

photoresearcher ESHPh



European Society for the History of Photography
Association Européenne pour l'Histoire de la Photographie
Europäische Gesellschaft für die Geschichte der Photographie



ESHPh Congress of Photography in Vienna

From 6 – 8 November 2008
The 30 Years Jubilee of the ESHPh
Austrian Academy of Sciences



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In autumn 2008 our Society is going to celebrate its 30 years anniversary at the Austrian Academy of Sciences, A-1010 Vienna, Sonnenfelsgasse 19.

We would like to take this opportunity to invite our European and international friends and colleagues to a meeting at the beginning of November 2008 in order to join with us to celebrate our birthday. The date was chosen on purpose – so that, for the first time for us, a ESHPh event will become part of the *European Month of Photography* which has taken place for several years now regularly in Paris, Berlin and Vienna and joined also by more and more European cities.

The Viennese Congress of Photography: 30 Years of the European Society for the History of Photography will deal with the essential questions of photographic history and focus on the following topics:

- Photographic history and the variable image in our society, including the use and manipulation of the picture as an aspect of our visual culture.
- The original object or (visual) symbol. The paradigm shift, ‘analogue-digital’, and the consequences for changes of significance in photography.
- Models, concepts and strategies for private and public photographic collections.
- Photography and its interaction: with the fine arts (painting, film/video and conceptual art) and the sciences.

The ESHPh anniversary event will not only address an expert audience but also all who are interested in photography.

Admission is free!

Because of the preparations for the *ESHPh Congress of Photography in 2008* we have brought forward Photoresearcher 11 to Spring 2008 so that we can now devote the time completely to our commemorative volume *The Anniversary publication: The 30 Years Jubilee of the ESHPh* which will be ready on the occasion of our jubilee event that will take place from 6–8 November 2008 in Vienna.

As always we were surprised to receive such a great variety of topics in the articles sent to us. But most astonishing were the exciting interrelations among the different essays. Therefore we are glad to present here, unintentionally, a true ‘subject issue’.

In his article *The Autochrome Process* the British art historian, painter and photographer Trevor George Sewell deals in depth with this colour process and its use, which was only replaced by a sheet-film version, the so called Filmcolor by the Lumière company in the early 1930s, which meant the end for all autochromes.

The essay by the Austrian art historian Anselm Wagner *Integrating Photography into History of Art. Remarks on the life and scientific estate of Heinrich Schwarz* gives insight into the comprehensive work of Schwarz and his life long interest in the reciprocal relationship of art and photography. In 1931 this American researcher of Austrian birth was the first art historian ever to publish a monograph devoted to a photographer: the Scotsman, David Octavius Hill.

On the basis of an essay by George Bateille and the discussion of the relationship between flowers and love, the British art historian Ian Walker questions if Karl Blossfeldt also fits into this pattern. In his exciting article *Blossfeldt and Surrealism*, he analyses, among other things, Walter Benjamin’s well known essay about Surrealism and quotes his criticism about Blossfeldt’s book from 1928. This new interpretation of Blossfeldt’s images of plants by Benjamin has opened a discussion which is still on going.

In what was to be his last essay, the German Professor of Radiology Nikolaus Schad wrote about his father in 2006. He deals with an aspect which has been a little neglected by art history so far: Christian Schad’s fondness for black and white and for abstraction by this painter of New Realism. In *Christian Schad: ‘My Pictures are in no way meant as illustration’*, he points out the artist’s great affinity to Zen-Buddhism and his life long search to reduce space and time. From his earliest youth onwards, fascinated by photography, Christian Schad made his first Schadographs in 1919 and was continually concerned with the photogram until nearly his death in 1982.

In the essay, *In the laboratory of light: The photogram in contemporary art and its interrelationship with 1920s avant-garde practice*, by the Austrians Inge Nevole, Christina Natlacen, Maria Schindelegger, serves as a perfect supplement to the article on Schad’s photograms. In their joint work the three women authors deal with the subject matter of the timeless technique of the photogram. The relationship of photogram techniques of the 1920s are compared with today’s digital era. It turns out that the working methods of modern artists dealing with this artistic medium show a broad variety of methods.

Finally, there is the essay from Sweden of Kerstin Arcadius, *The artist as photographer, picturing the countryside*, which deals with the Swedish painter and gifted amateur photographer, Severin Nilson, who documented the people and the countryside of the Swedish southwest in the 19th century, similar to Knud Knudsen in Norway and P.H.Emerson and Frank M. Sutcliffe in England.

Anna Auer and Alistair Crawford

Co-editors, Photoresearcher

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The Autochrome Process

The history of colour photography is older than is often assumed.¹

Autochromes are the color of dreams ...²

The autochrome was a voluptuous process, and all autochromes are richly sensual ...³

Within the history of photography the introduction of the autochrome process in 1907 was significant. Despite its limitations, it was the first colour photographic process which was practical and relatively easy to use compared with earlier processes. Many see the introduction of the autochrome process as being the birth of colour photography. Between 1861, when the possibility of colour photography was demonstrated by James

Clerk Maxwell (1831–1879) and the introduction of the autochrome, the ‘fundamental principles of colour photography had been proposed and demonstrated’.⁴

‘By the end of the nineteenth century a number of three-colour processes on paper were being employed by amateur and commercial photographers, including tri-colour carbon, gum-bichromate, ozotype (using pigmented gelatine), Pinatype (a dye transfer process), superimposed gelatine films on glass, Sinop (simplified collotype), colour collotype, and half-tone printing. The great majority

of these resulted in the imprint or transfer of coloured dyes, pigments, or inks onto paper’.⁵

The autochrome process was invented by Auguste (1862–1954) and Louis Lumière (1864–1948) and was presented to the French Academy of Sciences on 30, May 1904. Once production problems had been overcome, the autochrome plate was manufactured and introduced on 10 June 1907.⁶ The autochrome process is an additive screen-plate process. The Joly process⁷

was the first additive screen-plate process and was introduced commercially in 1895.⁸ It was available for a few years, but its inadequate colour sensitivity limited its use. The autochrome was used worldwide. Initially, however, the plates were considerably difficult to acquire.

This was due to a great and immediate demand for plates when the process was first introduced. As a result the Lumières’ factory had to increase production in order to meet the demand. Indeed, demand was so great that, by 1913, 6,000 autochrome plates were being produced per day.

Autochromes were used for illustrations in many publications, including journals and magazines. Improvements in full-colour printing had been made at the end of the 1890s and early 1900s. Due to increased possibilities because of improved printing technology



*Christian Schad: Table Decoration in Parent's Apartment, c. 1910, Autochrome, 9 x 12 cm.
Credit: Austrian National Library.*

an increase in demand for colour images, especially colour photographs, encouraged further improvements and developments in colour photography.

Although all of these three-colour processes were available at the beginning of the twentieth century, they were difficult to use, requiring skill and experience. As autochrome plates and equipment were readily available, the autochrome process provided many amateur and professional photographers with the opportunity to practice colour photography. Significantly, the autochrome process was used world-wide and for a wide range of subject matter and purposes. Although many autochromes have been lost due to poor storage, damage and general neglect, many more have survived compared with other colour photographic processes.

