and various U-shaped and V-shaped gouges for clearing. However, any tool that makes an impression in the surface will create a texture that can be printed. Even though linoleum can also be cut with the same tools as those used for wood cutting, there are special tools made for linocut. Tools with replaceable tips are handy so that cutting does not have to be interrupted by the need to sharpen tools.

Motor tools are another option. Small craft routers, sanders, and drills can make an interesting variety of marks. Motor tools make working with harder materials easier.



☞ Choose tools made of good quality steel and the kind of handle that feels comfortable. Long-handled tools can be cut down to customize the fit to your hand.

Printing Tools

Handprinting is accomplished by placing the printing paper on the inked matrix and burnishing the paper from the back. The inexpensive tool for this is a hard, smooth object, such as a wooden spoon or a large wooden drawer pull.

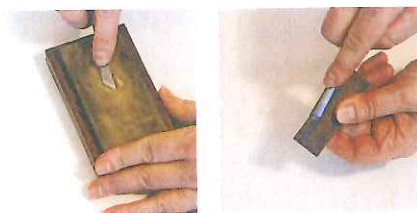
The traditional tool for this task is the baren. A baren is handmade with a knotted coiled twine covered with a bamboo sheath. Professional-quality handmade barens can be very expensive. Some contemporary barens, designed with the goal of reducing the force needed to pull a print, are made of plastic or with a highly engineered system of ball-bearings.

☞ Common burnishing tools: wooden knobs, Japanese Baren, wood spatula and wooden spoons.



Caring for Cutting Tools

Careless handling can cause nicks and chips that could require professional sharpening. Keep tools stored in a simple bamboo or canvas roll so that they do not bump against each other. Keep your tools sharp. You should never have to force a tool or “wobble” it to cut a line. This puts stress on the blade and can quickly result in a broken tip.



Regular use of a leather honing block or razor strap with honing compound can delay the need for sharpening the tool on a stone. Should tools require significant sharpening, use an India stone with a drop of oil to do the major work of reclaiming the edge. Keep the angle of the blade flat on the stone and move it back and forth. With U- or V-shaped gouges, rock the tool on the cutting edge, keeping the angle of the blade flat on the stone. Finish the edge on a finer-grained Arkansas stone. Use a slip stone to remove any burr on the inside cutting edge of gouges.

Matrix-making Process

Putting the Image on the Block

There are several methods for establishing an image on the block to use as a cutting guide. The degree of information needed in such a guide depends on the artist's intention to work precisely or spontaneously. Even if a cutting guide is established on the block, do not overlook the possibility of interpreting information as the cutting progresses.

Preparing the surface

The degree to which the surface of any material is prepared to receive the drawing is sometimes a matter of aesthetic choice, but it is often important for facilitating the process of cutting.

With almost all surfaces, there might be some residue of the manufacture to consider. Sometimes these textures will be

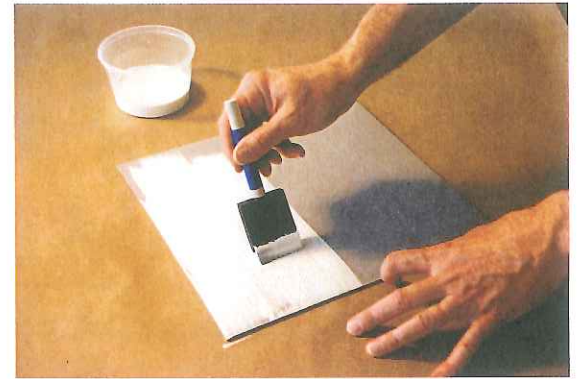
visible in the print. A light sanding with fine-grit (180 or finer) sandpaper or fine steel wool can remove this mechanical texture if it is deemed undesirable.

It is helpful to stain the block with a wash of acrylic paint, or printing ink thinned with mineral spirits. The stain makes it easy to see areas that have been cut. This is done *before* establishing an image with direct drawing and *after* any solvent transfer methods.

Alternately, if drawing on linoleum with India ink, a thin coat of gesso applied to the surface of the block will help the ink to adhere better. If the gessoed surface has undesirable brushstrokes or texture once it is dry, it can be smoothed with fine sandpaper or steel wool.

Direct drawing

The simplest method of establishing the image is obviously to draw directly on the block. Keep in mind that the printed image will be a mirror image of this drawing.

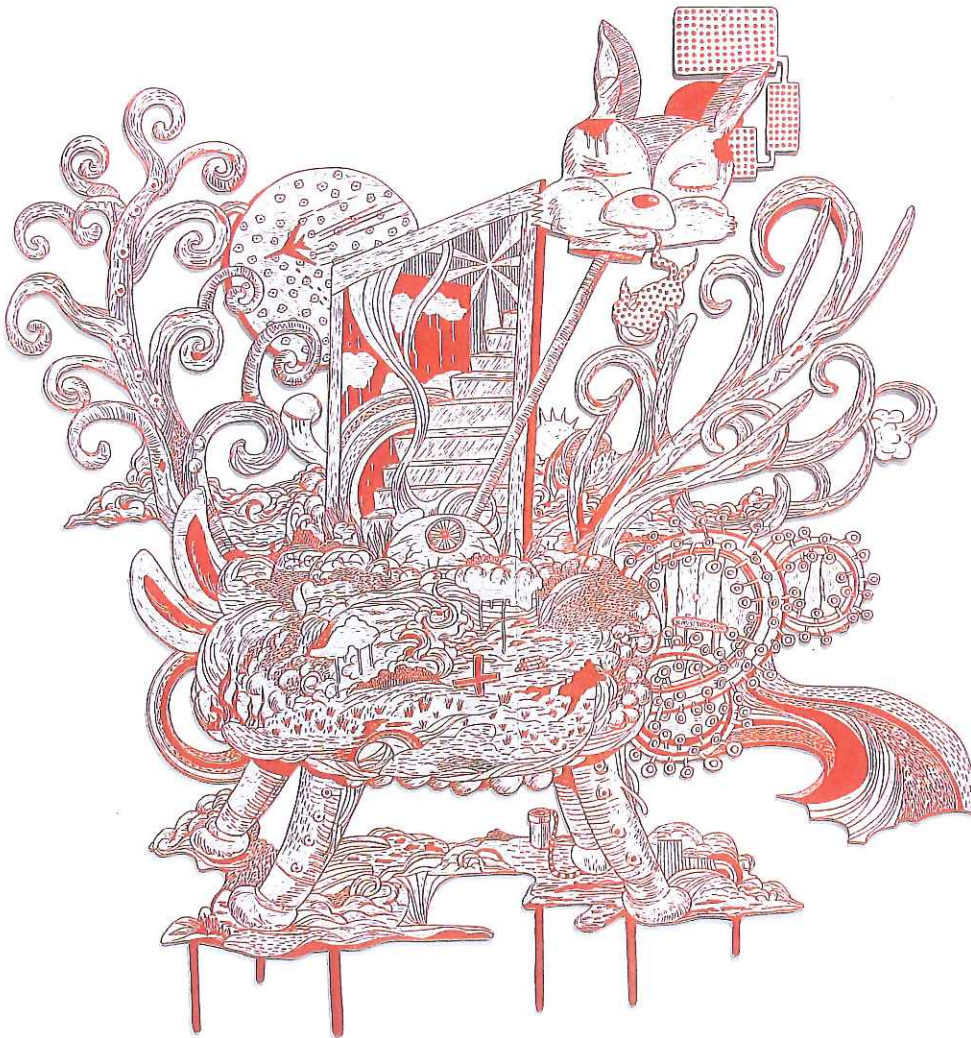


➤ To avoid streaks, use a sponge brush to apply the gesso.

➤ Tom Huck stains the surface of his uncut block with a red permanent marker. The red areas that remain to be cut are clearly visible.



④ American artist Swoon draws directly on the surface of the block, then proceeds to “carve the drawing.” She will interpret the drawing or add detail as she carves, using the carving tool as a drawing tool.



Kenichi Yokono, *Monster*, 2006. Spray-painted and inked woodblock, 71 × 65 in (180.3 × 165.1 cm). Collection of June Lee Contemporary Art. Courtesy of the artist.

Yokono takes the idea of drawing with carving tools to the next level. The blocks are carved, but rather than being printed, they are spray-painted white, then inked in red. The blocks stand alone as finished works.

Transfer methods

Transfer methods allow an image to be developed off the block where compositional considerations can be made in the same orientation of the final print. In most cases, the image transferred to the block will be a mirror of the original. Transferring can be done in several ways.

Drawing transfer

The first is to make the original drawing in a soft material such as charcoal, conté, or soft graphite, then place it face down on the block and transfer the drawing material by rubbing the back with a burnishing tool, such as a spoon or bone folder. Alternatively, transfer the material by running the assembly through an etching press at regular printing pressure.

Carbon transfer

The second method is to place a piece of carbon paper between the drawing and the wood or linoleum, and then trace the drawing, thereby transferring a layer of carbon to the block. If it is important to record a mirrored image onto the block, make initial drawings on tracing paper or make mirrored photocopies to trace from. Using a registration jig to keep the drawing and the block aligned, trace the information needed to guide cutting. Once the drawing is transferred, it can be strengthened on the block with a permanent marker or India ink for greater visibility.

Photocopy transfer

Another time-saving transfer process is photocopy transfer. It is especially helpful when working with text or photographic elements (begin with a clean, primed surface). The photocopy can be transferred either with heat or with solvent.

Heat transfers have the advantage of avoiding toxic solvents. While sometimes not as sharp as a solvent transfer, this method usually provides sufficient information to work as a cutting guide.

To transfer, place the photocopy face down on the uncut relief matrix. Using a household iron set on the highest dry heat possible, iron from the back to re-melt the copy toner and transfer it to the block.

⊗ Safety Watch!

A hot iron can cause severe burns. When done, unplug and let the iron cool.

Solvent transfer can be done by hand or with the help of the press. Note that while the process is described here as a means to develop a block, the solvent transfer processes can be used for many purposes, including direct transfers to paper.

The advantage of this method is that it provides the most detail of all of the transfer methods. The drawback is the potential toxicity of the solvents used and the changing technology of photocopiers. Some newer photocopy machines use different plastic toners that may not easily dissolve with conventional solvents. As the technology of photocopy machines

evolves, a certain degree of experimentation may be necessary to determine the most effective solvent for the different toner powders.

As of this writing, the most effective solvents are acetone and citrus solvent which is a d-limonene-based solvent and clearing agent that is marketed as a safe alternative to xylene and ethyl acetate. Check the MSDS of citrus solvent brands available locally to determine which products will work.

⊗ Safety Watch!

The photocopy transfer uses a solvent to dissolve the toner powder and release it on to the printing matrix. Be sure to wear appropriate skin protection and use in a well-ventilated area or wear a respirator.

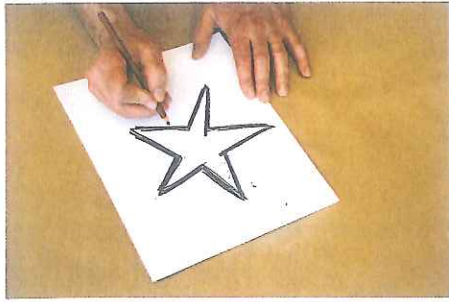
To transfer by hand, tape the photocopy to the top of the block. With a piece of cotton soaked in citrus solvent, rub the back of the photocopy to dissolve the toner. This may take a while. Be patient and let the solvent do the work. Rub the back with a spoon, pencil, or other hard tool to encourage the transfer and to create textural variations.

The press transfer is the quickest and generally affords a sharper, more detailed transfer. The process described here uses acetone. Collect the block, the photocopy, a newsprint sheet and a piece of clean blotter paper cut to cover the block. You will also need a stiff solvent-resistant plastic laminate (Formica) as a backing sheet. This helps give firm pressure and keeps the solvent from penetrating the printing blankets.

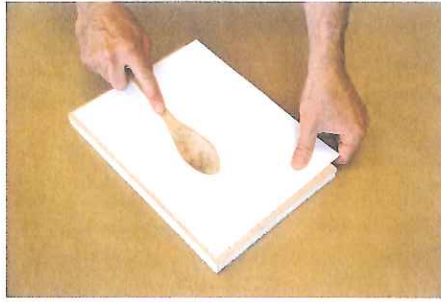
1. Set firm pressure on the etching press for the relief block, using all three felts and the backer.
2. Next, engage the blankets, then flip them out of the way. Keep the backing sheet and a newsprint protector sheet to the side.
3. Place your block on the press bed.
4. Trim the photocopy and lay it face down in position on the block.
5. Now you have to work somewhat quickly. Soak the blotter paper with acetone. Be efficient with the use of solvent, using only what is needed to soak an area big enough to cover the transfer area (not necessarily the entire sheet of blotter paper).
6. As soon as the acetone has flashed off so that the blotter paper is still wet but not shiny, *quickly* lay the blotter paper on top of the photocopy, then place the protective newsprint and then the plastic backer sheet on top.
7. Lay the blankets in place and crank the press through. Optionally, you may also go back and forth a couple of times to ensure a solid transfer. Then remove the blotter and photocopy to reveal the transferred image.

Once the drawing has been transferred to the block in black, stain the surface to facilitate the cutting process.

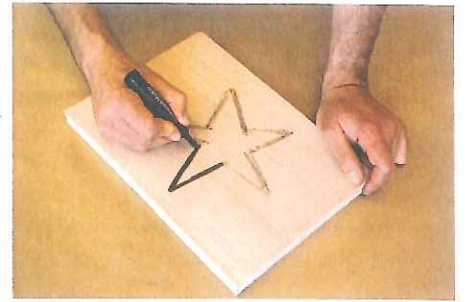
Drawing transfer



1. To transfer by hand, draw the image in a soft material.

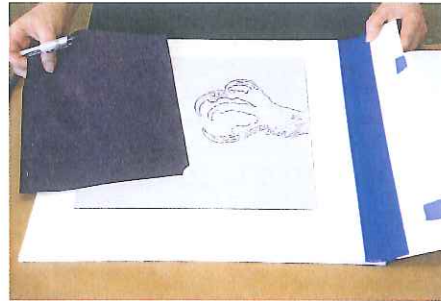
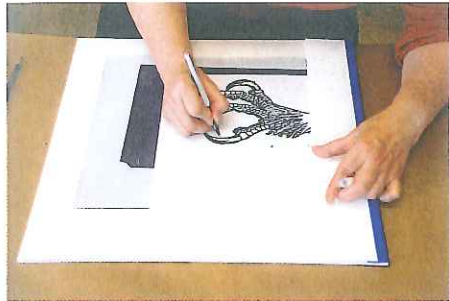


2. Place the drawing face down on the block and transfer by rubbing with a wooden spoon.



3. Strengthen the image with a marker pen before cutting.

Carbon transfer



1-2. Using the registration jig gives the ability to check the progress of the tracing.

Photocopy transfer



1. Lay the photocopy face down on the block.



2. Soak the blotter paper with acetone.



3. Lay the blotter paper on top of the photocopy.



4. Lay the backer and blankets, then crank through the press. Remove the photocopy and blotter.



5. Stain the surface to aid cutting.

Cutting the Block

The relief artist has several choices when cutting the block. The choice of tool will impart its own characteristic to the work. In addition to choosing the cutting tool, aesthetic decisions must be made for interpreting every mark.

Characteristic features

Information can be interpreted as a white line on a black ground, a black line on a white ground, solid white or black shapes, or textured areas. White line is the most straightforward cutting, using the gouge or knife as a drawing tool. The classic "black-line" approach echoes the historical aim of woodcut to mimic the look of a drawn line. It is achieved by cutting both

⊗ Safety Watch!

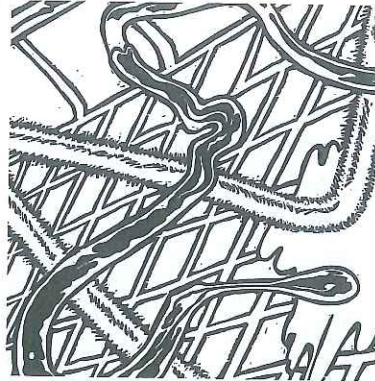
It is very important to keep blades and gouges well-sharpened; dull tools resist the wood, requiring more force to use them. One slip can mean a quick trip to the hospital for a few stitches.

sides of the line with the knife to establish linear elements, then clearing away the areas in between with the gouges.

