3 PRINTING PROCESSES: OLD MEETS NEW

MINDFUL OF A DEGREE OF HESITANCY AND CONCERN AMONG COLLECTORS WHEN IT COMES TO THE LONGEVITY OF PRINTS PRODUCED BY DIGITAL TECHNOLOGY, WE ASKED SENIOR CONTRIBUTING EDITOR RICHARD PITNICK TO TAKE A CLOSER LOOK AT THREE PROCESSES NOW AVAILABLE TO PRINT MAKERS—TWO FEATURING REFINEMENTS OF OLD TECHNIQUES, AND ONE THAT SEEKS TO BRIDGE THE GAP BETWEEN THE OLD AND THE NEW.

With the advent of a sustained and thriving market for fine art photography, collectors and artists have struggled in recent decades to balance the ever-evolving dynamic between technique, art and commerce that is unique to the photographic medium.

Where photographers continue to seek out new imaging techniques to enhance the creative and conceptual capabilities of the medium, particularly in regard to digital, they do so at the risk of their viability in the marketplace, which continues to place a high premium on archival work that displays an allegiance to the traditions of fine art photography.

For collectors inclined toward new modes of creative photographic expression, primarily as they relate to digital, there remains a degree of hesitancy investing in work of uncertain permanence and questionable significance in terms of its legitimacy within the art market.

As a result of this effort to reconcile the conflict between art and commerce, a divergent yet complementary image-making renaissance has emerged, with artists either adapting digital imaging to traditional darkroom practices, or adopting antiquarian photographic processes in order to reconnect with the "craft" of photography and find validation within the collectors market.

Master printer Allen McKinney works in a close, collaborative relationship with photographers and artists to create platinum/palladium prints of exceptional quality, beauty and longevity.

THE PLATINUM PRINT

Long regarded as the finest expression of photographic printmaking, platinum printing has remained the medium of choice for collectors and artists who value both the permanence of platinum, as well as the wonderful aesthetics that make a platinum print a true art object in and of itself.

"A well made platinum print has a unique aesthetic and presence that is more than photographic," says Allen McKinney, a master printer for more than 25 years, who combines old-world craftsmanship with modern technology to produce platinum prints of exceptional beauty. "I find them to be very much alive and almost three-dimensional, and I haven't found an image I didn't think looked more beautiful on platinum."

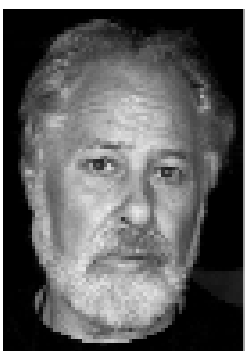
Working with a proprietary process that includes a special blending of platinum/palladium and print developer, as well as precise control of temperature and humidity in the developing process, McKinney produces prints that transcend the usual expectations. The printer's achievement in platinum printing, creating images with exceptional blacks, maximum shadow and mid-tone separation, subtle highlights, and an extended tonal range, is a result of a combination of meticulous, hand-crafted artistry, and state-of-the art digital technology.

Working from any type of original image source, whether black and white or color negative, transparency or print, McKinney begins the elaborate print-making process by creating a high-resolution digital scan. "I then use the computer to do extensive masking to separate the tones," he explains. "I usually divide the films into different tonal values, and I may use three or four films per image and that many exposures."

Once the final negatives are created, McKinney makes a traditional contact print, using a vacuum frame for precise registration of the different negatives. The thick, hand-coated archival cotton paper used by McKinney is exposed using an ultra-high UV 5000 watt light source. Like all platinum prints, each image will have subtle variations in color, tone and contrast.

It can take up to two weeks for McKinney to produce a single print, depending on the complexity of the image and the desires and expectations of the artists with whom he works closely throughout the entire process.

While acknowledging the cost and labor intensive nature of his process, McKinney believes the result offers an unparalleled aesthetic experience for the artist and collector. "Platinum is a very beautiful process, capable of producing a full range of density, tonality and contrast," says McKinney. "A fine platinum print glows with a luminosity and gentle warmth. From it's deepest shadows to it's deli-



McKinney's prints are made with a heavy-weight, archival cotton paper imported from France. His use of multiple coatings, films, and exposures yield prints with maximum shadow and mid-tone separation, subtle highlights, and an extended tonal range. Each image is initially proofed as a PDF file showing general content, image size and position. McKinney then makes a 4x5 platinum trial proof print showing tonality and color. Finally, a full-size image is made, which becomes the reference print for the entire edition.

