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.  

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 opaquing 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. 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. 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 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 Schlemmer’s “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 ¾ by 9 ½ inch) negative; its relatively large size simplified the retouching procedures, which were likely...

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


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”))
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
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’i v oktiabr’skie dni), printed in 1927–39 (fig. 10), exploits a photographic anomaly, halation, but at the expense of some detail. 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 lef in 1927. This print was acquired from the artist by El Lissitsky.

**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.

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 microgranular 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. 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
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).

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


fig. 17 Detail of Lotte Jacobi’s Ilse Langner under specular light, viewed at an acute angle. 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


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).


7. For a deeper discussion of retouching in prints by Aleksandr Rodchenko, see Daffner, “Dive,” in Abbaspour, Daffner, and Hambourg, Object:Photo.

Citation: