

Printmaking as Alchemy

Etching, woodcut and digital printing as tools of transformation

By April Vollmer

Printmaking, like alchemy, can be described as an alternative chemistry. Transmuting base metals into gold is a good description of what goes on in a print shop, where zinc plates are magically changed into matrices for prints. Like alchemy, the true goal of making prints is more significant than merely making gold, as nice as that would be. The aim of the contemporary printmaker, like the medieval alchemist, is to use material transformations to probe the nature of reality.

My artwork has been shaped by the printmaking techniques I use, and has been transformed as I moved from etching, to woodcut, to digital printing. I have focused on the chemistry of printmaking as a way to understand the material world. As the character of my work has changed, my understanding of my relation to that world has also been transformed. By altering a matrix of wood or metal with acid, knives, heat or light, I transfer layers of information from that template to a receptive surface such as paper. The indirection, the careful calculation and the implicit violence of cutting, burning, and impressing are the printmaking rituals that generate my images.

Curves and Grids

In my work I contrast the organic shapes of nature with the logical grid of culture. When I made my first etching plates, the grid of the press bed organized my plates so I could line up the paper squarely on top of them. Today the *kento* registration locates my paper against the image on my blocks. Accurate registration gives me the freedom to register many colors, or to rotate a square paper to print the image on all four corners. The computer offers me a mathematical basis for making images that is a natural extension of this way of working. The subject matter of my finished prints reflects my methodical working process: it balances fish against mosaic patterns, wreaths of grape leaves against woven fabric, centipedes against architectural floor plans.



I find similarities in shape between plant, animal and the human body. The veins in a leaf, in an insect's wing and in my own hand reflect the same physical principles. These correspondences help me locate myself in space and time, and measure my connection to nature. In my prints I parallel the image of my own hand with leaf forms, or equate the meanders on a fish with the meanders of a

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*April Vollmer, **Musca Mosque**, 2002. Hanga woodcut on kizuki hoshō, 10" x 10", edition 20. In the **Memorial Portfolio**.*

*April Vollmer, **Mulabandha**, 2002. Hanga woodcut on dyed kizuki hoshō, 10" x 10", edition 18.*

Roman mosaic. The process of printmaking is almost more important than the finished work because it is through attention to planning, cutting and printing that I come to understand relationships that I cannot grasp in any other way.

Background

The immediacy of nature framed my childhood. All my early memories are of camping, gardening, stargazing, birdwatching and tide pool viewing with my family. Each member of my family is engaged in the close observation of nature, through the study of optics, geology, chemistry, philosophy or botany. As a child I maintained an ant farm and a butterfly collection, alternate worlds that were stranger than fiction. The neutrality of scientific inquiry, outside human emotion, remains the source of my imagery.



*April Vollmer, **Spider Quadrille**, 2001. Reduction woodcut on kizuki hosho, 26" x 26", edition 11.*

This reduction print, depicting a spider displayed against a mosaic floor pattern from Venice, was printed in interlocking quarters with pigment dispersions and sumi ink.

Insects infiltrate much of my work because they are paradoxically beautiful and repugnant, mysterious and mundane. They represent human beings, participating in a plan larger than individual understanding, subject to forces beyond their comprehension. I use them like tesserae in a mosaic, as parts in a complex whole. Insects inhabit the same shallow space that prints do, and like prints, are best viewed intimately and from above. Spiders are representatives of the earth, crawling in and out of holes in the ground, between what is revealed and what is beneath the surface. I lay out insects according to a tantric diagram of the universe, bees and flies replacing the gods and goddesses that radiate outward, embodying the creative energy of the cosmos.

As an undergraduate at Hunter College in the seventies I found the chemistry of etching irresistible. The studio was like a laboratory, with bottles of active chemicals waiting to be used. It seems a long time ago now, when we kept the acid trays next to an open window for ventilation! I loved the physical engagement with zinc, copper, stone, alcohol, paint thinner, nitric acid and asphaltum, and the ingenuity it took to mix, heat, pour, roll and wait to get an effect. Vincent Longo taught me a feeling for materials and showed me the relation between minimalism's grid and the symmetry of the mandala, which now structures much of my work.

Working with traditional printmaking materials in the studio also made me feel connected to the history of art. The art historian Leo Steinberg laid the foundation for my understanding of the democratizing influence of printmaking. Steinberg introduced me to the work of Hendrik Goltzius and Marcantonio Raimondi, master printers whose etchings changed the place of fine art in the modern world by making it accessible through multiples. Printmaking continues to have overtones of social protest and proletarian interests. It remains tied to ideas of craftsmanship, and to the non-verbal learning that comes from working with one's hands.

In the 17th century Marcantonio was jailed for his etchings of Giulio Romano's reinventions of ancient erotic images. Though his contemporaries knew such imagery was a part of ancient life, they considered the public distribution of such images subversive.

