

Materials and Techniques of Man Ray's *Le Violon d'Ingres*

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On June 12, 2008, Man Ray's *Le Violon d'Ingres*, belonging to Rosalind Jacobs (fig.1a) was removed from display in her home and brought to The Museum of Modern Art for assessment. The small group that gathered at the museum was anxious for a rare opportunity to see the piece out of its frame and hopeful that a few hours access might provide valuable insight into the origins of the print and its place in Man Ray's oeuvre.

Physically handling the print was the first challenge. Measuring 48.3 x 37.5 cm (19" x 14.8"), the print is large and it is adhered overall to a thin paperboard mount which is stiff and moderately bowed. Based on its construction, composition, and state of preservation, the immediate impression of the mount was that it was manufactured in 1950s or 1960s. This mount, however, seems to be a later addition. Observed in specular light, very minor bulges can be seen at the upper left and right corners of the print.

Judging by the location and size, these minimal deformations appear to correspond to paper and adhesive residues from previously removed mount left on the reverse of the print.

The reverse of the mount is stamped "ORIGINAL," in red ink (fig. 2). In addition to the stamp, the print is inscribed "Man / Ray / 1924" in the lower right corner in a brown / black ink. The inscription shows some possible fading, though the down strokes of the pen remain in strong contrast with the underlying photographic image. The print surface has a moderate sheen with a lightly grained texture. The image is warm toned across the highlights, mid-tones, and shadows. With the exception of some slight mirroring at the edges, there are almost no signs of deterioration, such as fading or staining, to the silver-based image. There are scattered surface abrasions, some retouched, that Jacobs attributes to glass breakage that occurred when the framed print was shipped from Paris to New York in 1962.



Figure 1a. Man Ray, *Le Violon d'Ingres*, 1924, 48.3 x 37.5 cm (19" x 14.8"), Rosalind & Melvin Jacobs Collection



Figure 1b: Man Ray, *Le Violon d'Ingres*, 1924, 28.2 x 22.5 cm (11" x 9"), "Breton print" acquired by Centre Pompidou in 1993 (AM 1993-117)

Prints are shown to scale



Figure 2: Stamp applied to the reverse of the mount.

Safely released from the frame and mat, the physical size of the print was striking. It is significantly larger than *Le Violon d'Ingres* acquired by Centre Pompidou in 1993 (AM 1993-117, fig. 1b). Formerly in the collection of André Breton, this print was reproduced in June, 1924, in *Littérature*, a magazine edited by Philippe Soupault and Breton. The Breton print is also signed and dated, but it is less tightly cropped and is notable for the hand-applied media that define the *f*-holes. The *f*-holes in the Breton print appear lower on Kiki's back as compared to the Jacobs print. The Pompidou's print measures 31 x 24.7 cm (12.2" x 9.7") overall with an image size of 28.2 x 22.5 cm (11" x 9") making the Jacobs print almost 2/3 larger in terms of linear dimensions.

Man Ray was certainly making large-scale prints in the early and mid 1920s. Some rayographs from the period measure roughly 55 cm (21.7") in one direction. For example the rayograph *Ferns* (private collection), which is shown hanging on the wall in Man Ray's 1925 *Self Portrait in his Studio at 31bis Rue Campagne Premier, Paris* (private collection), measures 40.6 x 48.3 cm (16" x 19"), nearly the same size as the Jacobs print of *Le Violon d'Ingres* (fig. 3). These prints also share a warm image tone and a similar sheen and texture. Though roughly the same scale, a critical difference is that the large rayographs from the period are cameraless while the *Le Violon d'Ingres* is an enlargement from a negative with additional exposure required to apply the *f*-holes.

By 1920, photographic enlarging, using natural and artificial light, was a routine practice. A new generation of highly light-sensitive photographic papers, known as "enlarging" or "projection" papers, would, by the early 1930s, replace so-called "gaslight papers" that dominated the previous decades. But enlargers were relatively costly and the new papers required experience and skill to handle appropriately. Existing prints of early work by Man Ray such as *Elevage de Poussiere* (*Dust Breeding*) from 1920 are relatively small-scale measuring approximately 7.5 x 11.5 cm (3" x 4.5"), have smooth textures, a high sheen, and clear rendition of detail -- all attributes consistent with gaslight papers used for contact printing. Rayographs from the period mark the transition where larger work is produced directly and spontaneously, but by means familiar to any contact print-



Figure 3: Man Ray, *Ferns*, 1922, 40.6 x 48.3 cm (16" x 19") top and Man Ray, *Self Portrait in his Studio at 31bis Rue Campagne Premier, Paris*, Private Collection 1925 15.8 x 10.8 cm (6 3/16" x 4 1/4") Bottom

er and without the complication and expense of a photographic enlarger.