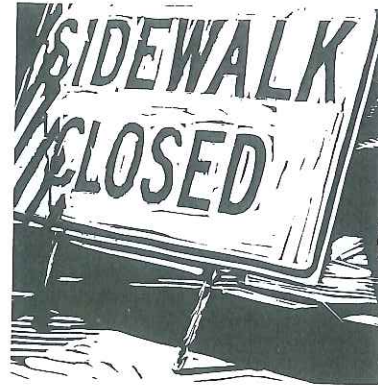
Of course, not all edges are hard or linear. Textured cutting with gouges or other mark-making tools can create a variety of interesting marks that can read tonally. Patterned cutting allows for decorative interpretation of tonality.



Black line textured cutting describes tonal values.



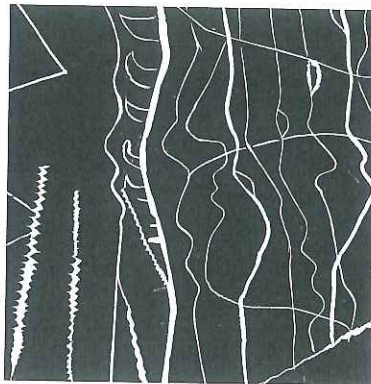
Black line cutting conforms to the line drawing.



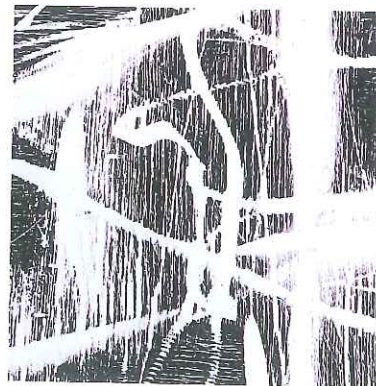
High-contrast cutting interprets photographic information and lettering.



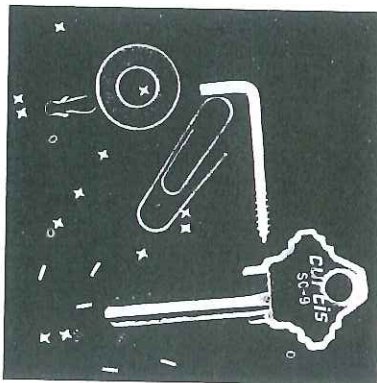
White line cutting describes form.



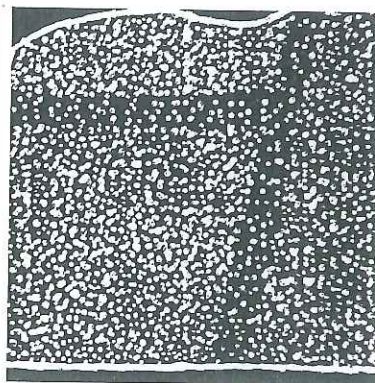
White lines with a variety of line weights. Wiggly lines have been made by rocking the U-gouge.



"Carving" with a belt sander expresses wood grain and creates soft edges.



Embossed and punched objects provide visual interest.



Stippling creates overall surface texture.

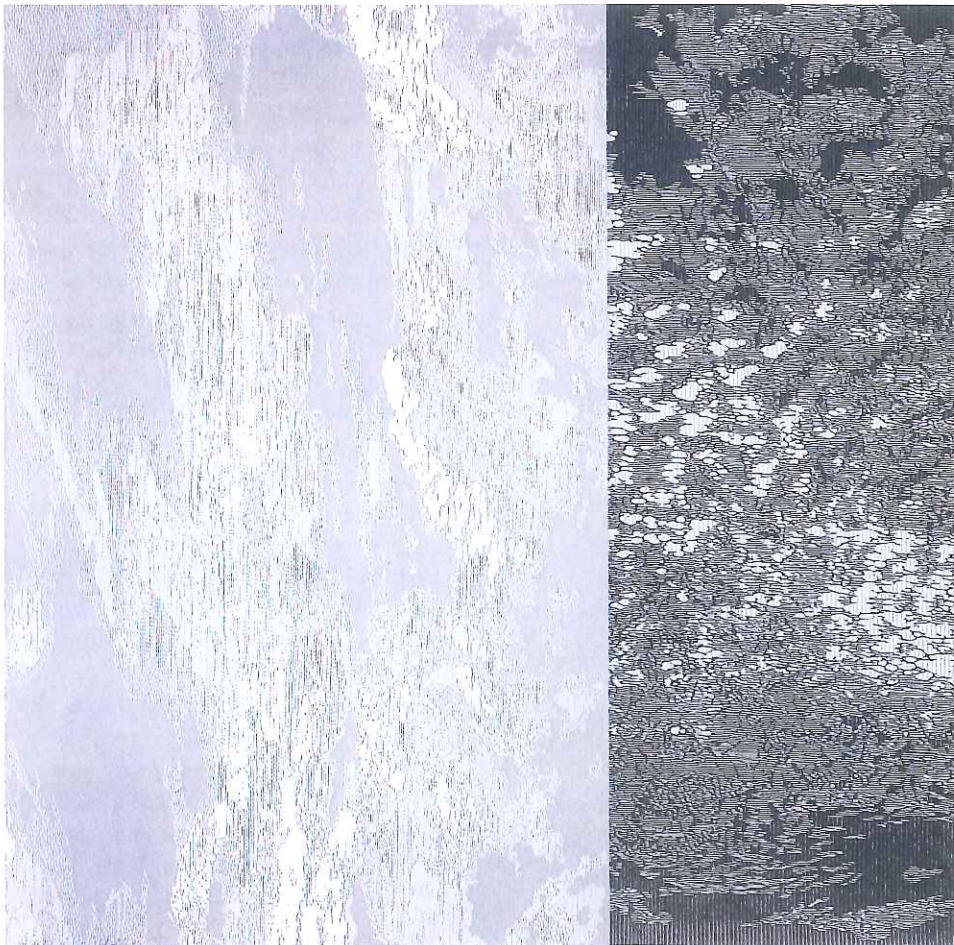


Decorative marks and patterns make for visual variety.



Marc Brunier-Mestas, *Maillot à Poids*, 2007. Linocut, 15¾ × 10 in (40 × 25.4 cm).
Courtesy of the artist.

Here the artist uses black- and white-line carving techniques to illustrate the scene of a disheartened Tour de France cyclist who has crashed and will no longer have the title of Best Climber, symbolized by the polka-dotted jersey.



Patsy Payne, *Cloudscreen 6*, 2002. Woodcut and linocut, 28 × 28 in (71.1 × 71.1 cm).
Courtesy of the artist.

Australian Artist Patsy Payne utilizes a cutting strategy of small marks. The result is an undulating textural surface without the bold edges that are emblematic of black-line woodcut. Her organization of the landscape elements with multiple orientations in the diptych form accentuates the fact that the image has been constructed, compelling the viewer to consider the abstract notion of landscape and the difficulty of our human relationship to nature.

Using the knife

The knife is traditionally the most important tool of the woodcut artist, used to outline areas that will be cleared later with gouges or chisels. It can also be used repeatedly to scar the surface of the wood in a cross-hatching manner to create tonal areas.

Working with the gouge

Gouges are used for clearing and textural cutting. To clear a large area cleanly, C-shaped gouges are the most effective. The wood is shaved gradually and can be removed with little texture remaining. The U-shaped gouges cut a narrower path, leaving more texture in the cleared area. When working with wood, gouging is done as much as possible in the direction of the grain of the wood. Cutting in this direction lifts the wood cleanly without digging into the surface.

For a sharply defined edge, first score a line with a knife or flat chisel. Start gouging in the middle of the area to be cleared and cut toward the scored line. Ease up the pressure on the gouge as you approach the line, letting the wood lift out sharply. If you are establishing an edge without a preliminary knife line, start at the edge and cut into the area to be cleared.

⊗ Safety Watch!

When cutting with gouges, always turn the block rather than the cutting tool so that cutting is directed away from the body. Use a bench hook to brace the block so that your hands can be kept behind the cutting tip.