A major development for colour photography which the autochrome process introduced was that it only needed a single exposure. Subtractive three-colour processes required three exposures, one for each colour, a longer and more complicated development process and the difficulty of accurate registration of the three colour positives. Therefore, the autochrome was much more practical to use with less to go wrong during the development process.

It is important to remember that reproductions in books are deceptive. A reproduction of an autochrome image is a print of the transparency. The 'actual' autochrome looks like a rectangular piece of black glass when it is viewed as an object. Only by using a light box or a viewer can the image be seen. Without light the image does not exist. Also, the colours of a reproduced autochrome in print are nothing like the luminous colours seen when viewing an actual autochrome with the aid of a light box or viewer. To understand the importance of the autochrome, therefore, it is necessary to look at originals. (This, of course, also applies to colour photographs and original works of art). To experience an actual colour photograph, it can be either

disappointing, that is, it now appears an inferior image compared with its reproduction, or startling, as can often be the case with autochromes.

Not until fairly recently have photographic historians attempted to assess the autochrome. This is possibly due to the general prejudice against colour photography which previously existed but now that the colour photograph can be regarded as an art object, the autochrome is now seen to be part of the same tradition. The history of photography has been predominantly concerned with black and white photography, with colour photography only occasionally mentioned. As the autochrome process was used for different reasons by many photographers, both amateur and professional, it is indicative that a prejudice against colour photography in general existed for many years. As many autochromes have survived it is possible to make a considered aesthetic assessment, demonstrating the beauty of the autochrome and its importance in the acceptance of colour photography as art.

The autochrome plate was produced by first coating a glass plate with an adhesive substance. It was then coated with dyed starch grains, which had been equally mixed with three colours: red-orange, green and blue-violet. Spaces between the grains were filled with fine carbon dust. The plate was then varnished and the panchromatic⁹ emulsion added. In order to expose a plate, it was placed into a conventional holder, glass to the front, and placed in the camera. Exposure was made through a yellow filter which compensated for the excessive blue sensitivity of the emulsion. 'A normal exposure for a landscape in summer, by midday sun, was one to two seconds at f/8, while a typical portrait exposure in a well-lit studio would be ten to thirty seconds at f/15'.¹⁰

After exposure the plate was developed to a negative. Then followed a rinse, and then the silver formed was bleached in an acid potassium permanganate solution. Following another rinse the plate was

redeveloped in the light to produce a positive. After the plate was fixed and washed, it was dried, and usually varnished for protection.

The disadvantages of the autochrome included the following: though the starch grains were very small (about 620,000 to the square cm), their randomness meant that grains of the same colour would often be clumped together, which could be seen by the naked eye; exposure of the autochrome took about 50 minutes longer than monochrome plates, making instantaneous exposures impossible; reproducibility of the autochrome was possible at this time, using the half-tone method, but it was expensive and the results were often very disappointing; the processed plates were dense, transmitting about 7½% of the light reaching them, and requiring brilliant light for viewing. In order to view the autochrome it either had to be held to the light, projected, or placed in a special viewer called a diascope, in which light striking the plate cast an image onto a mirror. Compared with previous processes, the main advantages of the autochrome were: that it was easy to use; it recorded colour well; and as the screen and image were combined there were no registration problems as in a three-colour process.

The autochrome was used world-wide by amateur and commercial photographers. The use of the autochrome by photographers who were members of the Photo-Secession¹¹ was mainly due to Edward Steichen's (1879–1973) enthusiasm for the process. Steichen attended a Lumière demonstration of the autochrome process in June 1907 at the Photo-Club de Paris and, from the introduction of the process, he became involved. Alfred Stieglitz (1864–1946) who was in Paris at the time was unable to attend due to illness. As a result of attending this demonstration, Steichen was able to pass on the necessary knowledge of how the process worked to other Photo-Secessionists. By August 1907 Stieglitz and Frank Eugene (1865–1936) were also experimenting with it. An

autochrome of Stieglitz's mother, made around 1907, is a striking portrait. She is wearing a black dress, which tends to accentuate both the out-of-focus green background and the bunch of coloured flowers on her lap; the composition is simple, but striking. In 1908 Steichen taught the process to Alvin Langdon Coburn (1882–1966). Coburn's *Lady in Red*, 1908, depicts a woman wearing a red dress standing against a brick wall with her hands behind her back. She fills nearly half of the right side of the image and looks away from the viewer. On the left-hand side of the image is a mass of ivy growing up the wall. The plain red dress is contrasted with the complex design of the green ivy. Coburn was very aware of the potential that colour photography, as a medium, offered the artist for personal aesthetic expression.

‘Look here. You see this omelette, this glass of cider, this farcically-arranged bunch of polychromatic flowers? ... Well, that's nature. But look here. I take this omelette and place it here; I take this one flower of bright clear gold and put it on the white tablecloth beside it; and I place this glass of cider close beside it again, but in a place where the sun can catch it and give its color a little more life. ... Well, that's art; that's photography. ... And this new process is going to make it absolutely necessary – far more necessary than it has ever been before – for the photographer to work with clear sensitive eyes, an alert intelligence, and thoroughly sensitive nerves. Much more than the old monochromist, the new color photographer will have to select his picture, rearrange his omelettes and flowers and sunlight, pick out the single perfect picture from among the dozens of discordant pictures which nature offers him at every turn.’¹²

Steichen had already produced colour photographs by 1907, using a Miethe three-colour camera, which had been invented by Dr. Adolf Miethe (1862–1927) in 1904.¹³ By using this camera the photographer could



Heinrich Kühn: Lotte, Hans and Walter Kühn at the Water, 1907/08, Autochrome, 18 x 24 cm. Credit: Austrian National Library, Vienna.

make three separation negatives, which had been exposed through red, green and blue filters. Three positives could then be made using the complementary colours, cyan, magenta and yellow. The positives were then superimposed to obtain a full colour reproduction. The material used for the positives was either tissue, film, or glass depending on which process was employed. In contrast to the autochrome, which is an additive process, this process is a subtractive process and has a main advantage over the additive process. As the additive process used filters which absorbed a high percentage of the light passing through them, the brightest parts of the image were represented by a small percentage of the light falling on the photograph. In a subtractive process white would be represented by clear glass or white paper, sending most of the available light to the eye. Hence this makes it possible to make colour prints on paper.

In view of this it is surprising that Steichen, and indeed other members of the Photo-Secession, did not pursue subtractive processes, as it would have been more practical to exhibit paper colour prints as opposed to autochrome transparencies. Also, the use of a subtractive process would have allowed for the

possibility of manipulation, particularly in terms of altering colours. Whereas, the autochrome, like the daguerreotype, was unique, and could not be manipulated, unless by the camera itself, for example, by using soft-focus. Through Steichen's attempts to master the technique of the autochrome process he discovered that its major drawback was that it was not possible to develop a system for achieving consistent results due to the variable quality of the emulsions. In the very first few months of the autochrome's introduction, Steichen produced hundreds of plates in France, England, Germany and Italy. (Unfortunately, most of this work was lost in the First World War).