Part of the challenge of making enlargements is dealing with image defects, once forgivable on a small scale, and the loss of resolution where even the sharpest negative produces an increasingly soft print as it is scaled upward. Papers of the period were designed to compensate for both. Instructional manuals strongly encouraged beginners to use "carbon surface" papers with a moderate sheen and medium grained surface texture that would help mask image flaws and compliment softened resolution of detail. [1] Rayographs from the period, like

Ferns, and the enlarged *Le Violon d'Ingres*, show these attributes.

Beyond choice of materials, there is a more substantial link between rayographs and the Jacobs *Le Violon d'Ingres*. Close inspection of the *f*-holes printed on Kiki's back indicates the patterns were cut manually, most likely from a sheet of paper. This sheet would then be used as a mask to transfer the *f*-holes during exposure of the print to light in the darkroom. Photomicrographs show tool marks and instances of overcutting, consistent with the use of a sharp blade (fig. 3). Commonly employed by photographers, knives used by Man Ray for retouching prints and negatives, as described by Lee Miller, could have served the task (fig. 4). [2] The two *f*-holes are not entirely symmetrical, showing minor variations that undoubtedly relate to the manual rendering process. Evocative of the sound holes applied to his *Self-Portrait Assemblage* from 1916, the design of the *f*-holes seems to derive from Man Ray's visual imagination and is not patterned after a specific instrument or maker. [3]

The photomicrographs also reveal a slight "shadow" at the periphery of the *f*-hole design. This shadow relates to light "leaks" produced when the mask with the cut out *f*-holes was laid over the light-sensitive photographic paper and exposed to light. By combining a photographic enlargement from the negative of Kiki's back with cameraless contact printing of the *f*-holes, the Jacobs *Le Violon d'Ingres* is a bridge between conventional photographic practice and rayographs, much like the Breton print links Man Ray's photography with his paintings. Man Ray himself asserted the conceptual union between photogram and conventional photographic enlarging describing the Jacobs print "the back of Kiki...is really a combination of photo and rayograph – an original like the rayograph..." [4] The application of the "ORIGINAL" stamp of the verso of the mount is consistent with Man Ray's description of the print. This stamp, applied from the early 1960s, was used by Man Ray to mark rayographs made throughout his career, distinguishing these unique cameraless prints from later derivations of the same image made using copy negatives. [5] The status conferred by Man Ray implies the Jacobs *Le Violon d'Ingres* is the print from which other, later, prints of this image derive; and this is certainly how the artist represented the print to Rosalind Jacobs when she acquired it in the early 1960s.

The inscription, handwritten in the lower right corner of the Jacobs print, provides further corroboration as it appears reproduced photographically in subsequent prints. One such print, thought to date from the early to mid 1950s, is in the collection of the Worcester Art Museum (2005.22). Formerly belonging to Naomi and David Savage, the photographically reproduced inscription on the Worcester print is identical to hand-

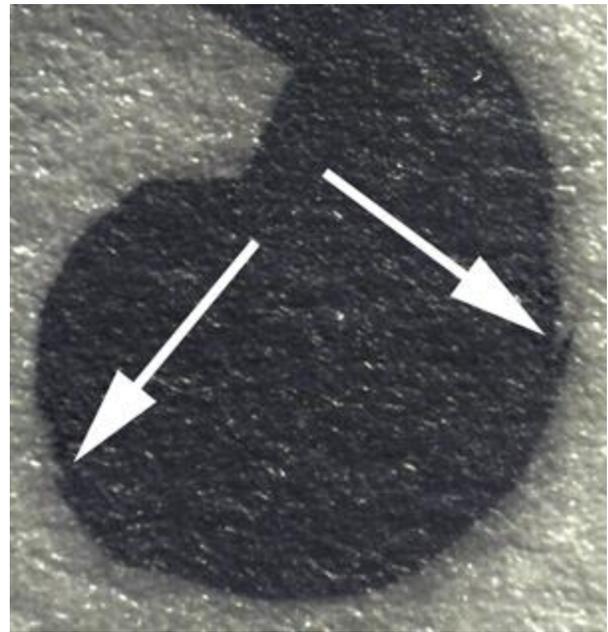


Figure 3: Photomicrograph of the upper elements of the left *f*-hole showing minor overcuts and other tool marks.