"In terms of look and feel, the Variochromat prints are identical to conventionally produced bromide prints. It's only the exposing device that differs."

cate highlights it will have a much greater tonal range than a gelatin silver print.

"By taking this archaic 19th-century platinum/palladium printing process, and coupling it with 21st-century technology, the result is an exceptional, luminous print that fully expresses the artist's vision. But even with the technological advances available today, producing a successful platinum/palladium print is an art, not a science."

Allen McKinney can be contacted at www.allenmckinney.com

THE DIGITAL ENLARGER

Combining the unparalleled controls of digital imaging with the traditional qualities of gelatin silver printmaking was the impetus behind the invention of the Variochromat digital enlarger, created by the Germany-based photography lab Polycolor and first introduced at Photokina in 2004.

The enlarger employs a seven-inch, cathode ray tube (CRT) with a resolution of nearly 31 mega pixels and 8-bit grayscale. The company describes the exposure as "linear," meaning the density of a tonal value on the paper is proportional to its numerical value in the file, which results in prints with a highly accurate reproduction of tonal values.

The Variochromat uses traditional computer software for operation, permitting users to create a profile for each type of photographic material and allowing the creation of a grayscale and correction values to optimize picture quality. The Variochromat software splits the file for exposure into different tonal ranges. Prints are made with a "preflash," a main exposure and a final "burn," yielding prints with very smooth tonality. Image sizing is achieved like standard enlargers, by raising or lowering the enlarger head. Although all exposures are produced digitally, the final steps of developing, fixing and washing are done in the traditional manner.

Inveted by Kai Sander, owner of Polycolor, a professional lab in Essen, Germany, the Variochromat system for producing gelatin silver prints from digital files first introduced at the 2004 Photokina, is a viable alternative process in the digital age.

Owen Boyd, a noted fine print maker based in Kent, England, is one of a handful of printers to have worked extensively with the Variochromat. A professional printmaker for 30 years, Boyd believes the Variochromat is the most successful merging to date of digital and traditional techniques.

"Although I consider myself primarily a 'craft' hand printer, I spent most of the the 1990s using digital imaging such as Quark and Photoshop. Consequently, I came to the Variochromat system with an understanding of both sides of the game," says Boyd.