Some Photo-Secessionists had already experienced the use of colour photographically, by producing multiple colour prints using the gum-bichromate process.¹⁴ By 1904, Steichen was making gum prints. From the publication of their work in the Photo-Secession magazine *Camera Work*, many photographers associated with the group also made gum prints. Robert Demachy (1859–1936) used the gum process in the 1890s. Heinrich Kühn (1866–1944), Hans Watzek (1848–1903) and Hugo Henneberg (1863–1918), who exhibited as a group in the late 1890s called Trifolium, or Cloverleaf,

also made gum prints. However, apart from Demachy, colour in the gum prints was usually dark and murky, ‘intended to add a deeper suggestion of mood rather than to startle the viewer by the introduction of pure spectral hues’.¹⁵ Kühn also made autochromes. His subject matter tended to be domestic, for example, still lifes, and portraits of his family. His *Still Life*, c. 1909, depicts three apples and a dish on a table top. The image is simply composed: one apple in a dish to the left; two apples by the side of the dish, one nearer to the dish than the other. The colours, orange and brown, are predominant, giving a very warm feeling to the image. In terms of the aesthetics of colour photography the most striking and effective photographs combine a few colours with a simple composition, as in Kühn’s *Still Life*. Arguably Kühn’s most beautiful autochromes are his flower studies, still lifes and portraits of his children and their nurse. His autochromes are distinguished by a soft, painterly appearance; an effect achieved by soft-focus. Possibly the use of soft-focus as an aesthetic device arose from the photographer’s desire to manipulate the process in some way for personal expression, as is possible with gum printing. Certainly the visual effect can be said to be evocative of the distant past and fragmented memory. His series of autochromes of his children, Hans and Lotte, and their nurse, Miss Mary, are imbued with beauty. The viewer is transported ‘back into a more gracious, naïve past’,¹⁶ to a world of peace and calm. According to John Wood this ‘look is the hallmark of a Kühn photograph, an invitation to tranquility’.¹⁷ An important aspect of Kühn’s photographs are their naturalness. The viewer’s experience is similar to looking through a window onto the scene. Nothing appears contrived and the children and their nurse seem not to have a care in the world.

John Cimon Warburg (1867–1931) used similar, simple devices to Kühn in some of his autochromes. In Warburg’s *Cow at Saltburn Sands, Yorkshire* c. 1909, a single white cow is depicted on the beach. The rest of



Heinrich Kühn: *Miss Mary in blue suit with cane*, 1910, Autochrome, 24 x 18 cm. Credit: Austrian National Library, Vienna.

the image is made up of blocks of colour: the sandy beach, the sea, and a block of land to the left of the image. The white cow stands out against the muted colours of the rest of the image. Although the composition is simple and the colours minimal, visually the image is striking. In another of Warburg’s autochromes, *London Roses*, c. 1908, a young girl is depicted with a ribbon in her hair. She stands under a rose bush, which dominates the top half of the image, holding a rose in each hand. Her gaze appears to be looking at something above and beyond the boundaries of the image, hence the viewer does not know what she is looking at. The image consists of mainly four colours: green, dark green, white and pink. Apart from one or two roses, the rest of the image is either in soft-focus, that is, the girl’s face, or out of focus – the background. The out of focus background, consisting of bright green and a darker green, has the visual effect of motion. This is in contrast to the girl who appears to be stationary.



Marcel Meys: *Alpine scene, Austria, c. 1910–1920, Autochrome, 12 x 9 cm, Credit: Austrian National Library, Vienna.*

After Alfred Stieglitz had endorsed the autochrome process the rest of the Photo-Secession took it up, except for Frederick H. Evans (1853–1943) and Robert Demachy. Importantly, autochromes were demonstrated and exhibited at the Photo-Secession Galleries between 1907 and 1909. This shows that the autochrome was regarded as art at this time, at least by the Photo-Secession. Subject matter which the Photo-Secessionists used for autochromes mainly included portraits and still life, possibly due to the long exposures necessary. By the middle of 1909, Stieglitz had lost interest in colour photography, and the majority of the Photo-Secession returned to the use of monochrome. The reasons for this could be practical, that is, the autochrome was difficult to view and exhibit, and the process itself was inflexible. Also, although most of the photographers who were part of the Photo-Secession made autochromes, only a small number of them survive. If autochromes are not stored in a protective environment, being glass, they are susceptible to breakage, humidity and damp, especially if they do not have on their protective glass cover. Another possible factor is that their autochromes were not so valued as their

black and white photographs. Apart from the use of the autochrome process by the Photo-Secessionists and their associates, it was also used for documentary purposes and for public education and pleasure. The professional photographers Léon Gimpel (1878–1948) and Marcel Meys, who were photographic correspondents for the French newspaper *L'Illustration*, and Jules Gervais-Courtellemont (1863–1931) were among the first to try the autochrome process in France. Gimpel, in particular, attempted to apply the autochrome to the photographic coverage of events.

At this time colour half-tone reproduction was difficult and very expensive, and only a few journals could afford it. *L'Illustration* had the necessary equipment, and became a pioneer of illustration using colour photographs, reproducing autochromes in the issue of 15 June 1907, by the trichrome half-tone method. Also, autochrome reproductions appeared in the following for the first time: *The Illustrated London News* in February 1911; in the United States, *Scribner's* published four autochromes in March 1910; and the *National Geographic* began publishing autochromes in July 1914.¹⁸ Although it was possible to reproduce autochromes by the half-tone method, it was not an easy procedure. Due to these difficulties, autochrome reproductions in *L'Illustration* were less frequent after 1907.

Autochromes were also used as slides, which could be projected by means of a lantern onto a wall or screen. Jules Gervais-Courtellemont and the writer, Pierre Loti (1850–1923), gave a series of illustrated lectures using projected autochromes, entitled *Visions d'Orient* – both Loti and Gervais-Courtellemont shared a passion for the Orient. According to Nathalie Boulouch, the autochrome allowed Gervais-Courtellemont ‘to record the splendour of oriental richness that was to send Parisians into raptures’.¹⁹ In 1911, Gervais-Courtellemont opened the *Palais de l'autochromie* in Paris. The building consisted of an exhibition hall, a

portrait studio, a laboratory and lecture hall with seating for 250 people. The projection of slides began in April 1908 and continued into the 1920s.²⁰ Gimpel and Meys also gave lectures on recent developments in colour photography. Gervais-Courtellemont travelled a great deal, visiting many countries, including Turkey, Israel, India and Japan. An autochrome by Gervais-Courtellemont, which appeared in a photographic essay of the *National Geographic*²¹ in November 1924 called *The Sardine Fleet*, depicts a harbour scene with two men in the foreground and an assortment of boats. The image is very blue – sky and sea – which gives it a cool feeling. He also produced autochromes during the First World War, depicting soldiers and showing the devastation of French cities and villages. Some of these images were published in two books: *Les champs de bataille de la Marne* (The Marne Battlefields, 1915, 240 photographs), and *Les champs de bataille de Verdun* (The Verdun Battlefields, 78 photographs).