Figure 4: An assortment of knives used for retouching available in the mid 1920's. Illustration from *The Art of Retouching Photographic Negatives and Practical Directions how to Finish and Colour Photographic Enlargements, etc.* by R. Johnson, Marion & Co, London, 1922.

rendering on the Jacobs print except for some manipulation, on the negative, of the last two digits in the date. The positioning and shape of the *f*-holes are identical and, likewise, the cropping is very similar. The Worcester print, and by implication every other print bearing this negative-based inscription, was printed from a copy negative made from the Jacobs *Le Violon d'Ingres* (fig. 5).

The primacy of the Jacobs print is further substantiated by fiber analysis, an important tool for determining the date of photographic paper. This methodology, first used in 1999 to expose fraudulent prints attributed to Lewis Hine, has been refined through a decade of collecting historical examples of photographic papers and through ongoing collaboration with forensic specialist Walter Rantanen, and the conservation department of The Museum of Modern Art. Working under the microscope and taking care not to disturb the photographic image, a minute sample of the paper fiber was removed from the edge of *Le Violon d'Ingres*. Using optical microscopy, the paper fibers and methods of pulp

manufacture were identified. The sample contained the following paper-making fibers: cotton/rag (55%) softwood bleached sulfite (28%), bast/rag (15%), hardwood bleached sulfite (1%) and softwood bleached soda (1%). These findings were compared to a database derived from the author's reference collection of photographic paper. The analysis indicates that the fiber mix in the Jacobs *Le Violon d'Ingres* is typical of photographic papers made in the mid-1920s. During this period, a transition was underway where manufacturers were moving away from paper containing a high percentage of rag fiber (cotton and flax/bast) in favor of increasing amounts of wood pulp. Papers from the later 1920s show significantly less rag fiber than that found in the sample. The transition to wood pulp and away from rag fibers was more or less complete by the mid 1930s at which point most photographic paper was made exclusively with wood pulp.

Technical analysis of the Jacobs print revealed multiple insights into Man Ray's choice of papers, his working method for applying the *f*-holes, the relationship between this print and subsequent copies, and the approximate date of paper manufacture. However, the characterization of the Jacobs print is only in its earliest stage. Numerous other attributes such as texture, sheen, and fluorescence behavior as well as physical and chemical composition can be documented with additional work. The need for research into the history and fate of the negatives is pressing. Aside from the intrinsic value of understanding Man Ray's interpretation and re-interpretation of the image, an investigation into the negatives could further establish the relationship between the Jacobs print and later prints. A close technical analysis of the Breton print, to compare it meaningfully to the Jacobs print, is another imperative. Such an assessment could reveal important information about the interrelationship of the two prints and the origins of subsequent prints of *Le Violon d'Ingres* produced by Man Ray over the course of his lifetime. Work on the exhibition history of the Jacobs print while in Man Ray's possession could build substantially on the results of paper fiber dating.

The artistic intent of Man Ray, as with all artists, is manifested through the selection and manipulation of materials. Though common for other artistic media, this sort of technical analysis is rare for the study photographs. Future applications, however, seem assured. Essential resources, like the reference collection of photographic paper and the commitment of time and resources by conservation department of The Museum of Modern Art, hold tremendous promise for the emergence of an enhanced, materials-based connoisseurship. As described in this essay, such work opened a channel enabling *Le Violon d'Ingres*, to speak clearly and emphatically.

