

Retouching Revealed: Finishing Practices Observed in the Thomas Walther Collection

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In a survey of the Thomas Walther Collection at The Museum of Modern Art, New York, the 341 photographs in the collection were examined to detect and evaluate the presence of retouching—modifications made to the negatives or to the prints' surfaces to correct errors or defects or to adjust the composition. A roster of the retouching marks, patterns, and effects detected in the works was compiled, providing evidence of a highly developed and widely practiced battery of techniques.¹

The photographs in the Walther Collection were taken between 1909 and 1949 and printed between 1909 and 1960. Retouching and other finishing techniques, including spotting and hand-coloring, have been used in photography since the advent of the medium. With the explosion of photographic enlargements in the 1920s, these practices gained new momentum, as flaws were more prominent in the larger prints. Retouching materials marketed for photographic finishing in the early twentieth century included watercolors, ink washes, conté crayons, pastels, and graphite. In addition, special retouching fluids were formulated to facilitate the adhesion of aqueous washes to stubborn emulsions, and opaquin liquid, similar to gouache, was painted on negatives to block light and thus create areas of highlight in the final print.

Instruction books were available to guide professional and amateur alike, and until the recent rise of digital photography, with its unique capacities for alteration, these tools and techniques were still very much in use. Illustrations in a 1918 publication (fig. 1) show typical tools and the kinds of marks recommended for different effects. Similar tools can be found throughout the literature up to the 1970s (fig. 2). The retouching box owned and used by British photographer Bill Brandt (1904–1983) (fig. 3) shows that he employed a limited selection of simple hand tools: a magnifying glass, a pencil holder, straight razors, and a fine brush.

For our study of the Walther Collection, the surface of each photograph was examined through a stereomicroscope and distinguishing characteristics noted.² Digital images of the areas of interest were captured as photomicrographs and as stills from polynomial texture maps (PTMs), which show surfaces in highly specular illumination.³ Retouching practices detected in the prints were divided into three groups: retouching of the negative (adjustments made to the negative before printing), additive retouching (the application of material to the surface of the print), and reductive retouching (the removal of material from the surface of the

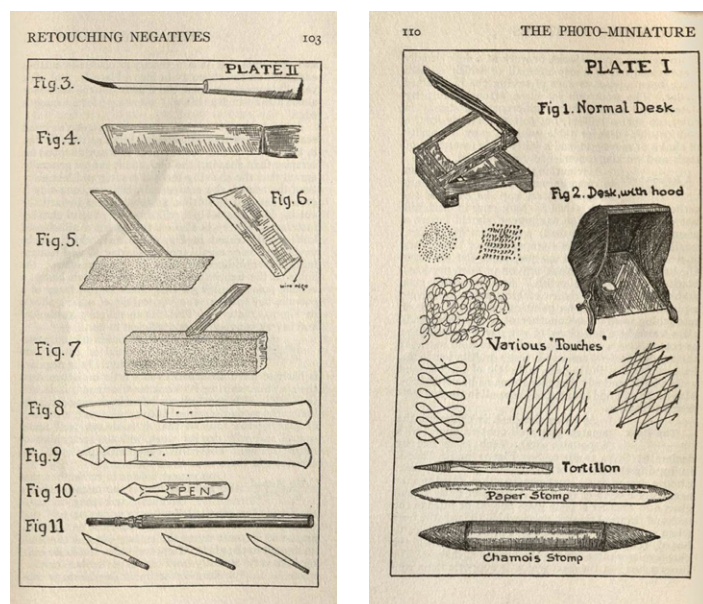


fig. 1 Pages in John A. Tennant, ed. *The Photo-Miniature: Retouching and Improving Negatives* 15, no. 171 (September 1918). Courtesy Lee Ann Daffner

print). Photographers may also have used chemical modification to reduce or intensify image density, but this was not tabulated in the study.

RETOUCHING OF THE NEGATIVE

Retouching of the negative was observed in forty-six prints, or thirteen percent of the collection. This includes prints in which direct modification was made to the negative with retouching medium and prints (such as photomontages or copy prints) made from negatives that capture retouching to earlier, first-generation prints. We did not specify the techniques used, because it was not always possible to determine the photographer's method of execution, and on occasion multiple techniques had been employed.

