

Understanding 20th Century Photographs: The Baryta Layer Symposium, Getty Conservation Institute and Paul Messier, The Getty Center, Los Angeles, CA, USA, January 24, 2006

Photographic Paper Exposed: New Meaning and Possibilities for Understanding 20th Century Photographs

Paul Messier¹

The samples that form the basis of the Getty Conservation Institute's baryta project were selected from a reference collection of photographic papers amassed over the past seven years. The GCI's reference collection contains over 3,000 samples of 20th century photographic paper, and most have been catalogued by manufacturer, brand, surface texture, reflectance, base color, and emulsion grade. The samples fall into two broad categories: books of specimen prints; and packages of unexposed photographic paper. The collection currently contains samples from 57 manufactures covering 369 brands. The collection is particularly strong between 1935 and 1965 with over 1,400 samples included. In fact, of the nearly 900 samples contributed to the GCI as part of this collaboration, most date from this period. Earlier material is much scarcer and is consequentially the highest collection priority. At present the collection contains a limited amount of material pre-dating 1935 (roughly 200 samples). Paper marketed and sold in the United States is most heavily represented. There is moderate western European representation, some papers from Eastern Europe and almost nothing from Russia, East Asia and elsewhere.

The collection began as a direct result of the Lewis Hine authenticity scandal that emerged in the fall of 1999. The questioned Hine prints exposed the critical lack of objective criteria to categorize, describe and date photographic paper. Early work on the project also exposed the fact that collections of well-characterized photographic paper either did not exist or were not readily accessible to scholars.

Conservators and art historians working with other media have long benefited from the study of reference collections of pigments, resins, gums, paper and textile fibers. In large part, the contemporary field of art conservation, from the standpoint of training, treatment, and scientific research, is based on the methodical study and characterization of these reference collections. The apparent lack of such resources in the field of photograph conservation, coupled with the rapid obsolescence of chemical photography, heightened the perceived need to collect as much as possible as quickly as possible. Considering the demise of silver-based printing, the collection also serves an intrinsically valuable preservation function, providing a tangible connection to the methods and materials of 20th century photographers.

One of the first research applications for the collection was providing an authoritative baseline documenting the use of optical brightening agents in 20th century photographic papers (Messier, P., V. Baas, D. Tafilowski and L. Varga., 2005. Optical brightening agents in photographic paper. *Journal of the American Institute for Conservation*). The project involved a survey of 2,076 black and white, fiber-based papers from the collection for optical brighteners. Very few incidences of brightened paper dating prior to 1955 were found, with no examples pre-dating 1950. The scarce, early incidences of brightened paper were not precisely dated, but packaging, related graphics and image content indicate the papers were manufactured somewhere between 1950 and 1955. During this early transitional period, the commercial availability of brightened paper was apparently quite limited. The same survey established

¹ Conservator of Photographs, Paul Messier LLC, Boston, MA 02135, USA, 617 782 7110, pm@paulmessier.com

that the sustained use of brighteners, with widespread commercial availability, began in the latter part of the 1950's, with roughly 33% of all papers from this period showing optical brighteners. The survey found peak use of brighteners in the periods 1960-1964 and post-1980. In the former time frame 55% of papers contained brighteners. In the latter period 78% of fiber-based papers showed brighteners. The survey also concluded that brighteners were found predominantly in the emulsion side of papers produced prior to 1960. After 1960 brighteners were mostly found on both the emulsion side and paper base.

Relatively simple in design and execution, the optical brightener survey nevertheless provides a useful illustration of the purpose and promise of the collection by addressing open questions regarding the material history of photography through objective observation. The "baryta project" is a much more complex elaboration of this same goal. Baryta papers were introduced in the late 19th century for use with collodion silver printing out papers. Since that time baryta coatings have consisted of predominantly barium sulfate, a white pigment, in a gelatin binder. The surface texture and highlight color of photographic paper are primarily attributable to manipulations made to this coating. On a deeper level, baryta is also a mix of elements, some benign contaminants and some intentionally added to achieve certain functional and aesthetic goals. The hypotheses driving the collaboration with the GCI is that precise measurement of these elements in conjunction with a well-characterized reference collection could provide an important tool to support studies into the origins of significant 20th Century photographic prints, as well as the materials and techniques of the past century's master photographers.

Unlike the optical brightener study, proving this hypothesis required the advanced research capabilities of GCI thus illustrating the importance of collaboration for making optimal use of the collection. Other collaborative projects, dealing with the permanence of optical brightening agents, paper fiber analysis and surface texture characterization, are currently underway or under consideration. Ideally work on these and other future projects should not only be collaborative but coordinated; involving data sets and samples shared across multiple collecting institutions. To the extent possible, current and future efforts should be complemented with a drive toward building permanent, peer-reviewed, literature dedicated to the material history of 20th century photographic printing.

As developing a shared body of knowledge emerges as a priority, there remains a need for effective forums where the issues of print dating, provenance, technical analysis and catalog raisonné studies can be discussed in a broader context among diverse constituencies including conservators, conservation scientists, dealers, collectors, curators and art historians. And all the while, weaknesses and gaps in the current reference collection should be filled as aggressively as possible through continued active collecting and through the development, and possible integration, of other reference collections of photographic paper.