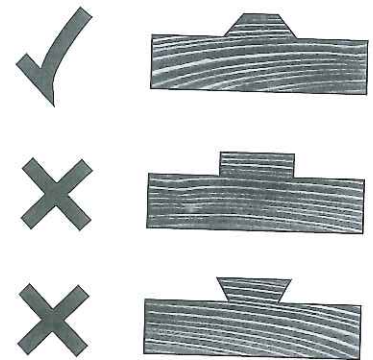
Using the knife



⌚ Almost all cutting is done by pulling the knife toward the cutter. It is not necessary to cut very deep, and, the finer the detail, the less depth is required.



⌚ The artist stands and carves at a table. Comfort when working on large blocks is important so as to avoid fatigue and injury. Always keep your tools accessible.

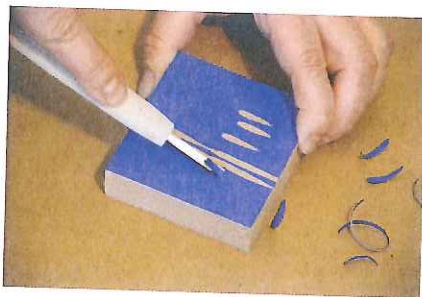


When scoring a line in preparation for clearing operations with the gouging tool, cuts should be angled away from the printing area in order to create the most stable printing base.

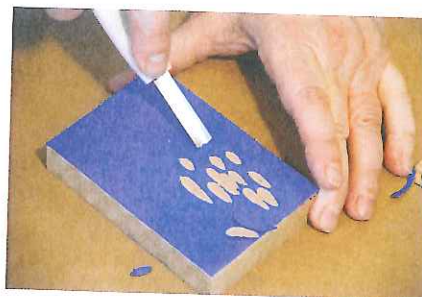
Working with the gouge



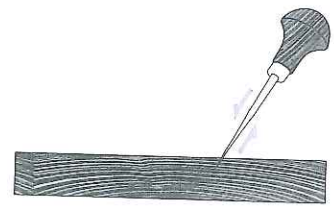
⌚ The pressure of cutting pushes the bench hook up against the table and pushes the block up against a second stop on the bench hook. A notch in this second stop allows the block to be turned at an angle as well.



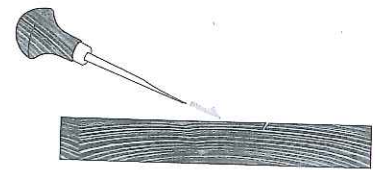
⌚ A U-shaped gouge clears a narrow path.



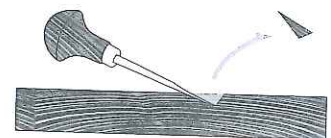
⌚ A C-shaped gouge can be used to cut a wider path or to clear large areas.



The scored or chiseled edge is established.



Cutting is directed toward the edge.



As the cuts meet, the wood is cleared.

Printing the Relief

Motor tools

Use of motor tools can provide a wholly different character of line and texture. Sanding tools can be used quite expressively and create soft tonal variations. Drills and routers can cut clean, mechanical marks.

Textural impressions

There are infinite ways to achieve textural impressions in the surface of wood or linoleum. Brushing the surface of softer woods with a steel brush can raise the grain. Distressing the surface by hammering nails, punches, found objects, or other items into it provides a variety of textures that translate to tonal values in the final print.

Since unmounted linoleum can be run through the press, textured materials that are not too thick, such as sandpaper, wire, metal washers, or watch parts can be impressed directly into the surface.

Good practice

Avoid potential damage to printing felts by using an old felt and a smooth piece of cardboard for this process.

Begin by setting the pressure of the etching press to accommodate the linoleum, felt, and cardboard. Lay the objects to be impressed on top of the block, place the cardboard and then the felt on top, and run them through the press. The impressions in the linoleum will be sharp and clear. (The cardboard will also be embossed with these textures and might possibly be developed further as a collagraph plate.)

Repairs

Once a part of the block is cut away, it is difficult to replace. It is a good idea, therefore, to be somewhat conservative when removing material at the beginning and take proofs at various stages during the cutting. Experience develops an understanding of the print that results from a certain amount of cutting.

If working with a detailed guide image, however, don't proof too soon. The inking process can cover up the guide image and make subsequent precision cutting more difficult.

Depending on the material being used, there are several approaches to repair work. Wood is relatively easy to repair. If you can retrieve the accidentally cut piece, simply glue it back in place with wood glue. If the piece is gone, fill the hole with wood putty, let it dry completely, then sand it smooth to the surface with a very fine sandpaper. Repeat this process as needed as the wood filler shrinks.

Linoleum is generally more difficult to repair, yielding mixed results depending on your craft. Mis-cut linoleum pieces can also be re-glued. Patches can be made with acrylic modeling paste, but it takes significantly longer than wood putty to dry.

While it might seem as if the work of making the relief print is in the development of the block, it is the ink-on-paper print that ultimately stands as the final measure of the work. Once the block cutting is complete, the artist has to consider paper type, size, and orientation, as well as ink color, all of which will interpret the information of the matrix into the final print.

Paper Considerations

Relief prints can be printed on a wide variety of papers. One of the main considerations has to do with whether you intend to print by hand or on a press.

Traditional handprinting is done on smooth, thinner, dry paper. With a thinner stock, the quality of the impression can be gauged by looking at the back of the print as the print is pulled. Asian papers from Japan, Thailand, China, and the Philippines offer a vast selection of suitable options.

When printing on the press, you can use thin or thick papers. Thicker papers printed on a press allow the image to have a degree of embossment, if desired. Smoother papers can be printed dry, while papers with textures can be dampened slightly in order to achieve solid, crisp printing.

Ink Considerations

The best ink for relief is a short ink with medium to high tack. It should also be relatively stiff. All of these qualities combine to allow the image to print sharply onto the paper.

Printing by hand requires a somewhat tackier ink. This helps keep the paper from slipping while burnishing.

Oil-based inks formulated especially for relief or lithography are more likely to be ready to use direct from the can. Some intaglio inks can be too runny for relief printing. Most printing inks, however, can be modified to make them suitable for relief printing.

In recent years, water-based inks have become much more viable options as slower drying formulas have given them similar working properties to the oil-based inks that they seek to replace. These are good options for situations that require simpler soap-and-water cleanup.

Good practice

Avoid using too much oil when modifying your ink. Excess oil will leach in to the paper causing a halo effect. Also, the ink may dry with a metallic-looking discoloration called "bronzing".

Karen Kunc

Karen Kunc's prints and artist's books stem from her contemplation of the forces of the natural world. Her works suggest ephemeral encounters and the immeasurability of time and distance. Her unique style of printing puts these notions into iconic images of creation and preservation, and allusions to human myth and metaphor.

🌀 *Describe your creative process.*

My process begins by making spontaneous sketches on 8 x 5 in cardstock. I draw only in black pen, preferring to let the color develop in the printing process. I look everywhere; my eyes always searching for visual cues—in the landscape, in interesting graphic patterns of tree branches against the stark sky, the spaces between things, or in odd and surprising juxtapositions of materials. I look for the human trace in surroundings—the absence of presence and the wear of time. When traveling, I sketch from life to put what I see into my own hand-marks. When at home, I draw from memory and invention, and contemplate the visual symbols that suggest meanings. I continually refer to this ongoing stack of drawings. In the sketches, all of my influences come into a translation that carries my unique hand and sense of composition.

Working from a thumbnail sketch, I generate a full-size graphite drawing on Mylar. I then make a simple tracing of the main shapes and forms. I transfer this layout in reverse onto two birch veneer plywood blocks and then apply shellac to the surface to seal the wood and protect the tracing.

The blocks are carved as opposites; a “positive” and a “negative.” I work with a reduction method, printing then carving further after each color run. I usually use paper stencils to roll color through the openings onto the block to apply ink in selective areas, enabling several colors to be printed at once. I try to print many colors against the white of the paper in the early stages, in order to insure a brilliance and variety of colors. I begin with transparent ink mixtures, with as much as 80–90 percent tint base, and use progressively stronger, less transparent colors as the image develops. To avoid embossment, I print on an etching press using a press board and no blankets. I use Japanese papers, which are very receptive to the ink. Some prints take as many as 8–12 runs to finish, with the later stages often handprinted. I work until the print feels finished and all my “questions” are resolved.