The delightful studio portrait subtitled *Daisy Spies as the Spiral in Oskar Schlemmer's "Triadic Ballet"* (*Daisy Spies als die Spirale in Oskar Schlemmers "Das Triadische Ballett"*), by Karl Grill, was printed in 1926 (fig. 4). This trimmed photograph is probably a contact print made from an 18 by 24 centimeter (7 1/8 by 9 1/2 inch) negative; its relatively large size simplified the retouching procedures, which were likely

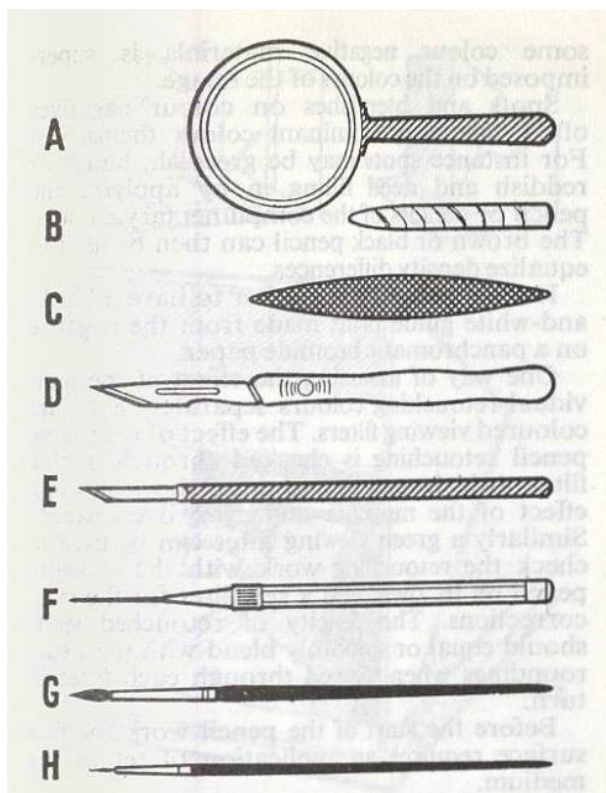


fig. 2 Illustration in *The Encyclopedia of Photography*. New York: McGraw-Hill, 1969. Courtesy Lee Ann Daffner

fig. 3 Bill Brandt's toolbox. Courtesy Bill Brandt Foundation



fig. 4 Karl Grill. Untitled (*Daisy Spies as the Spiral in Oskar Schlemmer's "Triadic Ballet"* [*Daisy Spies als die Spirale in Oskar Schlemmers "Das Triadische Ballett"*]). 1926. Gelatin silver print, 8 3/4 x 5 7/8" (22.2 x 15 cm). The Museum of Modern Art, New York. Thomas Walther Collection. Gift of Thomas Walther (MoMA 1676.2001)

fig. 5 Detail of Karl Grill's *Untitled (Daisy Spies as the Spiral in Oskar Schlemmer's "Triadic Ballet")* [*Daisy Spies als die Spirale in Oskar Schlemmers "Das Triadische Ballett"*])



fig. 6 Lucia Moholy. *Florence Henri*. 1927. Gelatin silver print, 1927–35, 14 5/8 x 11" (37.2 x 27.9 cm). The Museum of Modern Art, New York. Thomas Walther Collection. Gift of Thomas Walther (MoMA 1790.2001). © 2014 Lucia Moholy Estate/Artists Rights Society (ARS), New York/VG Bild-Kunst, Bonn

carried out using a magnifying glass. Today, the retouching is only visible under magnification. Thin white scribbly lines in the face are the result of marks in pencil (or some other solid medium) applied to the negative by the photographer or a studio technician; these opaque marks blocked the light during printing (fig. 5). When the print is viewed from a normal distance, the effect is to brighten the face in this otherwise dark composition.

Lucia Moholy also worked with 18 by 24 centimeter glass-plate negatives and similarly adjusted the image by working directly on the negative. In *Florence Henri*, printed in 1927–35 (fig. 6), painstaking retouching reduced dark shadows in the neck, mouth, and eyes of her subject. Little white lines in the final print started as graphite or wash carefully applied to the negative over each crease and fold Moholy sought to minimize in the shadows of *Henri's* striking features (fig. 7).

