



RECOMART

recom ART's View on Reprinting

For us the photographic artwork on the wall is not the original, it is just one part of the original. The original is the sum of all from the artist authorized materialized forms of the photograph. This means the negative or the original file, the test strips, the written idea, the edition copies, the authorized books and even the artist's intentions during the production and all the compromises that had to be made in order to show the work. All these elements together constitute the original intention of the artist and make up the original.

Producers of artworks often work in close cooperation and have direct discussions with the artists about what they really wish to achieve. We, as producers, know very well the differences between the artist's original idea and the produced final edition copies. Also, we know that there are often many differences during the production of each of the editions, because of developments and the various factors that exist in the production process.

Because of that, recom ART has an open view on what the original is. For us any reprinted motifs of damaged edition copies are also a part of the original work, if they fit to all other authorized copies. It is more a question of the quality of the reprinting and whether it is authorized by the artist or by someone who really knows the intention of the artwork rather than the question of whether reprinted copies are originals.

This view accepts the nature of photography that every single print is just an authorized copy of what the artist wants to show.

recom ART is very pleased to have the opportunity to replace damaged works due to the nature of working with photography. We are fully aware that this is not a matter of course with other type of artwork making, such as painting, sculpture and so on.

We think that when objects get damaged, get older or experience any other changes, it is part of the normal life process. To replace the photographs for next generations should be also part of the normal life process.

Some collectors often say, that they don't want to collect photographic artworks, because of the aging problem. From our experience, we have the feeling that issues and damages of photographic artworks occur sooner and more often through external influences than due to its inherent material characteristics. The bad handling of photographs is often the reason why we have artworks in bad conditions. We think a lot of artworks have been wrongly stored, wrongly framed and even wrongly produced!

That is why recom ART has been working for many years on the idea of the best workflow for a proper production process.

To save the knowledge and therefore the possibilities to produce the same work again we do three important things:

Preservation of the Artist's Intention.

Research on Material Combinations.

and

Taking Care of the Production.

Large Format Printing – How to improve it?

Current processing technology and exhibition of large-format photographs requires the use of various materials that interact in potentially negative ways with the print. Recom ART as producer of art photography and the Stuttgart Academy of Art and Design as their academic partner explore ways of improving the sustainability of modern colour photography in a joint project. With the aim to elucidate the impact of several commercially available and technically viable print supports and adhesive materials, a set of defined materials from a variety of suppliers are subjected to three different accelerated ageing protocols. While adhesive materials are mainly tested for their potential to release volatile organic compounds (Oddy test), samples of different photographic prints processed by Recom ART with a defined colour pattern were subjected to light and climate aging. The VIS reflection spectra of the colour patterns were recorded before and after the different ageing protocols. The ageing tests will allow a stability ranking and selection of the individual materials concerning their suitability as components of composite photographic print mounts. In a second stage, pre-selected materials are joined for print mounting and exposed to accelerated ageing to explore their interactions.

The experiments will be complemented by small-scale mock-up mounts of photographs to illustrate potential technical solutions for future large format print mounting based on the outcome of the accelerated ageing experiments. In our cooperation, we support the goal of Recom ART to develop a more sustainable approach towards producing, storing and exhibiting modern colour photography.

**Staatliche Akademie der
Bildenden Künste Stuttgart**

Bachelor thesis:
Franziska Leidig

supervised by:
PD Dr. Ute Henniges
Prof. Dr. Irene Brückle

in cooperation with:
Recom ART

The Digital Reference Scan

About condition documentation by means of spectral color measurements

Sven Schönauer
Translation from German: Kristina von Bülow

Conserving and restoring contemporary photography is a topic continuously gaining relevance, and, associated with it, the question of the significance of reproducing these photographs.

Currently, we have a situation in which even photographs from the more recent past already show significant condition changes, and it is time to agree on the future handling of this problem. It is not just about the availability of materials and production processes for remanufacturing, but also about collecting the data necessary for the faithful reproduction of a photograph, such as color values, focus, or maximum density, which becomes difficult after only a few years.

Production methods and materials

Today, it is a standard in archives, museums, and collections to document the specifications on technique and material. This is not just about the formal determination of the medium and the technique, but restorers increasingly attempt to record the production methods of photographs in as much detail as possible: Photochemistry, substrates, colorants, binding agents etc. prove to be essential information for the future reproduction of a work. However, the producer-specific details of the different methods are rarely adhered to. It is of paramount importance which producer the inks are from, whether they are based on dyes or pigments, and on which generation of printers they are processed. Additionally, details on the materiality of the printing papers will remain a trade secret of the producers.