The American photographer, Helen Messinger Murdoch (1862–1956), travelled extensively with her autochrome equipment making an around the world trip from 1912–1914. Her subject matter included indigenous people, architecture, landscape and portraiture. She worked regularly for the *National Geographic* magazine, which published many of her travel autochromes. Murdoch joined the Royal Photographic Society (RPS) in 1911, becoming a Fellow in 1912 and exhibited with the Society of Colour Photographers, which was formed in 1907. She recorded her observations in a daily diary, letters back home to America and in sketches and paintings. These written observations were used by Murdoch along with her autochromes to give lectures. She appears to have been very determined in her work and was prepared to take risks in order to get the photograph she wanted.

‘... Murdoch seems to travel around the world, charming and befriending everyone she meets. ... She is hugely moved by the beauties of the vistas

before her eyes and risks life and limb, hanging over the edge of erupting volcanic craters, trudging through the desert, to get the photographs she wants.’²²

The autochrome was used in a massive documentary project instigated by the banker Albert Kahn (1860–1940), called *Archives de la planète*. The purpose of the project was to produce a collection of documents reflecting daily life world-wide both geographically and culturally, that is, ‘a record of mankind caught in life’.²³ The scientific supervision of the project was led by Jean Brunhes (1869–1930). Brunhes was a geographer and instigator of the new discipline of human geography. He was appointed to the chair of Human Geography at the Collège de France in 1912 with a grant provided by Kahn. The project was begun in 1909 and ended in 1931. After Kahn had travelled around the world himself, with his chauffeur, Alfred Dutertre as photographer, he took on his first photographer Auguste Léon in 1910. After Brunhes had joined the project in 1912, others were taken on: Stéphane Passet and Georges Chevalier (1914), Paul Castelnau and Fernand Cuville (1918), Frédéric Gadmer (1919) and Roger Dumas (1920). Occasionally assistance was sought from others, for example, Gervais-Courtellemont was sent to Algeria in 1909. The photographers were sent to different parts of the world to photograph with the autochrome process and worked according to precise instructions given by Brunhes. For example, subject matter had to be centred within the autochrome, costumes had to be photographed front and back, and group photographs were particularly desirable. The collection of autochromes were used for Jean Brunhes’s lectures at the Collège de France (1912–1930), annual sessions at the Sorbonne, or for Kahn’s own guests at the *Société autour du monde*.²⁴ Today, the collection consists of c.72,000 autochrome plates and 183,000 metres of film and is preserved in the Musée Albert Kahn at Boulogne-Billancourt.



Photographer unknown: Along the Danube near Klosterneuburg/Vienna, c. 1920, Autochrome, 9 x 12 cm, Credit: Austrian National Library, Vienna.

Another use of the autochrome process was for professional colour portrait photography, for example, by Olive Edis²⁵ (d.1955) who was an established professional portrait photographer by the early 1900s. From c.1912, Olive and her sister Katherine made professional autochrome portraits, as well as still lifes and landscapes.

By the end of the First World War, she was an established colour portrait photographer. From July to November 1920, she was commissioned to photograph the Rockies by the Canadian Pacific Railway (C.P.R.) using their photographically equipped railway carriage. Edis often lectured about this trip using coloured lantern slides to supplement her autochromes. There was also an exhibition of this work in the C.P.R. offices in Trafalgar Square, London. She used autochromes well into the 1930s, which was longer than most professionals.

In Olive Edis's portrait autochrome *Bishop Arthur Foley Winnington-Ingram, Bishop of London*, c. 1925, the Bishop sits on a large armchair looking out at the viewer, one hand rests in his lap, the other supports his head, with an elbow resting on the chair, his robes of red, white and black are very striking. Edis has composed the image so that an expanse of green/brown wall is to the left of the Bishop. This creates an interesting outline combining the chair and the Bishop. Also, the green/brown accentuates the red and white of the Bishop's robes.

John Wood suggests that autochromes have a beauty and fascination which is unique, and that they are either inherently beautiful or conscious works of art:

'The inherent beauty of the autochrome makes it difficult at times to distinguish an autochrome that is merely beautiful from one that is a conscious work of art. It is as if the process itself had the power to confer aesthetic legitimacy on whatever was being photographed. There are, of course, exceptions, but most autochromes do seem to have the authority of art – that power to rivet our gaze and demand of our eyes that they return again and again, and the power to reward those returns with pleasure and insight.'²⁶

Wood's opinion of the autochrome is in contrast to that of the historian Anne Hammond who maintains that the majority of autochromes made between 1907 and 1930 were for objective reasons:

'Of all the autochromes produced between 1907 and 1930 ... only a small percentage was created by photographers with an avowed artistic motive. The many plates by the Lumières, by the multitude of workers for Albert Kahn's 'Archives de la planète', and by Gervais Courtellement and others for *National Geographic* magazine were made with a largely descriptive motive. For non-Secessionist photographers the invention of the autochrome was a brilliant technical accomplishment that achieved primarily a simulacrum of the coloured world.'²⁷

The sale of autochrome plates was discontinued in the early 1930s when the Lumière company introduced a sheet-film version of the autochrome called Filmcolor. Despite the disadvantages of the autochrome process, it was used for a surprisingly wide variety of purposes. Certainly many autochromes were made for objective reasons, for example, as a means of recording in the case of Kahn's *Archives de la planète*, and for reproduction purposes, such as those in the *National Geographic* magazine. As we have observed, however, many Photo-Secession members, and others, used the autochrome purely for personal expression.²⁸