I do believe that there is a correspondence between my process and my content. Many ideas stem from thoughts of growth/evolution and how small things can affect the outcome or path of shaping of everything, from seemingly inconsequential acts to impacting the whole world! There is my core metaphor! My process is performative, as my understanding of the image develops while I am in “the making.” My prints themselves record my process of destruction/creation, and I take on that omniscient role as I make my choices step by step toward the resolution of my image.

Born Omaha, Nebraska, USA

Education/training BFA, University of Nebraska-Lincoln, MFA, Ohio State University

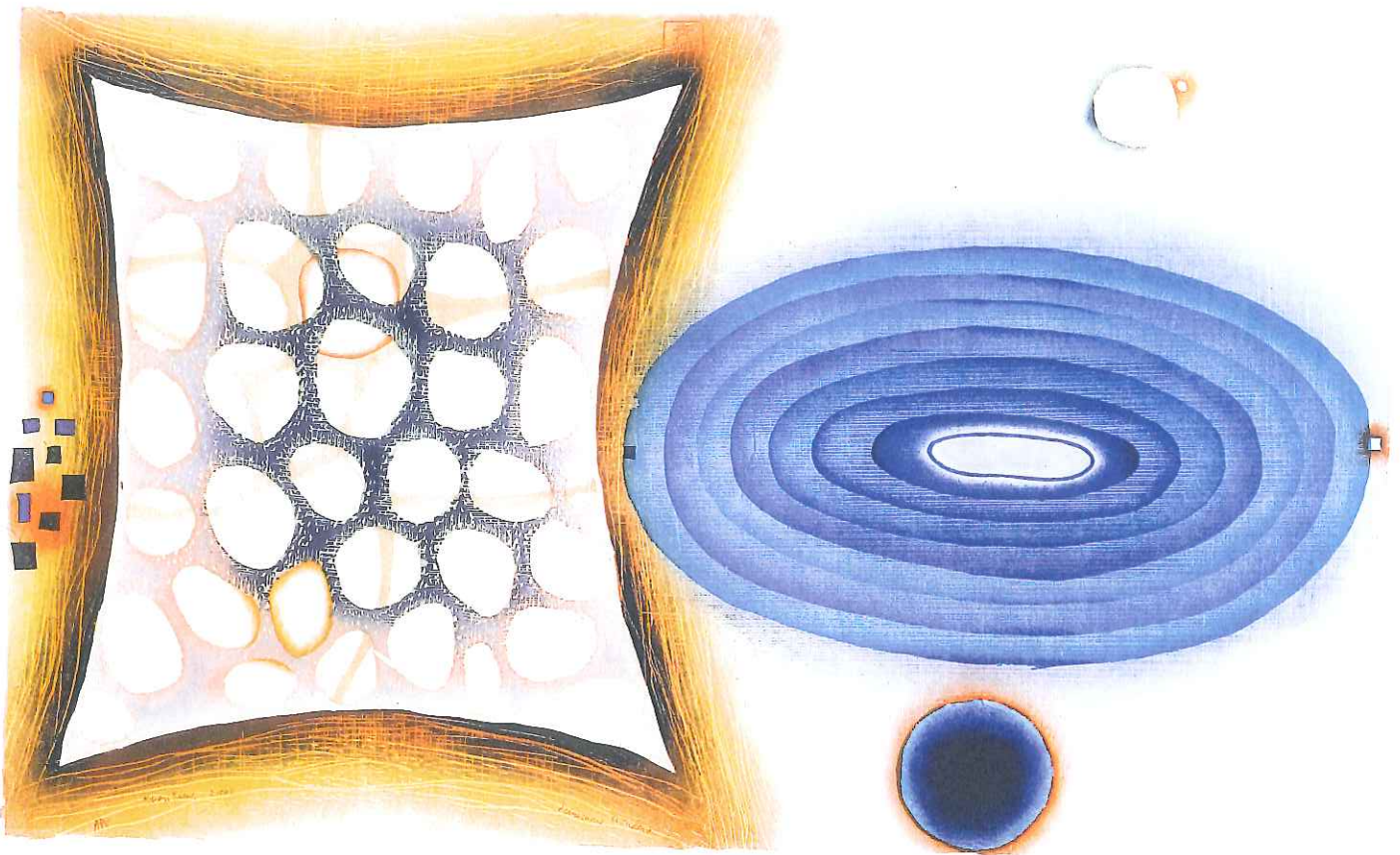
Current Position Willa Cather Professor of Art, University of Nebraska-Lincoln

Awards and Exhibitions Karen Kunc's work has been shown extensively in the US, Europe, and Asia. She is represented in collections worldwide, including the Museum of Modern Art (NY), the National Art Library of the Victoria and Albert Museum, London, and the Machida City Museum of Graphic Arts, Tokyo, Japan. Among Kunc's many honors are a Fulbright Fellowship, two National Endowment for the Arts Fellowships, and the Southern Graphics Council Printmaker Emeritus award in 2007.



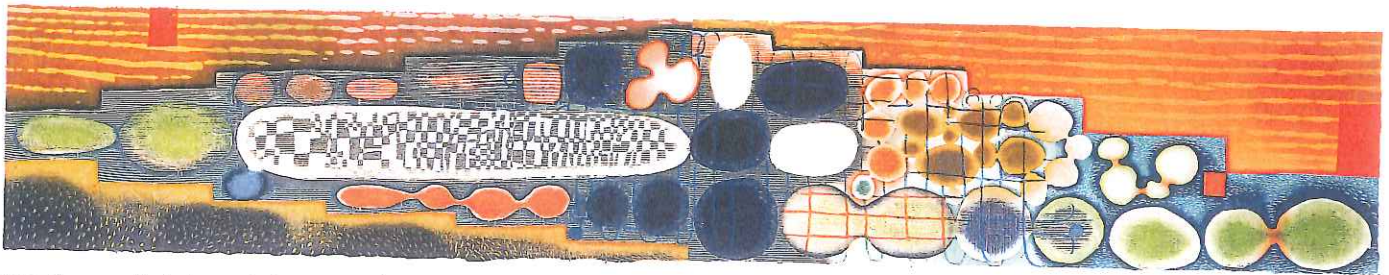
Primeval Message, 2001. Woodcut, 42 × 23 in (106.6 × 58.4 cm).

With this piece, the artist takes advantage of using a single sheet of shaped paper to achieve a collage-like effect. The print looks as if it was built from multiple elements to bring together seemingly unrelated forms, spaces, and colors. Kunc notes that she was referencing the fossil record, sedimentary accumulation, and the interpretation of meanings, when designing this image.



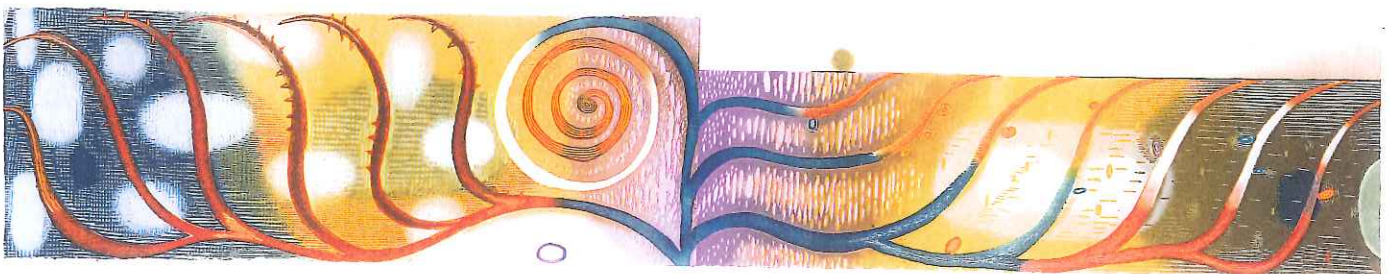
Luminous Wonders, 2006. Woodcut, 12 × 20 in (30.4 × 50 cm).

Here Kunc suggests a variety of dynamic themes ranging from the expanding universe to the birth cycle and cell division. With these images, she mixes a scientific illustrational style with a mysterious layering of cosmic spiritual symbols and orbiting celestial bodies.



Treasure Trove, 2005. Woodcut, 14 × 80 in (35.5 × 203.2 cm).