Hanga Woodcut

My initial love affair with etching culminated in a series of etchings of worms, printed from large shaped plates. From there I moved to oil paint and spent several years painting birds and invertebrates on shaped wood formats. When I wanted to return to printmaking in the nineties, I decided it was time to learn *hanga* woodcut.

Moku hanga is the traditional waterbase woodcut technique developed by the eighteenth-century Japanese *ukiyo-e* masters. Moku is wood, and *hanga* approximates "printing". Woodcut is a direct, sculptural way to make prints, and Japanese woodcut is its most refined version. In Edo-period Japan *ukiyo-e* prints were the visual expression of the transformation from a medieval agrarian economy into a mercantile urban one. I have always admired the intensity of *ukiyo-e* prints, which are small in scale and printed on insubstantial paper, but incredibly precise, often subversive, and always saturated with layers of meaning.

Hanga woodcut not only fulfilled my desire for historical connection, but it offered me great control over color and registration. I did not have access to an etching press at that time, so learning to print with a baren was very useful, and the non-toxic technique was perfectly adapted for my small studio.

Of course nothing works out as anticipated, and the change from oil paint to Japanese woodcut transformed my work in unexpected ways. The precision of Japanese knives led me to refine my cutting, so my imagery became more precise. My palette became more controlled, and my color more saturated as I began printing with pigment dispersions. The lightfast pigments already ground in water are a modern improvement on the fugitive dyes used in many of the *ukiyo-e* prints, and are a safe and time-saving alternative to grinding powdered pigments. I prepare colors as needed in small jars by adding gum arabic to the pigment dispersion as a binder. Even with these simplifications, I was surprised by the way the rituals of Japanese printmaking changed my way of working.



The preparations and arrangement of tools for *moku hanga* printing are more specific than for etching. The *kento* registration marks are part of the initial planning, and are transferred to each color block with the preparatory drawing. Two notches are cut along these marks: the *kagi kento*, a right-angled depression on the lower right corner, and the *hikitsuke kento*, a straight-edged depression toward the lower left corner. Together they define the bottom edge of the paper in relation to the image. These registration notches must be precisely cut for each of the color blocks. In the studio before printing, Japanese paper that has already been surface sized for printing with a thin layer of glue must be dampened just the right amount to absorb the color into its fibers without

Utamaro, the artist who portrayed the women of the pleasure quarters with such insight, was manacled and placed under house arrest. Like Marcantonio's in Italy, his prints were deemed improper for public distribution by the censors of his time.

April Vollmer, Roman Fugu (DNA edition), 2002. Hanga woodcut on eichizen washi, 15" x 16", edition 25.

April Vollmer, Generation 2002. Reduction woodcut on dyed kizuki hosho, 26" x 26", edition 18.

A Dionysian grape leaf wreath overlies a 13th-century Seljuk carpet fragment. The complexity comes from successive cutting of a small block in approximately ten steps. At each step the paper was rotated and the interlocking pattern printed in each of the four corners.

bleeding. The arrangement of tools is also very particular: the printing tools, color, and paper must be carefully aligned and placed within easy reach for printing with a baren, so printing can proceed steadily before the paper or block can dry out. Posture is especially important so that the proper amount of pressure can be transferred to the block at the right moment, and so that the printer does not become exhausted by the repetitious movements. These deliberate preparations contribute to a heightened focus during the act of printing.

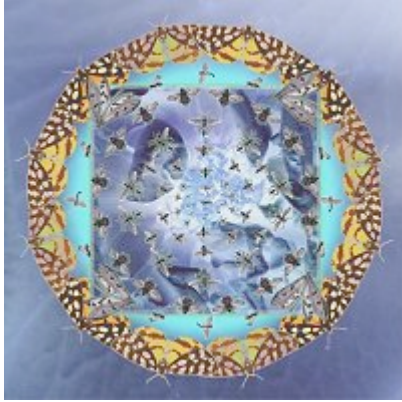
Japanese woodblocks are designed for editioning. Much proofing is needed before the block, brushes, and paper arrive at the right dampness for printing and before the printer becomes attuned to the requirements of the block. With practice, the intense concentration on the physics of printing has given me access to a deeper level of awareness that has changed the way I approach making prints.

As much as I profit from using the traditional processes of printing, I do not make ukiyo-e prints. Ukiyo-e prints were the product of a particular time and place, and were made by an orchestrated group of men with a commercial purpose in mind, a publisher coordinating the efforts of artist, cutter and printer. My prints are contemporary, individual and American. I value historical techniques for the light they shed on my contemporary practice. Woodcut and etching are relevant to an understanding of the varied techniques of today's pluralistic printmaking in the same way that an understanding of art history is necessary to an appreciation of contemporary art. My work is not nostalgic and retrospective, but is grounded on a foundation of past printmaking. In the spirit of bringing this historical understanding forward, and with the pragmatic desire to use the powerful tools at my disposal, I began to incorporate digital imaging into my printmaking.