Notes

1. Peter Tausk, *Photography in the 20th Century*, London: Focal Press Limited, 1980, p. 46.
2. John Wood, *The Art of the Autochrome: The Birth of Color Photography*. (Foreword by Merry A. Foresta.), Iowa City: University of Iowa, 1993, p. 1.
3. Wood: *The Art*, 1993, p. 161.
4. Brian Coe, *Colour Photography: the first hundred years, 1840–1940*, London: Ash and Grant, 1978, p. 60.
5. Anne Hammond, 'Impressionist Theory and the Autochrome', *History of Photography*. Volume 15, Number 2, Summer 1991.
6. Plate sizes were available from 3¼ inch square to 8½ × 6½ inches, and in metric sizes from 9 × 12 cm to 18 × 24 cm. Also, the stereoscopic size of 4,5 × 10,7 cm was available.
7. The Joly process was patented by Professor John Joly in 1894. The plate used for the process consisted of a screen composed of red, green and blue-violet lines.
8. Other colour screen-plate processes include: Joly (1895), Warner-Powrie (1907), Krayn line (1907), Krayn mosaic (1907), Dufay Diophtichrome (1909), Omnicolore (1907), Thames (1908), Paget (1913), Leto (1913), Baker Duplex (1926), Finlay (1929), Agfa Colour (1916), and Aurora (1909).
9. Panchromatic. A photographic material which is equally sensitive to all colours.
10. Coe: *Colour Photography*, 1978, p. 52.
11. The Photo-Secession was founded on 17 February 1902 by Alfred Stieglitz. Founding members included: John G. Bullock, William B. Dyer, Frank Eugene, Dallet Fuguet, Gertrude Käsebier, Joseph T. Keiley, Robert S. Redfield, Eva Watson-Schütze, Edward Steichen, Edmund Stirling, John Francis Strauss and Clarence H. White.
12. Alvin Langdon Coburn, in: Wood, *The Art*, 1993, p. 14. Originally published: 'The Painters' New Rival: Color Photography as an Expert Sees It', *Liverpool Courier*, October 31, 1907.
13. The Miethe camera was a three-colour camera which was built and marketed by W. Bermphol of Berlin.
14. 'The technique is based on the property of gum arabic when mixed with potassium bichromate to change its solubility in water upon exposure to light. The more strongly light acts upon the bichromated gum, the less easily it can be dissolved. A watercolor pigment of the type used by painters is mixed with the prepared gum and washed over the surface of a sheet of drawing paper. When dry it is exposed to sunlight beneath a negative. The image appears when the paper is washed with warm water. The 'developing' is done with a brush or less commonly by pouring a 'soup' of sawdust and hot water over the print again and again, a technique devised by Victor Artigue in 1892. If very hot water is applied to the print, all of the pigment can be removed. Weak areas can be strengthened simply by recoating the paper, carefully replacing the negative in exact register, and repeating the process. In this way different colors can be applied on the same sheet of paper'. From: Beaumont Newhall. *The History of Photography from 1839 to the present*, New York: The Museum of Modern Art, 1994, p. 147.
15. Sally Stein, 'Autochromes without Apologies. Henrich Kühn's Experiments with the Mechanical Palette.' *History of Photography*. Volume 18, Number 2, Summer 1994, p. 129; Uwe Schögl, Heinrich Kühn and the Autochromes in: *Photography and Research in Austria. Vienna, the door to the European East. Symposium 2001 Vienna*, Passau 2002, p. 79–91.
16. Wood: *The Art*, 1993, p. 149.
17. Wood: *The Art*, 1993, p. 149.
18. Between 1914 and 1937 the *National Geographic* magazine published over a thousand reproductions of autochromes.
19. Nathalie Boulouch, 'The Documentary Use of the Autochrome in France.' *History of Photography*. Volume 18, Number 2, Summer 1994, p. 143.
20. Seven slides were reproduced in *L'Illustration* 26 November 1910, pp. 369–376. Also, another six on Egypt were reproduced in *The Illustrated London News* 25 February 1911 supplement.
21. The *National Geographic* published 359 reproductions of Gervais-Courtellemont's autochromes between 1924–1930.
22. Pam Roberts, 'Helen Messinger Murdoch Hon. FRPS (1862–1956)', *Photohistorian*, 101, Summer 1993, pp. 22–23.
23. Jean Brunhes, in: Boulouch, 1994: 143. Originally published in: J. Brunhes, 'Ethnographie et géographie humaine', *L'Ethnographie* 1, 15 October 1913, p. 38.
24. The *Société autour du monde* was founded in 1906 by Albert Kahn. It met at Kahn's house and included intellectuals, artists, politicians and students who had received the grant 'bourse autour du monde', begun by Kahn in 1898.
25. The largest collection of Olive Edis's autochromes is in the National Portrait Gallery, London.
26. Wood, *The Art*, 1993, p. 1.
27. Anne Hammond, 'Early Colour and the Autochrome. Introduction. The Autochrome and the Photo-Secession'. *History of Photography*. Volume 18, Number 2, Summer 1994.

Integrating photography into the history of art. Remarks on the life and scientific estate of Heinrich Schwarz (1894–1974)¹

‘Photography is but the final culmination of a long development and must not be studied historically as an isolated phenomenon of the 19th and 20th centuries. For the spirit of photography is much older than its history ...’

(Heinrich Schwarz, 1962)²

One of the first art historians who realised the interdependency of the histories of art and photography was the Austro-American scholar and museum curator Heinrich Schwarz (Fig. 1). Among historians of photography he is well known as the author of the very first monograph to be written by an art historian on a photographer: the Scotsman, David Octavius Hill, which was published in 1931.³ As Martin Gasser pointed out so concisely, this book marked ‘the essential turning point in the historiography of photography, namely the change from exploring the histories of techniques to exploring the histories of the image.’⁴ But it is not only the book on Hill which defines Schwarz as one of the most important pioneers in this field of research; some isolated texts, previously nearly unknown, and partially unprinted lecture manuscripts from his estate, which were recently published in German under the title of *Techniken des Sehens – vor und nach der Fotografie* [Techniques of Observation. Before and After Photography],⁵ cast new light on his ideas about the interrelationship between art, photography and the technical devices found in artists’ studios, such as the mirror and the camera obscura. The following text provides a short biography of this outstanding scholar and concentrates on some major aspects of his work.

The photography advocate from the Belvedere

Heinrich Schwarz⁶ was born on 9 November 1894 in Prague, the son of a Jewish family that had converted to Catholicism. His father, the industrialist Louis

Schwarz (1859–1930), soon relocated to Vienna where his son attended the primary school at Schellinggasse before moving to the Akademisches Gymnasium [Academic High School] which was one of the favourite educational institutions of the liberal Jewish upper middle class of the Danube Monarchy. Heinrich Schwarz began studying art history at the University of Vienna in the autumn of 1912 but was forced to interrupt this for military service between November 1914 and November 1918. On 8 July 1921, he received his doctorate. His doctoral thesis, *Die Anfänge der Lithographie in Österreich* [The Beginnings of Lithography in Austria],⁷ was begun under the supervision of Max Dvorák who died five months before Schwarz obtained his degree. Schwarz’s specific interests, which were devoted to the graphic arts and modern reproduction processes, led him to expand the field of art history: ‘He was the first to think about an interconnection between the histories of art and technology.’⁸ He shared this tendency of leaving behind traditional areas of research with his more famous colleagues of Jewish origin from the Vienna School of Art History, including Ernst Kris, Fritz Saxl, Hans Tietze and Ernst H. Gombrich (who all had to leave Austria in the 1930s).

Schwarz’s first post was at the Graphische Sammlung Albertina in Vienna where he began working as an unpaid trainee in October 1922. In April 1923 he moved, in the same capacity, to the Österreichische Galerie Belvedere. It was not until December 1927 that he was placed on the payroll; in 1930 he was appointed to the permanent staff and promoted to second level curator in 1933. This was his last chance for it was completely impossible after 1933 for a person with a Jewish background to become a civil servant in the anti-Semitic atmosphere of Austria.⁹ Previously Schwarz had lived mainly off his inheritance, as many other prominent Viennese scholars with Jewish roots, such as Gombrich, had had to do. Nevertheless, Franz Martin Haberditzl, the legendary director of the

Belvedere and one of Egon Schiele's early supporters, regarded Schwarz as his 'first and most essential collaborator'.¹⁰ This is demonstrated by Schwarz's editorship, along with Haberditzl and his colleague Bruno Grimschitz, of the scientific catalogue of the Gallery of the Nineteenth Century which he had mainly assembled in 1924, and, after 1926, of the Belvedere almanac *Amicis*. In 1926 Schwarz published his most successful book, *Salzburg und das Salzkammergut: Eine künstlerische Entdeckung in hundert Bildern des neunzehnten Jahrhunderts* [Salzburg and the Salzkammergut: An Artistic Discovery in One Hundred Pictures from the Nineteenth Century] which was republished in enlarged editions in 1936, 1958 and 1977.¹¹

The first indication of Schwarz's occupation with photography is shown in his organisation of the exhibition *Künstlerdokumente zu den Werken der Galerie des 19. Jahrhunderts* [Artists' Documents on the Works in the Gallery of the Nineteenth Century] in 1928 where he also displayed photographic models for paintings. In the winter of 1928/29 he curated the first historical photographic exhibition to be shown in Vienna after World War I *Die Kunst in der Photographie der Frühzeit 1840–1880* [Art in the Photography of the Early Period 1840–1880]. This title formulated the program of his future research activities which rapidly made him the country's leading expert on photographic history. He also dealt with contemporary photography and manifested himself as 'one of the few advocates of New Objectivity in Austria'.¹² He regularly wrote reviews for the *Photographische Korrespondenz*, a journal which was published by the Photographische Gesellschaft [Photographic Society] and the Graphische Lehr- und Versuchsanstalt Wien [Educational and Experimental High School for Graphic Arts, Vienna]. He contributed the opening essay to the international photographic magazine *The Gallery* in 1933 and, most likely, brought the landmark Werkbund exhibition *film und foto* to Vienna in 1930.¹³



Fig. 1: Unknown Photographer: Heinrich Schwarz, July 1946, Providence, Rhode Island. Credit: Magdalena Magnin, Boulogne/Seine.

Schwarz had his international breakthrough with the previously mentioned book, *David Octavius Hill: Master of Photography* 1931 [but published in Autumn 1930], which was subsequently published in both American (1931) and English (1932) editions through the help of the famous Austrian novelist Stefan Zweig who had good contacts with publishers around the world.¹⁴

Banishment, exile and second career

Heinrich Schwarz's career was suddenly interrupted by Austria's annexation by Nazi Germany in March 1938. On 6 April 1938 he was 'relieved of his duties for racial reasons'. In the following months he tried to find work in Great Britain where he had many contacts from the time of his Hill project, and he spoke English fluently – indeed his friends dubbed him an 'Anglo-German'¹⁵ – and it is also reported that he guided King Edward VIII through the Belvedere during his visit to Vienna in 1936.¹⁶ With the help of the Society for the Protection of Science and Learning in London, founded in 1936 to

support persecuted German scholars, he applied, without success, for the position of director of the Graves Art Gallery in Sheffield.¹⁷ In March 1939 he emigrated to Stockholm where he was a guest of Prince Eugen of Sweden whose curator had been a friend of Schwarz's for several years.¹⁸ The reason why Schwarz left Sweden so soon for the USA is not known; possibly it was as a result of the growing anti-Semitic feeling in the country. Schwarz had to sell a part of his library in order to finance the travel and subsistence costs for himself and his brother. He arrived by ship on 3 February 1940¹⁹ in New York which, at that time, was also the gateway to America for other Austrian art historians, such as Otto Benesch, Hans Tietze and Wilhelm Suida.

Beaumont Newhall, the newly appointed curator of the photography department of the Museum of Modern Art, was among those who helped this almost penniless immigrant in his second new start. Newhall knew of Schwarz even before his arrival through the American edition of his book on David Octavius Hill; a book which 'will always be a landmark in the history of photography, for it was the first attempt to evaluate, in terms of art history, and social background, the work of an artist who happened to use a camera instead of the more conventional materials of an artist,' as Newhall expressed it, out of profound admiration for his older colleague, to the Emergency Committee in Aid of Displaced Foreign Scholars in New York.²⁰ Based on this, and other positive comments from other experts, this organisation financed, in part, Schwarz's first job in the United States.²¹ From 1941–42 he was employed as a research scholar at the Albright Art Gallery, Buffalo, where he catalogued the collection, especially its photographic masterpieces. Realising the importance and innovation of Schwarz's research activities, Gordon B. Washburn, director of the Gallery from 1931 to 1942, reported to the Emergency Committee that: 'Dr. Schwarz is one of the few people in the art world who

has done research in photography. I know of no subject which needs studying more badly than the connection of photography with painting.'²² In July 1942, one month before this letter was written, Washburn had become director of the Museum of Art at the Rhode Island School of Design in Providence. He appointed Schwarz as curator of the newly created Print Department, a position Schwarz held for the next twelve years.²³

This relatively rapid successful integration cannot obscure the fact that, compared to his Viennese position, these were poorly paid jobs in the provinces which forced him to take on additional work in order to make ends meet.²⁴ Schwarz's situation in Providence became worse at the end of 1949 when Washburn left Rhode Island to take over as head of the Department of Fine Arts at the Carnegie Institute in Pittsburgh. Taking advantage of Schwarz's absence on a trip to Europe in 1953, his new superiors acted behind his back and did not extend his contract.²⁵ The impending end of his professional career produced a feeling of solidarity among his friends and colleagues. Even in Vienna, where, after the war, none of the authorities had thought of recalling him to his former position, and where he had to fight a lengthy legal tug of war to gain redress from the Austrian Ministry of Education, plans were made to appoint him director of the Belvedere or the Kunsthistorisches Museum.²⁶ Schwarz himself was partly responsible that this opportunity was not seized: he had become estranged from his former homeland although he still visited regularly and whose art was his main field of interest, and he was extremely unwilling to give up his American citizenship. Starting on 1 July 1954, this 60 year old museum man was appointed Visiting Professor of Fine Arts at Wesleyan University and curator of the collection at the Davison Art Center in Middletown, Connecticut. The two positions finally provided Schwarz with enough time and the means for his

research and travels. Following his retirement in 1966, he substituted for Julius Held at Columbia University, New York. He had previously taught at Wesley College (1952–53), Mount Holyoke College (1954) and Yale University (1958). He must have been a very charismatic and inspiring teacher. In 1972, Alan Shestack, who was to become director of the Boston Museum of Fine Arts and is now deputy director and chief curator of the National Gallery in Washington, wrote that, in 1957, as a young student of biology, he had attended Schwarz's lectures and they had filled him with such enthusiasm that he changed over to art history.²⁷

Schwarz remained curator at the Davison Art Center and its collection was almost doubled during his employment to more than 10,000 works.²⁸ Up to the age of 78 his retirement was repeatedly postponed. After he finally retired, he started to suffer from an unexplained illness²⁹ and died in New York on 20 September 1974, aged 80.

The missing opus magnum: rediscoveries and misinterpretations

While Schwarz covered the entire history of western art, from antiquity up to the present in his teaching, in his research work, he devoted himself principally to graphic arts. As a distinguished expert in that field, he was a member of several committees and advisory boards, but it seems that he never actually joined a photographic society. Beaumont Newhall wrote that the graphic arts had always remained his favourite access to photography: 'for him photographs were prints'.³⁰ Thus, the connection of printing and photography was a more or less technical and media one (and this was the reason why Schwarz held Talbot's reproducible calotypes in much higher esteem than Daguerre's unique specimens). In the early 1940s, at the latest, he had already planned a book on the interrelationship of

art and photography, based on the history of technical and scientific development. The earliest document of that project is a two paged book proposal from c.1940–43 in his estate.³¹ In February 1947 he presumably spoke about that book in a letter, announcing it for 1948.³² But initially only the essay *Art and Photography: Forerunners and Influences* was published in the *Magazine of Art* in 1949,³³ together with a text entitled *The Daguerreotype and the Painter* by Schwarz's friend Beaumont Newhall³⁴ who in 1934 had already edited his paper, *Photography and the Artist*³⁵, most likely the first art historical paper on this problem. In the following decade, the book project seems to have been put on the back burner. Not until 1959 was Schwarz granted a sabbatical in Europe for that purpose; Studio Books had shown an interest, but eventually refrained from the project.³⁶ Meanwhile, the topic had been explored in two small exhibitions³⁷ and in some lectures;³⁸ it was definitely in the air. In 1960, Schwarz's friend and successor at the Belvedere, Fritz Novotny, wrote in his volume of the Pelican History of Art that Schwarz's book *Art and Photography* would be published soon.³⁹ In the same year, Schwarz negotiated with Thames & Hudson, London, and DuMont-Schauberg, Cologne. However, in the end both publishers felt that the general interest in such a book was categorised as being too low and refused publication.⁴⁰ Schwarz compiled many records over the decades, but did not author a manuscript. In addition to the publishers' negative reactions, it seems that his many duties as curator and university teacher prevented him from working on his opus magnum. Thus it was reserved for other scholars, such as André Vigneau,⁴¹ Van Deren Coke,⁴² Otto Stelzer,⁴³ Araon Scharf⁴⁴ and J. A. Schmoll gen. Eisenwerth,⁴⁵ to elaborate on this topic in a more comprehensive way. The great success of these publications must have hurt Schwarz greatly for it showed that he had been too much ahead of the times. However, he published some

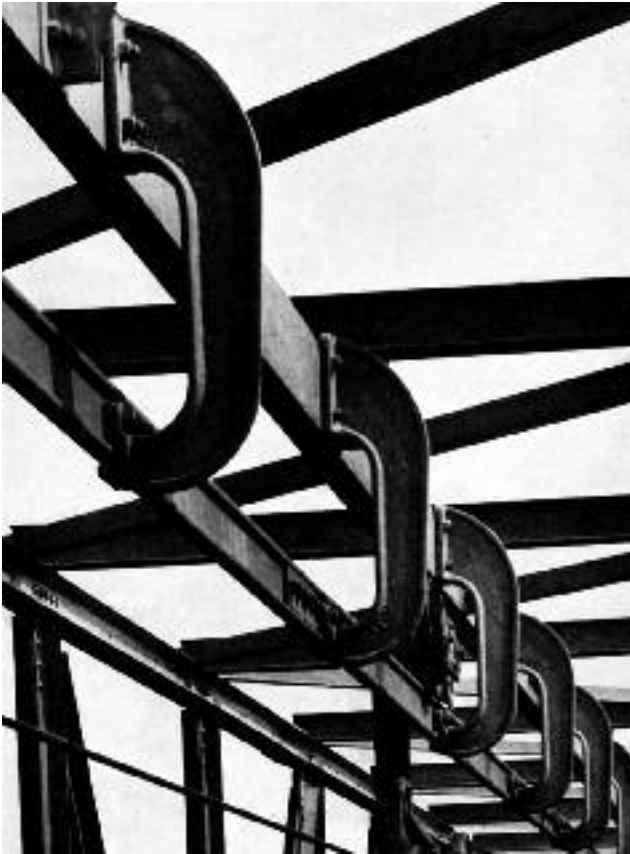


Fig. 2: Alfred Renger-Patzsch: Roller Rail of a Cablecar, Mathildenhöhe near Bad Harzburg, photograph, published in Alfred Renger-Patzsch, *Die Welt ist schön*, Munich 1928, plate 78. © VBK Wien 2008.

essays and gave many lectures on this, his favourite topic; the seed he planted only sprouted years later and sometimes others harvested the rewards.⁴⁶

These scattered texts were collected by William E. Parker in the reader *Art and Photography: Fore-runners and Influences, Selected Writings by Heinrich Schwarz*; first edition published in 1985, followed by Paolo Costantini's Italian translation in 1991.⁴⁷ Parker's volume, which above all consolidated Schwarz's reputation in the USA, possesses two major disadvantages in spite of all its merits: it does not begin until 1949 which completely excludes all of Schwarz's Austrian publication activities, and it could not take advantage of the scientifically processed estate which has been available at the Getty Research Institute since 1996. Texts, which were written in the early thirties, were erroneously attributed to his time in America; others, including the important lecture *After 1839*, given in 1958/59, were quite simply overlooked. In this way, Schwarz's progressive position which was formed by the aesthetics of *New Objectivity* was falsely attributed to the 1950s and 1960s and appeared somewhat conservative.

At the same time, one could only gain an inadequate impression of how greatly Schwarz, in the 1950s, had already anticipated the fashionable topic of the 1960s and 1970s: namely 'Art and Photography'. The new collection of essays, *Techniken des Sehens*, therefore puts emphasis on the 1930s in order to give an accurate idea of Schwarz's intellectual position and is also expanded to include previously unknown writings from his estate. In addition, the scope of the contents has been greatly enlarged: not only Schwarz's study of the camera obscura, but also of the mirror as an optical aid used by artists since the 15th century, is documented in two essays which demonstrate that his scientific focus was not limited to the integration of photography into art history but, more generally, on the influence of technology and the history of science on artistic developments. This creates a connection between Schwarz's scientific point of departure with current interests in several 'techniques of observation' which play a formative role in today's discourse on art history and cultural studies.

Photography as an expression of New Objectivity's *Kunstwollen*

New Objectivity exerted the first, and maybe the most important influence on the development of Schwarz's theory. In 1928, Alfred Renger-Patzsch's famous photographic book, *Die Welt ist schön* [The World is Beautiful] was published in Munich. This volume became the 'bible' of *New Objectivity*. It showed animals, plants, people, architecture and the modern world of technology and consumerism in close-up and high definition, stressing their serial and structural aspects (Fig. 2). The young art historian Schwarz was deeply impressed; he reviewed *Die Welt ist schön* in the May 1929 edition of the *Photographische Korrespondenz* journal where he wrote:

‘The book is a signal. It finally proclaims photography’s liberation from the fetters of painting, which has humbled it for almost one hundred years and, in spite of which, it was arrogantly forced to follow ... Landscape photography which ‘looks like a Corot’ or a portrait photography which ‘looks like a Waldmüller’ are, of course, somewhat hermaphroditic, taking an undefined position between painting and photography, without being able to lay any claims on being recognised as an independent form of artistic creation.’⁴⁸

Here we are dealing with a renunciation of Pictorialism; photography is an individual artistic medium sui generis and cannot become art by imitating painting. He continues:

‘The pictures by Renger-Patzsch are much too personal, his details too characteristic, his motifs too ‘non-painting’, to make it possible to explain or interpret them through a comparison with paintings ... This is where the importance of these photographs lies: they do not want to simulate anything and also not veil anything. They want to be nothing more than photographs, but also nothing less ... If, today, Renger-Patzsch’s photographs give us a more pure form of pleasure than some works by painters, it is no mere accident, but proof of the fact that the age has found a more sensitive and significant instrument for its *Kunstwollen* [will of art] with photographers than with painters.’⁴⁹

Those were harsh words: placing photography not on the same level as painting but above it and regarding it as the appropriate expression of the *Kunstwollen* – a favourite phrase of the Viennese School of Art History since Alois Riegl. To the best of my knowledge, no art historian had dared this before Schwarz. That he held a mechanical pictorial medium in such high esteem, can possibly be traced back to his origins in an industrial family which provided a kind of immunity against the pessimistic view of civilisation and opposition to

technology, which was prevalent among the humanist intellectuals of his generation.