With this image, the artist creates a scene reminiscent of an archeological dig—a place where ancient treasure and artifacts are scattered among colorful stones and rubble. The size of this piece allows the audience to experience the “artifacts” on a panoramic human scale.



A Patent Embrace, 2005. Woodcut, 14 × 78 in (35.5 × 198.1 cm).

A beautifully exotic tree-like form unravels its dangerous tendril branches, reaching for its next embrace. Kunc takes advantage of the long narrow piece to accentuate the expanding nature of this primeval organic form.

Rolling Up

Roll the ink out onto a slab of glass or smooth stone using a medium rubber brayer. The layer of ink should be heavy enough to cover the printing slab, but not so thick that it develops an orange-peel texture. The surface should be smooth and velvety. Keep adding ink little by little and roll it out until a

Rolling up



1. To add the ink to a glass slab or smooth stone, pick up a small amount with a brayer and begin to roll out.



2. Continue to add ink and roll it out in small quantities.



3. When all the ink is rolled out, the surface is smooth and velvety, and the ink makes a "tacky" sound, it is ready to transfer.



4. Use the brayer to transfer the ink to the block.

slight tacky sound is heard. Transfer the ink to the block with the brayer until the same sound is heard.

Depending on the surface area to be covered, you may have to add ink to the slab in order to maintain the ink film. Be careful, however, not to overload the surface of the block with ink. Aim to have the same velvety ink layer on your block as is on the inking slab. A heavy deposit of ink will spread during printing, sacrificing detail in the final image.

Printing the Block by Hand

Handprinting requires a simple registration method, especially if anticipating multiple colors. A registration guide combined with T and bar to align the paper, and block or kentō registration marks cut directly into the block are conventional registration systems for handprinting.

Alternatively, a system that holds the paper in place relative to the block in a fixed position can be very accurate. This can be accomplished with a punch registration, or simply by taping the paper down next to a block held in a fixed position.

Set up the paper and block in the registration guide of choice. Lay the printing paper over the inked block and rub the back of the paper with a burnisher—either a traditional Japanese baren, a wooden spoon, or some similar device. Wooden drawer pulls work nicely, too.

As the block is burnished, the ink will show through the back of thinner Asian papers, enabling you to gauge the quality of the printed image. The amount of pressure determines both the tone and sharpness of a print. In general, a sharper, more detailed image results from a relatively thin inking with heavier rubbing rather than lighter rubbing with a heavy ink deposit.

Sometimes, artists will purposefully vary the burnishing pressure to achieve additional tonal variety. A "kiss" impression is the term used to describe the even, light tone that the paper picks up when it is first put onto the inked block and rubbed lightly by hand. Darker areas can then be selectively developed with additional burnishing.



☞ The paper is fixed into position with tape hinges. Tape is also used to define the border of the paper and the block position.

Printing the block by hand



1. When inking the block make sure that the ink layer is consistent. Always avoid roller marks.



2. Here the artist Endi Poskovic uses a variation of the traditional system of registration. His printing papers are locked into place and successive blocks are placed in the exact position relative to the paper.



3. Placing the paper on the inked block should be done with care and precision. This will allow the paper to make full contact with the inked surface. Poskovic uses a long paper tube to help him roll out the paper.



4. Burnishing a large print is a slow and physical process. Be methodical in knowing where you've burnished and pay special attention to the edges and corners. Once the image has been lightly burnished all over once by hand, select areas or the entire print can be darkened by continuing to burnish with heavier pressure. Place another sheet of paper over the print paper to protect thin papers from the direct action of the burnishing tool.



5. When lifting a large print after burnishing, make sure that the paper does not crease or fold in on itself. Hold it up high. Sometimes it helps to have another person assist.



6. The block is inked with another color.



7. Another color is added.



8. Poskovic reviews the image before continuing with more colors. In the end he will have printed ten different colors from five blocks.

Printing on the etching press



1. Tom Huck at work on his woodcut *Ultimate Cock Fight*. His press setup has running boards at either end of the block.



2. The block is inked.



3. The paper is placed using a T and bar registration (located on running boards).



4. The blankets are added.



5. The finished print is removed.

Printing on the Etching Press

Methods for printing relief using the etching press will vary slightly depending on the material of your block. Because etching presses are designed to print thinner metal plates, mounted linoleum and blocks or boards greater than $\frac{1}{4}$ in (6 mm) thick require some accommodation for the thicker material. Extra wood or board, preferably slightly thinner, placed on the press at the leading edge of the block allows the blankets to be engaged off the printing block and keeps the block in position as it is run through the press. T and bar or kentō registration marks can be positioned on the block itself, or T and bar marks can be located on the surrounding running boards if the paper is larger than the block.

Other Presses

While the etching press is the more familiar and available means of printing the relief element, many artists still use vertical motion presses such as the Albion, Columbia, or Washington iron hand presses for relief printing. These platen presses are antiques that were used for printing type and relief images before the advent of lithography and digital process for mass printing. Their system of springs can transfer a great deal of pressure. Small iron “nipping” presses used for bookbinding have a similar vertical motion and can print small blocks too.

Letterpress proof presses are also favorites for many artists. These presses have a cylinder that travels over the inked block to make the print. Blocks must be “type-high” (.918 in/2.4 cm) to print in the proof press. Linoleum can be mounted on MDF and shimmed with thin cardboard to achieve this. The proof press is an excellent choice if making a large edition or if combining imagery with letterpress.

Printing on other presses



1. When using an iron hand press, the block is secured in the press bed and inked up by hand with a brayer. The paper is positioned.



2. Once the paper is positioned, packing is placed on top.



3. The bed is rolled underneath the platen and the lever is pulled to print.



1. When using a nipping press, set the inked plate and paper on a carrier board. Registration guides can be marked directly on the carrier board.



2. Cover with a packing board.



3. Slip this assembly into the press and tighten the screw as far as it will go. Unscrew and carefully remove the assembly.



☞ When using a cylinder press, the relief element is secured in the press bed. Depending on the type of machine, inking is by hand or controlled by the machine. Paper rests on the cylinder, which travels over the inked block to make the impression.



Endi Poskovic, *Night Studio Scene (Rumor de Lobos Grandes)*, 2007. Woodcut, 32 × 48 in (81.2 × 121.9 cm) each. Courtesy of the artist.

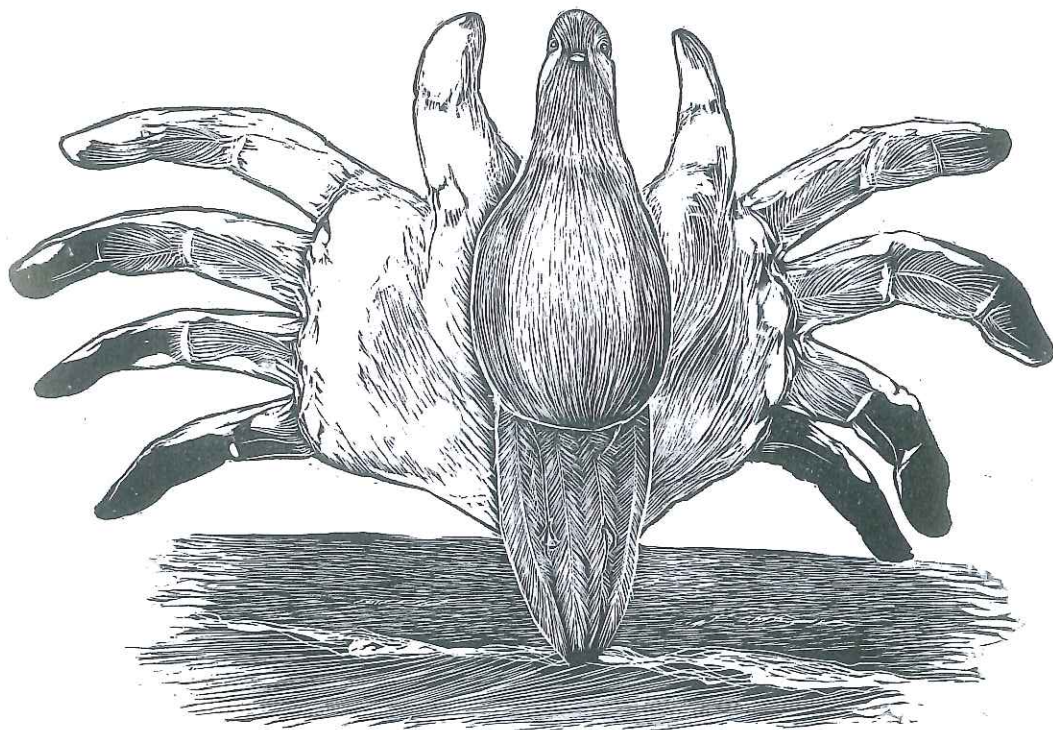
These images are different color versions or states. Creating separate color blocks allows Poskovic to explore different color combinations before editioning. Best known for his large-scale color woodcuts, Endi Poskovic's works have been exhibited all over the world. He works in series, developing a vocabulary of idiosyncratic images and text that portend ominous narratives. The works portray a dystopic vision of a contemporary world replete with conflict. The simultaneous seduction of color and surface in the prints becomes the metaphor for our own blindness to, and complicity in, the problems that exist in our world.