ADDITIVE RETOUCHING

In additive retouching, wash, graphite, or colored pencil in neutral hues was applied to the surface of the print to darken or modify areas of the image. Additive retouching



fig. 7 Details of Lucia Moholy's *Florence Henri*. Top to bottom: below left eye; below right eye; left side of bottom lip; right side of bottom lip. Area of detail is 13.5 x 20 mm. Department of Conservation, MoMA

can take the form of dabs, spots, lines, or patches. In the Walther Collection, 175 prints, or fifty-one percent of the collection, show evidence of additive retouching. Some inks or dyes have faded over time, rendering retouched areas more visible than when the marks were first applied. In a print by Jaroslav Rössler (fig. 8), the artist used more than one technique to enhance his abstract design. A graphite line was pressed into the emulsion, a printing flaw was reduced through etching, and intersecting lines were brushed on with aqueous wash. These prominent diagonal lines are easily identified as retouching under specular light illumination, where they stand out against the faint silver image (fig. 9).

Retouching was also used to emphasize details lost in overexposure or in printing. Roman Karmen's *Moscow Illuminations Celebrating the Tenth Anniversary of the Russian Revolution* (*Moskva noch'iu v oktiabr'skie dni*), printed in 1927–39 (fig. 10), exploits a photographic anomaly, halation, but at the expense of some detail.⁴ The artist's choice of a very matte, slightly textured paper further softened the details. With a delicate hand, Karmen reintroduced lost elements by drawing with graphite pencil: streetlamps, located at the nucleus of radiating light, were carefully re-created; horizontal bands of light from a moving streetcar were delineated; and the word "Lenin" was outlined and brought into focus by outlining and shading (fig. 11). The retouching may have been done in preparation for publication or exhibition; the image was reproduced in the journal *Novyi Ief* in 1927.⁵ This print was acquired from the artist by El Lissitzky.

REDUCTIVE RETOUCHING

In reductive retouching, minute quantities of the print's image surface were removed by cutting, scraping, or pressing the emulsion to expose the white paper or baryta layer beneath. Such techniques can be traced as far back as the early nineteenth century, when they were common among watercolorists and painters such as John Singer Sargent, J.M.W. Turner, Honoré Daumier, and Winslow Homer.⁶

Reductive retouching was observed on sixty-three prints, or eighteen percent of the collection. Of these, six were platinum or palladium prints, one was a pigment print, and the rest were gelatin silver prints. Half were printed on matte paper, and the other half on glossy paper. Matte papers may have been chosen for aesthetic reasons, but they have other distinguishing qualities as well. The matting agents embedded in the emulsion have a micro-granular texture, so less force is required to remove minute portions of the emulsion with a blade. Moreover, because they are slightly porous, matte papers accept applications of graphite and light washes rather than repelling them. Theoretically, additive techniques could have been used to retouch the negative instead of applying reductive techniques to the print, but, in general, it was easier to retouch a print than a negative and it was far less risky, as removing



fig. 8 Jaroslav Rössler. Untitled. 1924. Gelatin silver print with pencil and black ink, 1924–35, 9 ½ × 9" (24.1 × 22.8 cm). The Museum of Modern Art, New York. Thomas Walther Collection. Robert B. Menschel Fund, by exchange (MoMA 1845.2001). © 2014 Sylva Vítové-Rösslerová



fig. 9 Jaroslav Rössler's Untitled under extreme specular light illumination. Department of Conservation, MoMA



fig. 10 Roman Karmen. *Moscow Illuminations Celebrating the Tenth Anniversary of the Russian Revolution* (*Moskva noch'iu v oktiabr'skie dni*). 1927. Gelatin silver print, 1927-39, 9 3/8 x 11 7/16" (23.2 x 29 cm). The Museum of Modern Art, New York. Thomas Walther Collection. Abbott-Levy Collection Funds, by exchange (MoMA 1712.2001)

