



PAULMESSIER
 Conservation of Photographs & Works on Paper

Collection of Historic Photographic Papers

The Paul Messier Black and White Photographic Papers Collection

The largest collection of its kind in the world, the Paul Messier Black and White Photographic Papers Collection was started in the late 1990s to provide, for scholars and connoisseurs, an objective baseline for dating and authenticating photographic prints. Catalyzed by the Man Ray and Lewis Hine authenticity scandals, the reference collection is a response to the urgently expressed need to establish the material history of 20th century photography.

Concurrent with its assembly, innovative methods to characterize the physical and chemical composition of photographic papers have been devised and continue to be actively developed. New characterization techniques are needed not only to determine print date but also to provide insight into more subtle issues informing a photographer's choice of paper by manufacturer, brand, surface finish, and other materials-based characteristics. Based on this ongoing research, a statistical methodology to date silver gelatin paper is US patent pending.

As characterization methods prove viable, emphasis is shifting toward practical applications. For example, a project designed to demonstrate the impact and significance of newly developed characterization techniques were applied to lifetime and posthumous prints of Lewis Hine's *Powerhouse Mechanic* in the collection of the George Eastman House. A range of novel approaches were deployed to help determine the origins and stylistic evolution of prints made of this iconic image. Results of this effort emphasize the great scarcity of early prints and segment into discrete groups the various progression of lifetime, posthumous and fraudulent material. This sort of work is a pressing need for any number of 20th century photographers including André Kertész, Walker Evans, Man Ray, Henri Cartier-Bresson and Dorothea Lange. Developing a platform to methodically collect and disseminate this information is essential.

Rising market values combined with increasingly refined art historical scholarship makes an understanding of the materials of the photographer an increasing priority. Astute collectors, both private and institutionally-based, frequently rely upon information generated from the collection as a routine part of their due diligence prior to any major purchase. Meanwhile, collecting institutions have begun the process of incorporating many of these emergent techniques into their ongoing research agendas. For the Museum of Modern Art (MoMA), this integration has already resulted in a more definitive and nuanced understanding of the origin of key prints in its collection. At MoMA this work continues through a \$1.475M project backed by the Andrew W. Mellon Foundation to characterize the modernist prints of its Thomas Walther collection and to publish the methodologies and findings.

Though the research potential is exciting, the collection also serves the intrinsically valuable purpose of safeguarding the materials of the 20th century photographer. As much as anything else, the collection is a response to the growing realization that silver-based, chemical photography is nearing its end as a commercially viable medium and that the material link to over 100 years of photographic expression is disappearing and requires preservation.

The Collection by the Numbers

The collection contains 5,064 catalogued samples of photographic paper dating from 1895 to 2005. Growth is constant with over 200 newly acquired (and as yet un-catalogued) papers entering the collection since fall 2011. Cataloging consists of entering key attributes such as manufacturer, brand, surface finish and date into a custom-designed database. Presently 98 manufacturers are represented in the collection with 476 brands and 367 proprietary surface designations.

Samples come into the collection in manufacturer sample books and in packages of unprocessed paper. There are 142 unique sample books containing 2,645 papers. There are an additional 41 duplicate sample books that provide an excellent resource for comparative aging properties of prints on various papers. The collection holds 2,426 samples taken from original manufacturer packages. These packages, containing an estimated 76,500 sheets of unexposed paper, are preserved and photographed. There are 6,089 package images (front, back and sides) representing 155 GB of data. In addition, 742 processing instructions have been removed from packages. These are sleeved and preserved in 3-ring binders. Each instruction sheet is also scanned and saved as a PDF, representing an additional 1.3 GB of data. The collection is supplemented by a library of approximately 240 technical manuals specific to photographic printing and papers. The earliest example in this library dates from 1860.

The collection has been used as the basis for numerous characterization studies forging numerous collaborations with institutions including the Art Conservation Research Center at Carnegie Mellon University, the Getty Conservation Institute, the Texture Lab at Heriot-Watt University, the Surface Metrology Lab at Worcester Polytechnic University, the School of Electrical and Computer Engineering at Cornell University, the Department of Chemistry at California State University, Northridge, the Accelerator Mass Spectrometry Lab at the University of Arizona, the George Eastman House and the Museum of Modern Art (among others). Data from these research projects are integrated into the collection catalog. Such data include 940 concentration measurements of barium and strontium content, 2,410 surface texture micrographs (4.7 GB of data), 1,643 paper thickness measurements and 742 identified papermaking fibers.

Upon acquisition, papers are inspected for manufacturer markings (back prints) and fluorescence attributable to optical brightening agents. To date, 291 papers show manufacturer back printing. When present, back prints are scanned showing colors, patterns and details (rendering approximately 870 individual images). These images, along with extensive notations and supplemental images, are presented in a web-based archive. Papers containing optical brightening agents total 1,058 examples dating from the mid 1950's to the present.

The collection is stored in two parts. Packages of light sensitive paper, eventually needing cool or cold storage, require a storage volume of approximately 175 feet³ (just under 5 meters³). Sample books and processed papers derived from the packages, the most essential research repository, requires approximately 28 feet³ (roughly 0.8 meters³). The entire collection is presently stored on shelves in a room measuring 300 feet² (approximately 30 meters²).