There are countless anecdotes about materials that disappear, reappear in another shape, only to turn out to essentially be the same. The most well-known example is probably the instant camera film by Polaroid, a re-edit of which is being distributed under the brand of Polaroid, although in technological respects, it represents another procedure, thereby delivering different results. The paper producer Hahnemühle, on the contrary, avoids new methods in the production of their papers in order not to be met with the rejection of the customers. It is obviously close to impossible to achieve identical results when reproducing a photograph several years of age, despite supposedly using the same material. Additionally, it requires a significant amount of effort to get print results from a digital file that are on par with those from a negative having originally been printed analogously.

While it is possible to unambiguously determine materials – even though they may not always continue to be available – the tolerance limits in the assessment of color values, gradation, and focus are not defined in

technical measurement terms. Things turn hot when no references are available anymore and colors, depths, and lights need to be reconstructed – more often than not, on the basis of subjective memory or experience.

In the best case, the author of the work is still available and willing to authorize the reproduction. It can then be given clearance at the producer's and perhaps even be signed. The question about the status of the reproduced photograph – for example, whether the newly produced image replaces the primary original within the oeuvre, becoming the 'new original' – leads to entirely new problem statements that cannot be clarified in this context.

The digital version as a reference

recom ART digitizes works for collections, museums, and archives. Concurrently, the company produces artists' photographic works in close cooperation with them. Being digitized is the negative, the diapositive, or the enlargement – however, usually not until many years after the creation of the work. At this point in time, considerable condition changes are often already visible – at times, they are the very reason for the digitization. The lack of reference as to what the artwork exactly looked like when it was first produced triggered recom ART to develop new processes [1] in order to document the color values in the lab color space during the digitization or, respectively, already during the initial production of the works.

For the reproduction of photographs, a workflow was established that is centered on the digital version of the work as a reference. The lab measurements are part of the digital version, documenting the exact appearance of the photograph at the time of its digitization. This procedure is a novelty. A color-true digital 'proof' is being created that acts with measurable values and retains its validity on the long run when data is migrated properly, since it is not subject to aging processes caused by environmental influences.

Customary tools are used for this – test charts on various substrates, measured by means of spectral photometers, as well as respective software for generating color profiles – even if they are applied differently: The scanner becomes the color gauge, and the output, file and print, becomes the image thereof. The scan file additionally is compared to the lab values that are measured on the original with the spectral photometer. The result is a color-true file. In this process, it is possible to attain a tolerance of less than $\pm 2\%$ with 90 % of all templates, depending on the material of the templates and the tolerances of the scan and print process. Henceforth, this file serves as a comparable reference for the reproduction. With works of non-digital origin, this is clearly the only possibility of a digital reference.

Of course, it is only possible to document the condition as it is on the day of the scan. It is not possible to draw inferences about the original condition of the physical photograph at the time of its creation.

Works of digital origin

A file alone says little about what an artwork actually looked like when it was created or when it was cleared by the artist, respectively. Just as much as in analogue photography, the ownership of the negative is no guarantee for an artistically perfect print, the digital file alone often does not suffice to produce a work from it. If, for example, one passes the very same file to three different production service providers, one is bound to receive three different results – despite an increasing number of standards. And if the procedure is repeated five years later, in all likelihood, the results will vary yet again. So, if a motif is printed out and compared directly to the file, the measured values of the file will not necessarily conform with the ones on the paper. A reason for this can be, for instance, that the color space of the file is larger than the one possible to represent on paper: The software managing the printer compresses the colors of this file in such a way that they are reproduced in the best possible way. Standards usually describe processes. Yet, in creative work, there is a tendency to bypass them in favor of individual production preferences. But when materials or machines change or cease to exist, even the documentation of these processes is not ultimately helpful.

At the latest at this point in the production process, we leave the path that can be traced back retrospectively. On the one hand, there are different types of compression, and on the other hand, the process of the output is tied to the components machine and software. Changing the materials and processes inevitably causes deviations. However, only files that contain lab values function as device-independent references.

In the workflow developed by recom ART, the measurements of a print are recorded immediately after its initial production of the work from a file. A new digital version of the photograph is created in consideration of the recorded measurements with the specific color and contrast values. Thereby it is ensured that the measured values of the reference file are identical with those of the output, i.e. the color-true print. Artists themselves but also collectors, conservators, and restorers will always be able to access this objective digital reference – it documents the precise color values of an artwork for times to come.

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