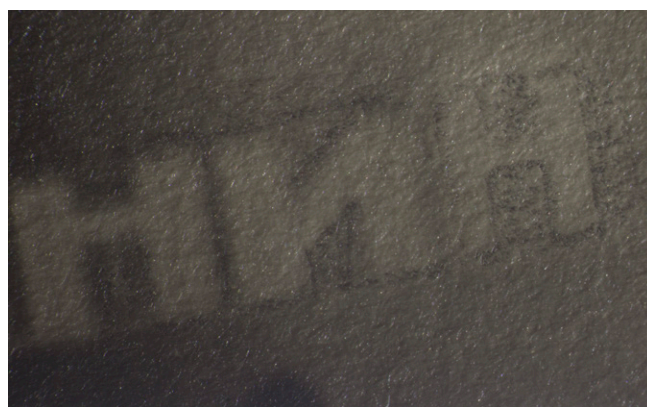
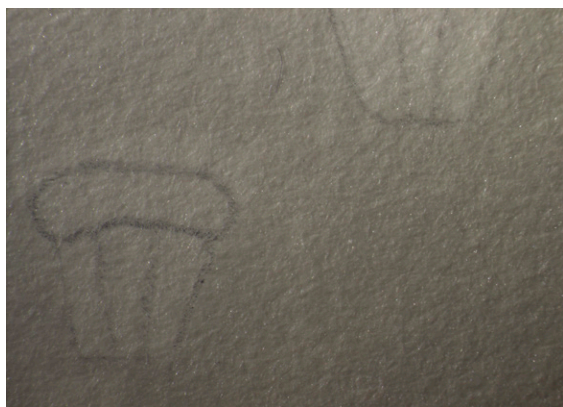


fig. 11 Details of Roman Karmen's *Moscow Illuminations Celebrating the Tenth Anniversary of the Russian Revolution*. Top: streetlamps in the light halo at top. Bottom: lettering at top right. Department of Conservation, MoMA



fig. 12 Aleksandr Rodchenko. *Dive* (*Pryzhok v vodu*). 1934. Gelatin silver print, 1934–39, 11 ¹/₁₆ × 9 ³/₈" (29.7 × 23.8 cm). The Museum of Modern Art, New York. Thomas Walther Collection. Gift of Shirley C. Burden, by exchange (MoMA 1827.2001)

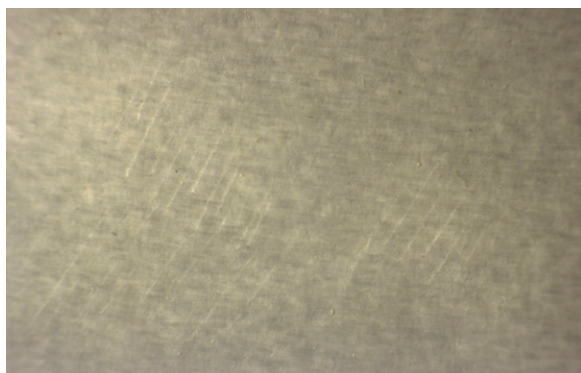
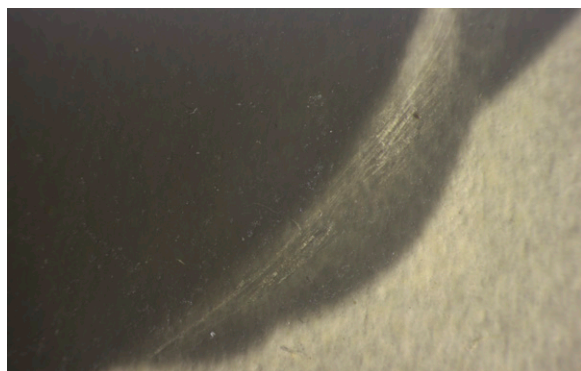


fig. 13 Details of Aleksandr Rodchenko's *Dive*. Top: lower right side of the figure. Bottom: vapor to the right of the cloud at bottom left. Area of detail is 13.5 × 20 mm. Department of Conservation, MoMA

image details from a negative was irreversible, whereas a new print could always be made if retouching to the positive image failed to achieve the desired affects. In addition, for photographers working in the newly popular 35mm format, retouching the negative would have been very difficult, due to its small size.