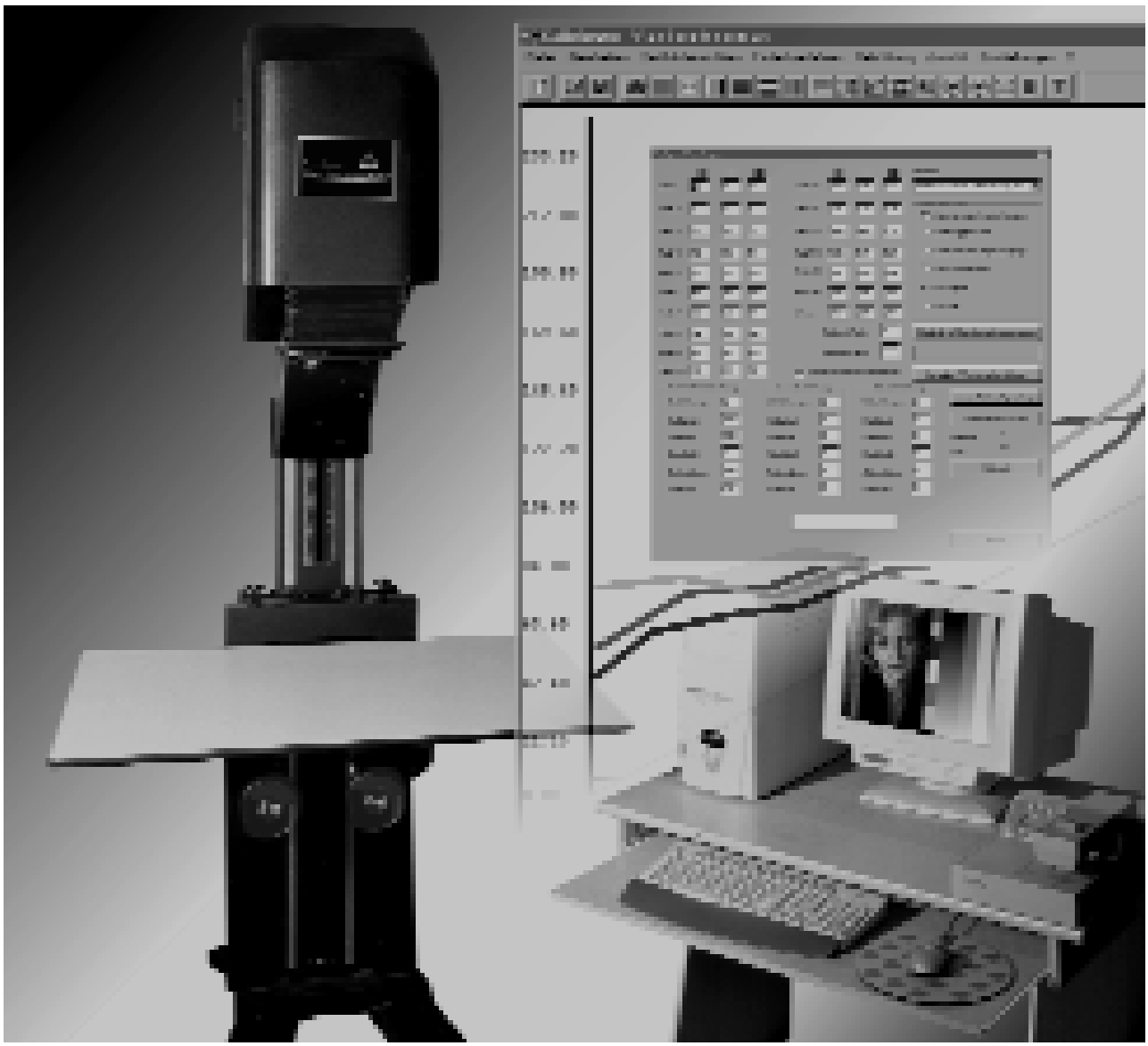
"In terms of look and feel, the Variochromat prints are identical to conventionally produced bromide prints. It's only the exposing device that differs. As far as resolution is concerned, the Variochromat produces prints that are comparable to prints from a 4x5 negative.

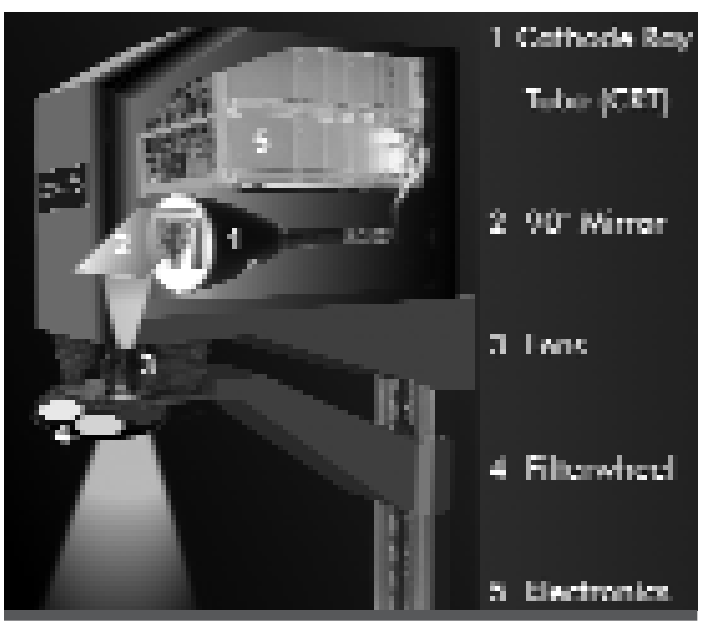
"The differences that do exist between Variochromat prints and traditional film/enlarger prints are subtle yet detectable," says Boyd. "With film, there's an 'authenticity' about the whole process, a direct relationship between light, exposed silver, and print. I do feel the digital route has a somewhat unreal aspect," he says. "That's not to say that Variochromat prints are any less real looking than prints made using the traditional enlarger, just that the process is less authoritative, and while this is true to some extent in all digital imaging systems, perhaps it is more relevant with black and white.