Jaana Paulus, *Eron jälkeen (After Divorce)*, 2006. Reduction woodcut, 15¾ × 25 in (40 × 63.5 cm).

Jaana Paulus works with very complex color-reduction printing, often involving more than 15 layers of printing. This image is a view from the artist's country home where she sometimes feels transformed by nature. Standing in the foreground is a woman with hedgehog spines. If necessary, she will use them in her defense as she proceeds with a divorce.



Andy Farkas, *New Wings*, 2004. Wood engraving, 5 × 7 in (12.7 × 17.8 cm). Courtesy of the artist.

Wood engraving is a traditional form for book illustration. Farkas continues that tradition in this work, an illustration for a short story entitled *The Bird and the Blind Man*. Developing his images in an improvisational manner, he loosely sketches an idea on the block, then finds the emotive detail as he carves. In this story the images take on a more surreal quality, the idea being that the imagery is from the blind man's point of view.

Color Relief Printing

There are two basic approaches to color image development in the relief print. A reductive approach builds an image with successive layers printed from the same printing element. Any printing after the first will layer with previous printings, creating color mixtures.

A multiple-block technique is essentially additive in approach. Color can be printed as a single layer or, when mixed with various proportions of transparency, layered for complex color mixtures. Of course, the experimental printer might use a combination of reductive and multiple-block techniques.

Reductive Approach

A traditional reductive approach begins with a color drawing to serve as a guide for the cutting and building of the image. Once the image is transferred to the block, the cutting proceeds by removing any areas of the image that are to remain white. The block is then inked with the first color and printed. Once the desired number of copies has been printed, the block is cleaned (with mineral spirits or water, depending on the type of ink) to prepare it for more cutting.

Reductive approach



Sean Star Wars' print, *Country Croc*, combines reductive color with a key block. Here you see the sequence of color reductions printed separately, the key block and the final composite print.

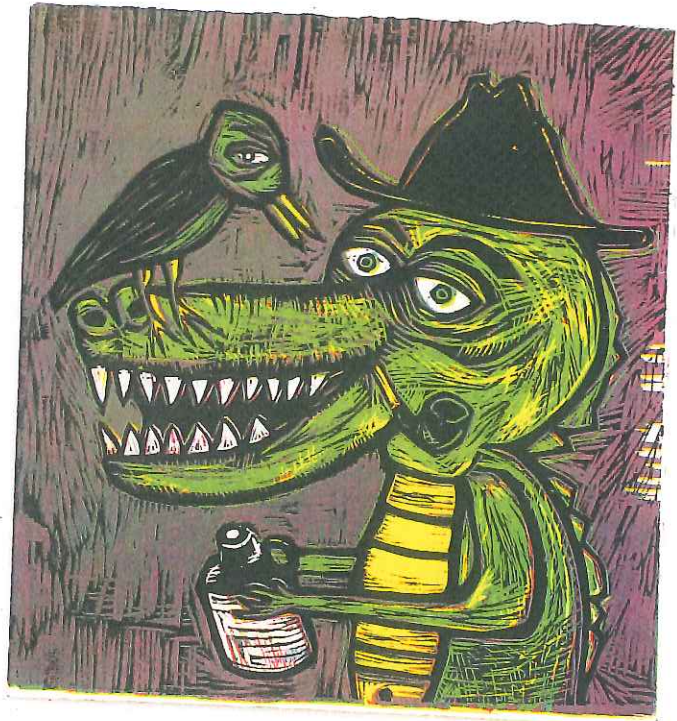
If it is necessary to work on the block right away, a little talc can be dusted into the surface to absorb excess solvent or moisture. This dusting, however, tends to fill in fine wood grain and should be avoided if it is important to maintain the grain.

The cutting that is now done may be viewed as "saving" the color just previously printed. Cut away the block in every place that this color is to exist in the final image. The second color may then be printed, overprinting the first one everywhere except where the block has been cut. The transparency or opacity of this second layer will determine the color mixture that results.

This cutting/printing, cutting/printing pattern continues until the majority of the block is cut away. The obvious drawback to this system is that the printing matrix is destroyed in the process of developing the image. Any mishaps along the way cannot be corrected.

Additive Approach

The multiple-block color relief is more versatile in that it enables all plates and blocks to be developed and proofed, then reworked if necessary. Since a separate block is made for each color, it can be more time-consuming, though.



Additive approach



Key block



Key block proof

The key block

A key block is traditionally cut first, then used to generate color support blocks. The key image can often exist as a stand-alone print.



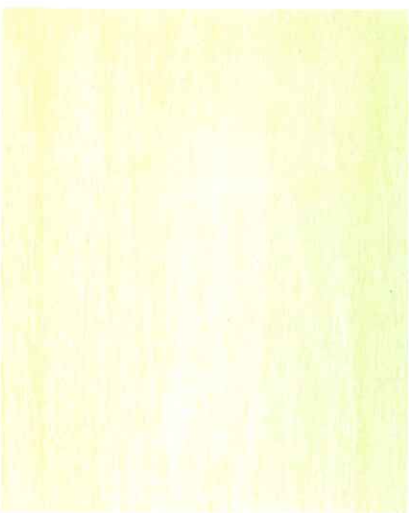
Background block



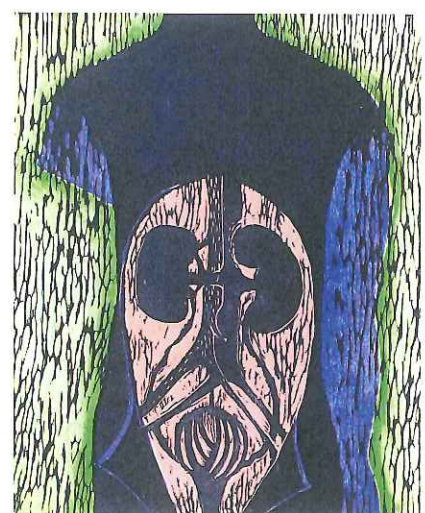
Jigsaw block

Support Blocks

Support blocks carry color and other information. The background block is used to print a wood grain texture, and the jigsaw block is made by offsetting the key image on to a thin piece of lauan, then cut apart. This allows for more complex color to be printed in a single pass through the press.



Sequence of printing: block 1, blocks 1 and 2, composite image



The multiple-block print can be approached in two ways. A common method is to develop a key image first. This image is then proofed and used to offset information onto other blocks to be developed for support color.

If the offset is made onto thin material, the image can be cut apart so that blocks of color can be inked up separately and reassembled in a jigsaw manner for printing. This allows several colors to be printed at once. Very thin (1/8 in/3 mm) lauan or HIPs are especially good choices for this process because they are relatively inexpensive and can be cut by hand with a utility knife.

Another approach is to transfer guide information to several blocks. The blocks are cut simultaneously with no block being dominant, each carrying detail important to the final image. When the cutting is complete, or nearly complete, the artist can proof the blocks, printing different color combinations and sequences.

Of course, these approaches are not absolutes. The continuum between them is certainly open for exploration.

Color Ink Considerations

Relief color printing is perhaps more flexible and forgiving than other color printing tasks. As mentioned earlier, the ink should be short, have medium to high tack, and be relatively stiff so that it can print accurate detail. This stiffness can be modified, since the level of detail is different in each color block.