Aleksandr Rodchenko used a straight razor or etching knife to remove emulsion from his prints, creating highlights by revealing the white baryta layer. This invasive procedure is sometimes readily visible to the naked eye. A straight razor could be held with the flat edge nearly parallel with the plane of the paper, then lightly flicked or drawn across the surface. This tool could also be used to create thin lines by angling one corner onto the paper, diminishing dark passages. In photographs by Rodchenko, an artist deeply in tune with his materials, the technique is carried out with precision and control and the retouching is only visible under magnification (figs. 12, 13).⁷

Reductive retouching to prints was dictated by the desired effect: a careful and delicate style for smoothing out texture, more invasive when elements were added or removed. In two photographs by Lotte Jacobi (figs. 14–17), image material is partially obscured or lightened, almost as if the surface has been sanded. A surprising amount of reductive retouching on these two prints is only discernible in specular light and only when viewed at an extreme angle. In that viewing configuration, passages appearing matte are areas of etching, where the artist carefully modified the surface with a tool that barely scratched the surface of the emulsion, reducing the deep shadows in the subject's face.

Our survey of retouching practices revealed the photographers' working processes and brought to light the range of visual and hand skills required in the creation of these unique works of art. Articulating the prevalence of retouching also informs preservation and exhibition guidelines in ways not always fully considered. During the survey, it became clear that conservation treatments such as surface cleaning, washing, and lining and factors in exhibition such as light exposure all take a toll on original retouching. In *Lotte (Eye)* (*Lotte [Auge]*), a portrait by Max Burchartz printed in 1928–29 (figs. 18, 19), the light, almost transparent quality of the brushstrokes in the retouching may be due to the loss of some of the medium through washing, or the result of watercolor dyes which have faded. Treatment procedures such as surface cleaning can irreversibly remove subtle retouching made with graphite, which is easily erased. Exposure to light during exhibition can alter colorants in dye-based mediums such as colored pencils, aqueous watercolors, and other additive materials described in this study.

Researchers should also consider who may have executed the retouching. In addition to the artist, an artwork might have been retouched by restorers, conservators, the artist's estate, collectors, dealers, and other well-meaning

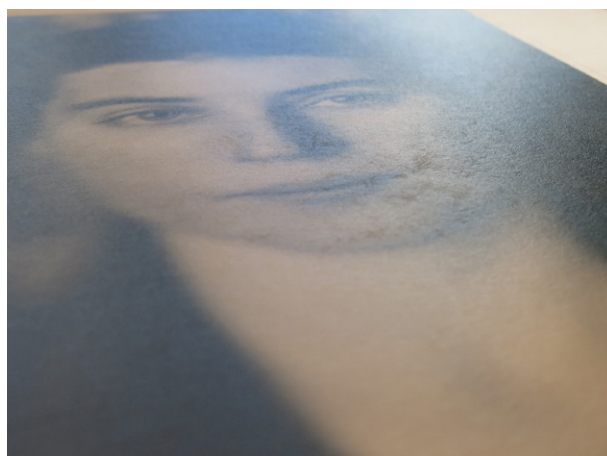


fig. 14 Lotte Jacobi. *Franz Lederer*. c. 1929. Gelatin silver print, c. 1929–40, 8 3/4 × 6 1/2" (21.3 × 15.5 cm). The Museum of Modern Art, New York. Thomas Walther Collection. Grace M. Mayer Fund (MoMA 1708.2001). © Lotte Jacobi Collection, University of New Hampshire

fig. 15 Detail of Lotte Jacobi's *Franz Lederer* under specular light, viewed at an acute angle. Department of Conservation, MoMA

fig. 16 Lotte Jacobi. *Ilse Langner*. c. 1930. Gelatin silver print, 1932–33. Image: 8 3/4 × 6 1/2" (22.5 × 16.5 cm). The Museum of Modern Art, New York. Thomas Walther Collection. Gift of Thomas Walther (MoMA 1709.2001). © Lotte Jacobi Collection, University of New Hampshire

fig. 17 Detail of Lotte Jacobi's *Ilse Langner* under specular light, viewed at an acute angle. Department of Conservation, MoMA



fig. 18 Max Burchartz. *Lotte (Eye)* (*Lotte [Auge]*). 1928. Gelatin silver print, 1928–29, 11 7/8 × 15 3/4" (30.2 × 40 cm). The Museum of Modern Art, New York. Thomas Walther Collection. Acquired through the generosity of Peter Norton (MoMA 1646.2001). © 2014 Max Burchartz/Artists Rights Society (ARS), New York/VG Bild-Kunst, Germany