"I suppose that this contrast between the two methods is more 'philosophical,' than a question of objective quality," Boyd adds, "but I maintain that it does change the way we feel about, and look at photographic images.

"All that having been said, I'm in no doubt that silver-based prints are the only way to produce satisfactory black and white prints from digital media. The CRT has a kinder, more photographic feel to it than other digital, laser-based techniques. I suspect this is because phosphor gives a closer analogue to photographic emulsion than the single wavelength output of laser devices."

For more information on the Variochromat enlarger contact: www.polycolor.de





The Variochromat digital enlarger uses a 7-inch cathode ray tube with a resolution of 31mega pixels and 8-bit grayscale. Exposure follows a linear track, with the density of a tonal value on the paper being proportional to its numerical value in the file, resulting in prints with a highly accurate reproduction of tonal values. The Variochromat uses traditional computer software, permitting users to create a profile for each type of photographic material. The software splits the file for exposure into different tonal ranges. Prints are made with a "preflash," a main exposure, and a final "burn." Image sizing is achieved like standard enlargers by raising or lowering the enlarger head. Although all exposures are produced digitally, the final steps of developing, fixing and washing are done in the traditional manner.

"The difference between a carbro print and a conventional silver print is the difference between kissing a beautiful woman and just watching."

Mac McGowan is regarded as one of the finest printmakers using the antiquarian process known as carbro printing, which was first introduced in 1869.

THE CARBRO PRINT

Among the many antiquarian photographic processes that are enjoying a revival among artists and collectors, perhaps none is more unique than carbro printing.

First introduced in 1869, carbro printing originated as a process whereby a black and white print is made from three color separation negatives of cyan, magenta and yellow pigments. Individual prints are made from each negative, with the resulting color emulsion then stripped from each print and finally superimposed in register on a fresh piece of paper. The final result is a uniqely different print of rich tonality and color, and wonderful depth and three-dimensional texture.

Regarded as one of the finest practitioners of carbro printing, photographer and master printer Mac McGowan has been working with carbro for 25 years to print his own work and that of other photographic artists. His company, Carbro Ltd., has produced carbro prints for museums and galleries all over world, including a renowned series of carbro murals on permanent display at the Ellis Island Visitor Center in New York.

While anyone who has seen one of McGowan's prints has to admire the remarkable beauty and feeling of depth, both visual and tactile in each image, it is tempered by the knowledge of how daunting a task is required to make a single image. "One gets a luminosity with a carbro print that you just don't get from silver," says McGowan. "It has a life of its own, with a long scale, transparency in the deep shadows, and a huge, rich tonal range that provide a faithful reproduction of the gradation in the negative. The pigment in the print is permanent for hundreds of years."

Such qualities are not easily come by, McGowan admits. It can take as longt as three days for McGowan to complete a single print. McGowan hand-coats his own paper with a hand-mixed carbon/bromide formula. He also varies the combination of water-dispersed cyan, magenta and yellow pigment to obtain variations and gradations in the final image.

