

Digital Output in the Age of Photography

By Chris Maher and Larry Berman

Photography is the art of creating images by the action of light. Technology has always driven improvements in the photographic process, from early Daguerreotypes, Tintypes, and Cyanotypes, to today's high-speed films and megapixel sensors.

In the past, most process improvements were chemical in nature, but today's major advances are provided by digital technology. And as these digital processes yield higher and higher quality the demand for silver based photographic materials is dropping to the point where manufacturers can no longer profitably produce items like internegative film, or reversal photographic papers (Type "R" materials). Consequently, it is no longer possible for photographers working with traditional transparency film (slides) to print their images as they always have, and are instead scanning their work so it can be output through a number of high quality printing processes, such as LightJet or Giclée prints.

As a point of reference, B&H Photo, one of the largest camera stores in the world, has only a limited stock of outdated internegative film that expired two years ago. As these materials disappear, the photographer who has spent an entire professional career shooting transparency film, has no choice but to scan their slides if they wish to make prints.

Even photographers who shoot negative film may find that the superior control and flexibility of digital processing makes the effort of scanning their negatives worthwhile. Photographers who shoot their images digitally (It should be noted that in 2003 the sale of digital cameras exceeded film cameras for the first time, and the trend is accelerating) have no choice but to work digitally in their printing processes. Optical enlargement on chemically processed paper is just not possible, nor is it desirable.

The solution of choice for many is inkjet printing. It is a natural transition for those photographers who have always chosen to do their own printing as they now have even more control over the finished print than they previously did. Programs like Photoshop, while difficult to master, offer photographers tremendous control over their images, allowing them to express their vision in ways that were never possible even with the most highly skilled chemical darkroom work.

Rapid advances in depositing microscopic droplets of ink precisely where the photographer's image requires them allow the artist to produce truly beautiful images on ink jet paper. Each print is considered an original, in the same way that multiple optically enlarged photographic prints are considered originals. Just as the chemically produced negative is only a step in the completion of a finished image, so too is the digital photographers electronic file just a point in the process to the final output of original prints.

There are those who think that using a computer to adjust an image defines it as "Digital Art." But this isn't so. Photographers have always used adjustments like burning and dodging and contrast control to optimize their photographic images in the printing stage.

In photography's 173 year history, the permanence of images has always been an important consideration. Early color prints on chromogenic (Type "C") papers were noted for their tendency to quickly color shift and fade, and manufacturers worked to improve stability throughout the 1970's. Today's inkjet prints also can be susceptible to attack by Ozone and Ultraviolet light, but are rapidly being improved by their designers. Ink and paper combinations exist today that have been subjected to accelerated fading tests* and are rated to resist fading for more than 200 years. Photography is now a medium with potentially longer lasting archival qualities than ever before in its history.

In conclusion, photographic images are created by the action of light, whether that light strikes a chip of silicon or a film of silver halide. The process that produces the final print should be chosen for its beauty and functionality, taking full advantage of the best materials that will allow the artist to fully manifest their vision.

We recommend that photographs printed using the inkjet/giclée process be accepted by shows as the natural evolution of image printing for photographers. Further, we recommend that those printing with these new materials disclose the specifics of their process in a statement that will inform and educate the viewing public.

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