Before turning to the computer I had used photocopies to transfer the level of detail I wanted to my blocks. I captured the immediacy and detail of plant forms by placing them directly on the bed of the photocopier. When I began using the computer, I changed from photocopying to scanning. I scanned my insect subjects directly from the scanner bed, then combined those scans with other elements in Photoshop. The computer documents as much detail as a photocopy, while giving much more control over composition. I still photocopy my finished digital image so I can transfer it, with its registration marks, to each of my blocks. I apply solvent to the blocks, place the photocopy face down, and run it through a press. These detailed, monochromatic traces guide my cutting. I decide on the color separations and the level of detail I want intuitively, by freely hand cutting with my Japanese knife.

Pixels to Pigments

After using the computer for planning my woodcuts, I experimented with digital printing. Perversely, digital images are difficult to transform creatively into prints because mechanical printing appears deceptively simple. To reach the same level of control and engagement as I do with woodcuts, I must visualize the scale and texture of the image on paper while viewing its rough approximation on a monitor. Then the print goes through a sequence of proofing, adjustment, and compromise before it feels my own. I print the initial proofs myself, then work with a professional printer to make the lightfast finished prints.

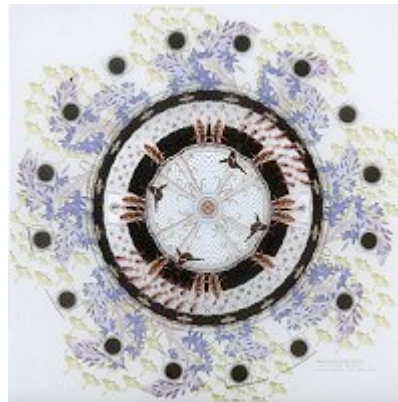


*April Vollmer, **Black Rose Tantra**, 2001. Inkjet on yamaguchi washi, 20" x 20".*

*April Vollmer, **White Rose Tantra**, 2000. Inkjet on yamaguchi washi, 20" x 20".*

The texture of the rose petals is reflected in the subtle texture of this paper. Bleed printed, this image is a square rose, overlaid with a pattern of insects, pollinators of the rose, generating energy as they radiate outward.

My first digital work, *Big Bang*, was bleed-printed on handmade Japanese paper. Incorporating the deckle and texture of the paper into the print helped me bridge the difference between machine and hand printing. The *Bramante's Tiny Temple* series uses an architectural plan based on Bramante's Tempietto in Rome as a framework for radiating patterns of plants and insects. I printed the series of four on translucent Mylar sheets and hung the slightly curled prints unframed from nails to emphasize their physicality. Other prints are made in layers or printed with shiny metallic ink so that the print shanges in the light as the viewer moves.



*April Vollmer, **Bramante's Basement**, and **Branante's Lunar Temple**, two prints from the **Bramante's Tiny Temple** series, 2001. Inkjet on mylar with paper cutouts, each 36" x 36".*

To counteract the flatness of machine printing, I printed this series on translucent Mylar sheets and hung the slightly curled prints unframed from nails to emphasize their physicality. The centers glow with added contrast from a second layer of opaque white paper under portions of the prints.

Integration

My images grew out of the intense engagement with materials and processes required by traditional printmaking. The structures of printmaking have organized my art making in the same way that architectural plans and gridded mosaics provide a framework for organic animal and plant forms in my images. In the last three years, I have added a layer of computer manipulation to the techniques of etching and woodcut, which frees my imagination by focusing my attention even more precisely. Using the computer has transformed my work by allowing me to create complex patterns by rotating, duplicating, and changing scale. Those manipulations were essential to the development of my mandala forms. The computer provides an explicitly mathematical foundation for my exploration of natural form and allows me to include literal images from science, nature and architecture.

I continue to move back and forth between digital and hand printing, letting one method inform the other. I approach digital printing from the perspective of a printmaker, using the familiar transformations of layering, reversing, and transferring information to generate images during the process of working. I print

digitally on textured or translucent materials to give machine-made prints more physical presence. The computer's ability to generate and duplicate complex patterns allows me to make woodcuts that are more detailed and more densely organized. My work in general has become more abstract, no longer tied to the logic of three-dimensional space, because of the absence of time, scale and gravity in virtual space. While the true nature of reality has remained elusive, the transformations from digital to woodcut and back again have broadened my printmaking and have given me a clearer understanding of the connection between the virtual and the real.



While not strictly architectural plans, tantric diagrams function as maps of the cosmos. My prints are about the beginning and the end of the universe and equate images from the very near (the rose) and the very far (the sun).

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Bramante was the Renaissance architect who understood ancient architecture best; his Tempietto is a statement in miniature of the principles of Roman design. The image is structured with the floor plan from Bramante's Tempietto, embellished with insects and flowers. Filling it with insects make the Tempietto seem even tinier.

April Vollmer, **Big Bang (Fire)** 2000. Inkjet on kozo misumi washi, 26" x 26".

This print includes the paper's deckle and texture and represents the beginning of the universe, when everything exploded from nothing. The radiating insects replace gods and goddesses in a tantric diagram.