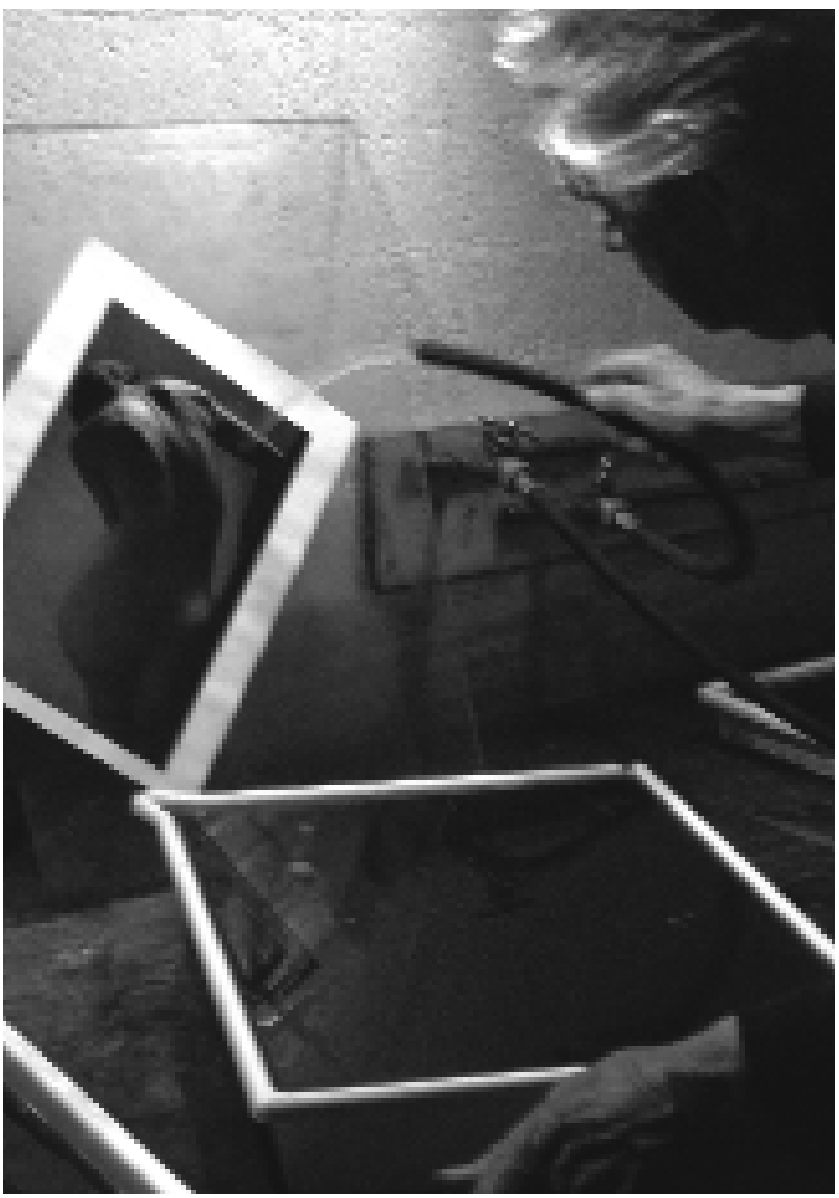
Unlike traditional silver prints with their light sensitive emulsion, carbro prints are chemically sensitive. The relief effect that one obtains with carbro works best using a paper with a hard, glossy surface, explains McGowan.

The process begins with a regular black and white print that is fixed and dried. McGowan then places a sheet with the hand-coated gelatin/pigment emulsion into a chemical sensitizer. Once the sheet is thoroughly soaked, it is squeegeed together with the black and white print and then pressed under a weight for 15 minutes. The silver in the black and white paper chemically hardens the gelatin in proportion to the amount of silver in different areas of the print. McGowan then peels apart the tissue from the print and makes another sandwich, squeegeeing the tissue and a fresh sheet of photo paper. The two sheets are then placed in a tray with 120-degree water, which causes the gelatin sheet to float away leaving the image transferred onto the photographic paper. Any remaining, unsoluble gelatin is washed away from the final print.

The process allows McGowan a high degree of refinement. He usually makes his original print a little flatter and more denser as the amount of silver in the original print is critical. He also manipulates contrast and density in the final print by controlling the amount of pigment in the gelatin. The more pigment there is the more contrast there will be.

"The difference between a carbro print and a conventional silver print is the difference between kissing a beautiful women and just watching," says McGowan in describing the unique aesthetics of a carbro print.

McGowan can be reached at www.carbromac.com



The carbro print starts as a regular black and white print that is fixed and dried. A separate sheet of paper that has been hand-coated with a gelatin/pigment emulsion is soaked in a chemical sensitizer, and then squeegeed and pressed together with the black and white print. The silver in the black and white paper chemically hardens the gelatin in proportion to the amount of silver in the print. The two prints are then peeled apart. The sheet with the hardened gelatin is then pressed and squeegeed to a fresh sheet of photo paper. Both sheets are then placed in a tray of 120-degree water, which causes the gelatin sheet to float away, leaving the image transferred onto the photographic paper. One of the unique characteristics of carbro prints is the way tonal areas directly adjacent to highlight and shadow areas are raised above the surface of the print, creating a relief effect.