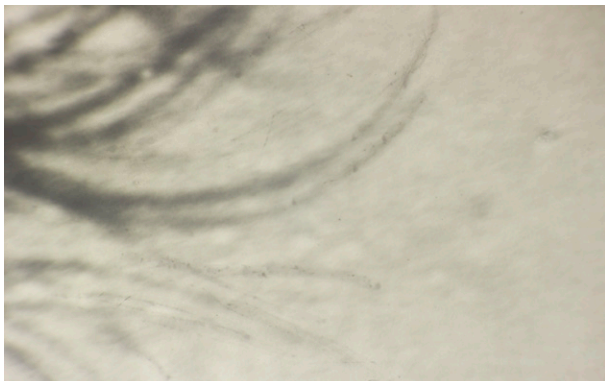


fig. 19 Detail of Max Burchartz's *Lotte (Eye)*. Eyelashes, at right. Department of Conservation, MoMA

stakeholders. This is more likely for additive retouching, which is the easiest and most common technique. When conservators are asked to evaluate the methods and materials of manufacture for high-profile works, they should be wary of market-driven cosmetic enhancement.

In the methodology of materials-based studies, we let the artifact—the photographic print—reveal and define itself, through our examination and analysis of its material constituents, including finishing practices such as retouching. By considering our observations within the intersecting contexts of social and economic history, photography's technical development, and what is known of the artist's intent, we can define a richer, more accurate map of an object's lifespan.

NOTES

1. This study builds on the author's survey of the retouching practices of Bill Brandt, in "'No Rules': An Illustrated Glossary of Bill Brandt's Retouching Techniques," in Sarah Hermanson Meister, *Bill Brandt: Shadow and Light* (New York: The Museum of Modern Art, 2013), pp. 186–93. Portions of "'No Rules'" have been repurposed for the current essay.
2. For more information on the study of the Thomas Walther Collection, see Daffner, "Dive: A Materialist History of the Photographic Industry in Germany and the Soviet Union between the Wars," and Hanako Murata, "Material Forms in Nature: The Photographs of Karl Blossfeldt," in Mitra Abbaspour, Lee Ann Daffner, and Maria Morris Hambourg, eds., *Object:Photo. Modern Photographs: The Thomas Walther Collection 1909–1949* (New York: The Museum of Modern Art, 2014), pp. 64–65, 322–24. A slightly expanded version of Murata's essay appears on this website, under the same title. For a discussion of Edward Weston's retouching practices, see Constance McCabe, "Noble Metals for the Early Modern Era: Platinum, Silver-Platinum, and Palladium Prints," pp. 6–9, on this website. Also on this website, see the Glossary for more information on retouching and individual Photograph pages for retouching data on specific works.
3. For more information about PTMs and the Walther Collection, see "Surface Analysis" in the Materials section of this website.
4. Halation occurs when light passing through a negative is reflected back, causing a secondary exposure on the underside of the emulsion layer, which in turn creates a halo of image silver on the negative. When the image is printed, the halo blocks the light, creating white areas in the print. The flaw may be avoided by the use of light-absorbing coatings on the back of negatives, called anti-halation layers.
5. *Novyi lef* 1, no. 10 (1927), insert facing p. 9 (as *Moskva noch'iu v oktiabr'skie dni*).
6. Marjorie B. Cohen, *Wash and Gouache: A Study of the Development of the Materials of Watercolor*, exh. cat. (Cambridge, Mass.: The President and Fellows of Harvard College, 1977), pp. 44–48.
7. For a deeper discussion of retouching in prints by Aleksandr Rodchenko, see Daffner, "Dive," in Abbaspour, Daffner, and Hambourg, *Object:Photo*.

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