When working with oil-based inks, it is ideal if prints can be air-dried for a day between printing successive layers. This

drying makes the viscosity (oiliness) of the ink layer less of a factor in the quality of the printed surface. A dry ink will be rejected by an oily ink if printed too soon in succession. That being said, there are some occasions when printing successive layers directly after each other is necessary or preferable. When printing “wet into wet,” avoid rejection problems by printing each successive layer with a slightly oilier ink.

As you mix color, consider its relative opacity or transparency. Adding more transparent base can create very pale tints, useful for subtle layers. Adding white and/or metallic pigments increases opacity. The sequence of printing can also affect the relative dominance of any color. Traditionally, the sequence runs from light to dark, warm to cool. With reductive printing especially, this sequence tends to build value contrasts that are important to compositional structure. But varying printing order or opacity can yield some fascinating variety of effects, such as veiling or editing. The nuances of layering can be a vital consideration in developing an image.

Printing Multiple Blocks (Etching Press)

A good registration guide and careful attention to precise placement is the key to obtaining accurate registration. Printing multiple blocks one right after the other allows even greater control. The following steps explain the procedure.

1. In order to use the press to help “hold” things in place, tear the paper so that it is at least 3–4 in (8–10 cm) longer than the final intended print size. Place the registration guide on the press.

Printing multiple blocks



1. The paper has been engaged under the roller and the first block is placed in position.



2. Here, the first layer is a background wood-grain texture printed in a pale green.



3. Once the first layer is printed, the block is removed and replaced with the jigsaw pieces for the second layer.



4. The second layer here is comprised of a set of jigsaw pieces which have been inked in three different colors. The outer shapes have been wiped so that just a halo of green ink remains.



5–6. The second layer block is removed and replaced with the final key block to generate the composite image.



2. Set the proper pressure for the material being used, accommodating running boards for thicker blocks if needed. In this example, running boards are in place to accommodate printing a series of wood blocks.
3. Lay the paper in place and cover the paper with a sheet of protective newsprint. Lay the printing blankets on top, then engage the blankets and the edge of the paper in the rollers. Flip blankets and paper over the roller, making sure they remain uncrumpled.
4. Place the inked block in place on the registration guide.
5. While holding the paper up, slowly crank the assembly through the press. As the press bed moves through, the paper will gently lower onto the block. Holding the paper up in this manner prevents ink "push" caused by any shifting of the paper on the plate.
6. Once the block is clear of the cylinder, crank just a couple of turns and leave one end of the paper engaged. Switch matrices and crank back through. Repeat for each successive color.

Sometimes this wet-into-wet printing is not possible, as would be the case with a reduction print. An option for successive colors in these situations would be to lay the printing paper with the printed surface face up and the block positioned on top. Positioning the smooth, flat sizing catcher under the paper for a little cushioning is also helpful sometimes.

Beyond the Press

The relief print is traditionally a human-scaled production. Many printmakers embrace the intimate scale of the activity as one of the reasons for making prints in the first place. Conversely, there exists a constant challenge for the printed image to compete with other forms of artistic production. Moving out of the conventional print contexts allows us to see the printed image in a new light.



Swoon, *Buenos Aires, Berlin*, 2005. Linocut with hand-painting and cutting, approximately life-size. Courtesy of the artist.



Swoon, *Family Feeding Pigeons*, Brooklyn, 2005. Linocut with hand-painting and cutting, approximately life-size. Courtesy of the artist.



Swoon, *Allison the Lace Maker*, Berlin, 2005. Linocut with hand-painting and cutting, approximately life-size. Courtesy of the artist.

These prints by American artist Swoon are life-size portraits influenced by Indonesian shadow puppets, and by drawing on street posters and graffiti. The artist wheat-pastes the prints onto walls, doors, and other public spaces, allowing them to become a part of a community and take on a life of their own. As multiples, these prints are installed in different locations around the world, where they assume different lives, depending on the environment in which they are placed. They are not protected from the elements, allowing the process of decay to become an integral part of the prints.

Relief print installation

Thomas Kilpper, *Don't Look Back*, 1998. Site-related print installation.

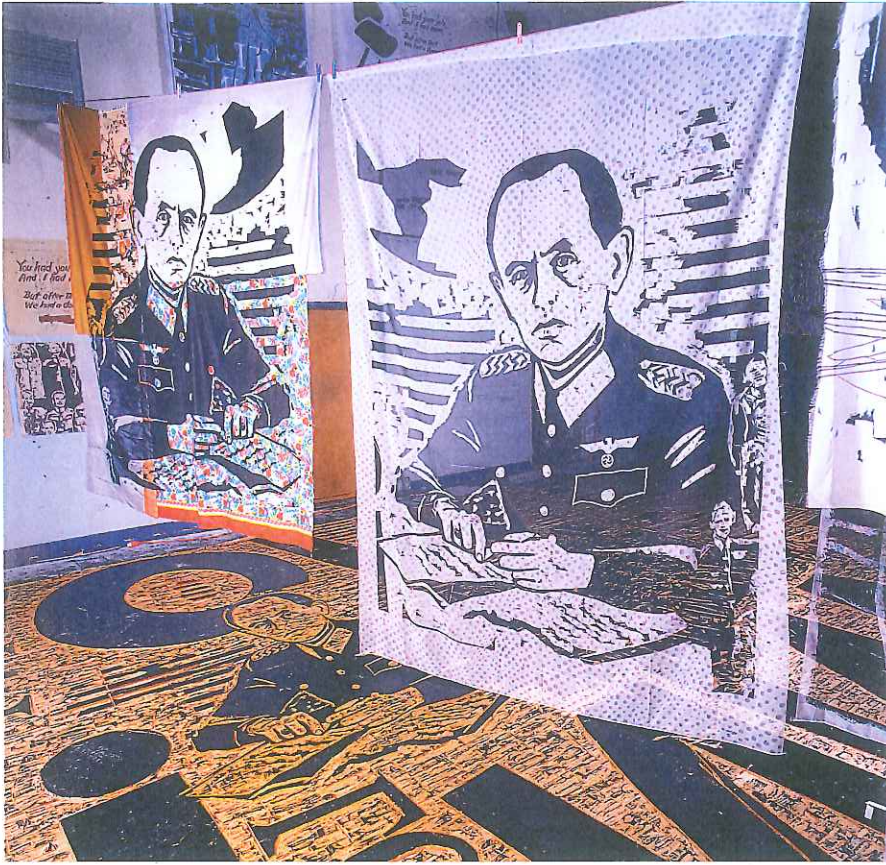
The artist carved the floor of a basketball court to create a giant wood block that was then inked and printed on a variety of surfaces including fabric, paper, wallpaper and advertising posters. These prints tell the story of the abandoned site that was the central interrogation camp of the Luftwaffe during World War II and that was used after the war by the US Forces to interrogate some of the Nazi leaders, and to select who will be integrated into US-services and who will be brought to trial. . . . The new West-German secret service was founded here under the control of the CIA. Like most of his staff members—its “new” director was the old director of the Nazi era, Reinhard Gehlen. Special anti-guerrilla warfare training was held here at Camp King near Frankfurt on Main during the Vietnam War. After printing the floor, the artist displayed the prints in the basketball court for the exhibition. The visitors—walking on the block—moved between “negative” and “positive”. This way the prints and block worked together as an installation rather than existing as separate components. A 300 square meter banner print of the carved floor was sewn together and was displayed during the exhibition hanging from the town-hall’s façade.



1. A banner, 984 sq ft (300 sq m), printed by Thomas Kilpper from a carved basketball court floor.



2. Visitors walk through the installation.



3. Images printed from the carved floor hang from a clothesline.



4. Some of the prints taken from the carved floor.

Relief print event

"Big Damn Prints," Pratt Institute, Brooklyn, New York, 2007. Courtesy of Dennis McNett.

Pratt Institute printmaking professor Dennis McNett has organized this event to allow his students and members of the art college's community to create large relief prints. Due to the scale of the blocks, a rented steamroller is used instead of a press. To save money and for ease of use, fabric (muslin) replaces paper. During the process, students learn to collaborate and assist one another, which are hallmarks of printmaking practice.



1. The image is drawn.



2. The block is carved.



3. The block is inked.



4. The sheet is placed on the block.



5. The steamroller is used for printing.



6. The print is removed.