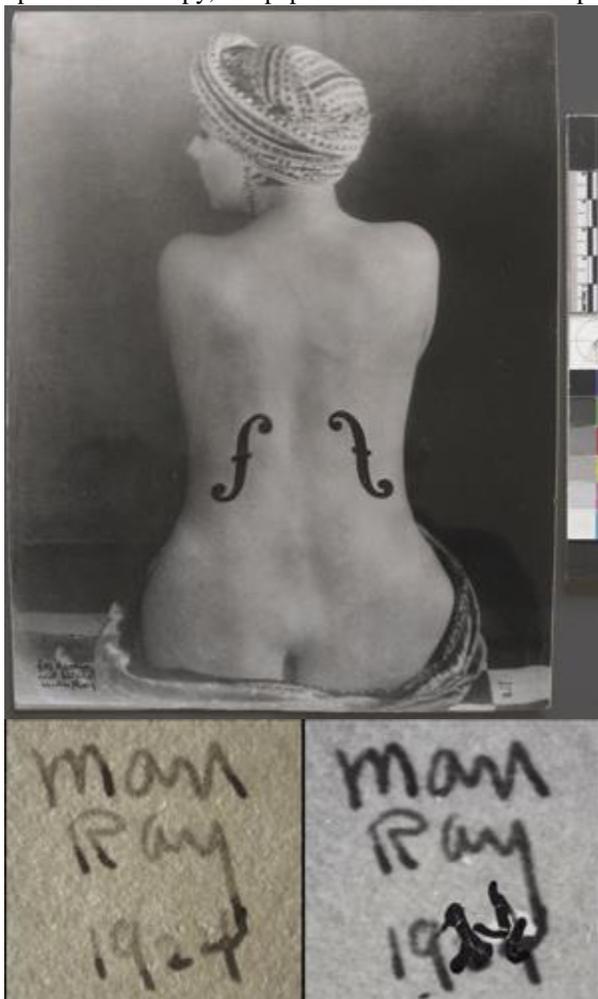


Figure 5: *Le Violon d'Ingres*, apx. 24.7 x 18.7 cm (9.7" x 7.4"), Worcester Art Museum (2005.22) from the collection of Naomi and David Savage, printed circa 1955. Inscriptions written on Jacobs print (left) and photographically reproduced on the Worcester print (right)

References

- [1] R.C. Bayley, *Photographic Enlarging* (London: Iliffe & Sons LTD., c. 1920).
- [2] Mario Amaya, "My Man Ray: An Interview with Lee Miller Penrose," *Art in America* (New York: Brant Publications, Inc., 1975), vol. 63, no. 3, 54-61.
- [3] Personal communication with Emilio Colón, Associate Professor of Cello, Indiana University Jacobs School of Music, Darcy Kuronen, Darcy, Curator of Musical Instruments, Museum of Fine Arts, Boston, and Stewart Pollens, Violin Advisor, LLC, New York, 2009.
- [4] Man Ray to Rosalind and Melvin Jacobs, September 3, 1962. *Papers of Rosalind and Melvin Jacobs*, New York.
- [5] Steven Manford, *Behind the Photo: The Stamps of Man Ray* (Paris: Carnet de Rhinocéros, 2006).

Acknowledgments

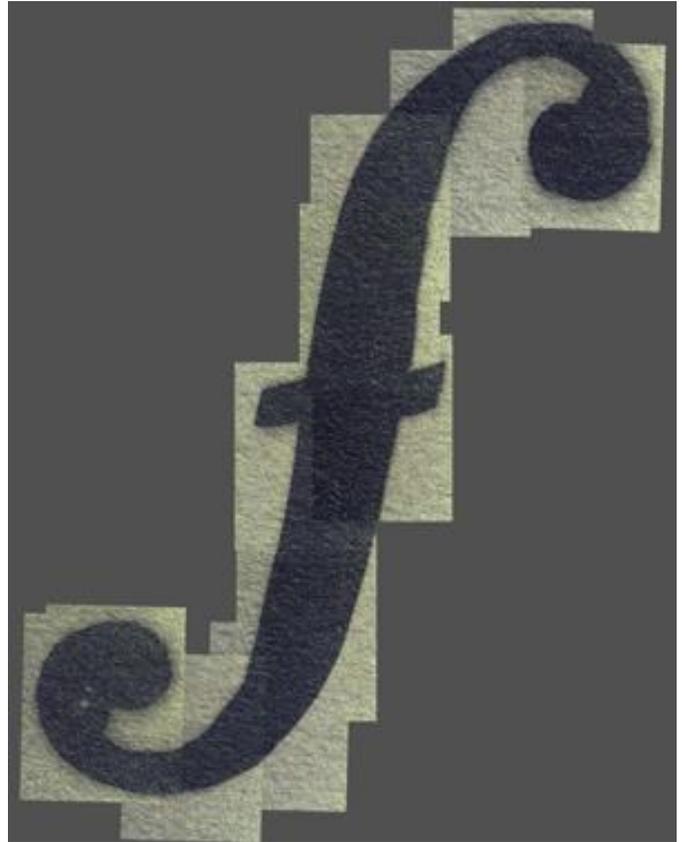
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*Man Ray, **Le Violon d'Ingres**, 1924, Rosalind & Melvin Jacobs Collection, f-hole composite of photomicrographs made at the Museum of Modern Art, June 12, 2008*



The author making a fiber sample, at the Museum of Modern Art, June 12, 2008