One year later, Schwarz was able to integrate the idea of photography as the pinnacle of the modern *Kunstwollen* into a comprehensive art historical system. In autumn 1930, his already mentioned book on *David Octavius Hill* was published by the Insel-Verlag in Leipzig and marked the beginning of a scientific history of the photographic image.⁵⁰ Previously, the history of photography had been mainly written by professional or amateur photographers and was orientated more towards its applicability and the technical development of the new medium. This is also the case, for example, with Josef Maria Eder’s famous *History of Photography*, first published 1932. On the other hand, Schwarz quite clearly took the approach of an art historian. For him, the discovery of photography was not an accident, not a disruptive element in the field of art history, but the logical and consistent fulfilment of the modern age’s *Kunstwollen*, namely, the mimetic artistic notion of the Renaissance which longed to depict reality as faithfully as possible. Following the French Revolution, this artistic dogma was extended to include a new historical subject: the burgher. Schwarz wrote: ‘The burgher’s picture of the world had been small and narrow. Now, at once, he expanded it on every plane of his middle-class existence ...’⁵¹ This means that the mimetic intention was the same as before but there was now the necessity to include considerably more images of considerably more persons, objects and events. Schwarz argues that only graphic, comparatively inexpensive, reproductive processes can satisfy this. The enormous increase in clients and subjects found its ‘adequate expression’,⁵² as Schwarz described it, in lithography after 1798 and, after 1839, in photography. In addition, the return to nature, to the concrete and real, as well as positivism as the dominant *Weltanschauung* of the up and coming natural sciences, formed the ideological foundation for



Fig. 3: David Octavius Hill & Robert Adamson: Professor Alexander Monro, 1843–47, calotype, in: Heinrich Schwarz, *David Octavius Hill: The Master of Photography*. New York 1931, plate 9.

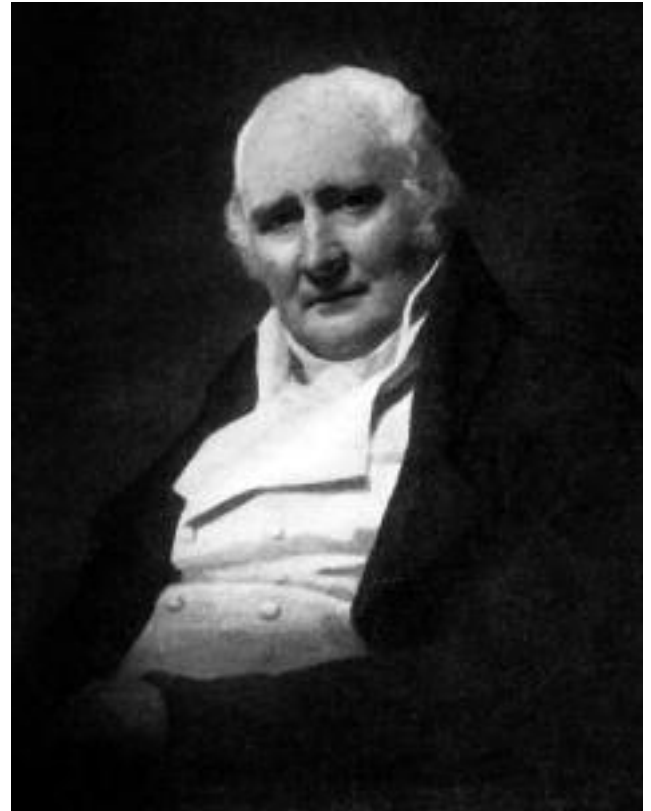


Fig. 4: Henry Raeburn: John Wauchope, Esq., c. 1800, oil on canvas, Scottish National Gallery, Edinburgh.

photography, which ‘demonstrated most concretely the essential identity of the artistic and scientific strivings of the time.’⁵³ Naturalism was the dominating style in the 19th century and found its fulfilment in photography. Photography is therefore not an ‘outsider’ but the culmination of centuries’ long development in the history of art.

Today, it is difficult to comprehend the revolutionary, explosive power with which Schwarz transformed the ugly duckling ‘photography’ into the proud swan ‘photographic art’. At the time, Schwarz was more or less isolated from his colleagues with this opinion. In spite of the efforts which the photographic guild had been making for almost one hundred years, the majority of art historians considered photography precisely the opposite of art (and this continued until long after World War II). Very few art historians before Schwarz, including Alfred Lichtwark in Germany and, later, Schwarz’s friend Carl Georg Heise,⁵⁴ had dealt with photography as an artistic form to be taken seriously.

For Schwarz, the calotypes which the Scotsman David Octavius Hill had created in the 1840s represented the pinnacle of photographic art which had not been surpassed. This is somewhat surprising seeing

that these pictures have nothing in common with the aesthetics of *New Objectivity*. With their gentle chiaroscuro, the natural lighting from above and the concentration on the face and hands, with the rest disappearing into darkness, they are more based on the British portrait tradition of the 18th century (Fig. 3). Schwarz himself gives Henry Raeburn as an example (Fig. 4). Hill (Schwarz ignores his collaborator, Robert Adamson, to create the picture of a lonely genius which was typical of the time) was one of the major archetypes of the pictorialism which Schwarz rejected. The aspect of Hill’s work which Schwarz admired was not merely its firm position in the history of art but the perceived concentration on purely photographic means; fundamentally, the abstention from retouching (later, Schwarz had to admit that Hill and Adamson had, indeed, touched up some of their images).⁵⁵ This purely photographic aspect is, of course, a modernist category and reminds one of the ‘pure photography’ of the 1920s and 1930s. Schwarz observed the history of photography from a very contemporary point of view which was one of the fundamental approaches of the Viennese School of Art History, particularly in the work of Franz Wickhoff, Max Dvorák and Hans



Fig. 5: Ferdinand Georg Waldmüller: *The Höllengebirge (near Ischl)*, 1834, oil on wood, 31.5 x 25.5 cm, Österreichische Galerie Belvedere, Vienna.

Tietze.⁵⁶ He followed a dual strategy: on the one hand, photography was a specific art form, independent from painting and, on the other, an integral component of art history, even the fulfilment of the contemporary Kunstwollen. Its most prominent exponents were Hugo Erfurth and Helmar Lerski, along with Renger-Patzsch, on whom the 'photography advocate' from the Belvedere devoted numerous articles and lectures.⁵⁷

Photographic perspective in painting before and after 1839

After his emigration to the USA, Schwarz ceased dealing scientifically with contemporary photography and devoted himself to the photography of the 19th century and its position in the art of that period. He considered it a symptom of the new social conditions and the resulting new way of observation which took hold of all aspects of pictorial art in the 19th century. This led to his epoch-making discovery that something like a photographic perspective had existed in painting decades before the invention of photography:⁵⁸ pictures which showed unspectacular, random details



Fig. 6: Jurriaan Andriessen: *Artist with Camera obscura*, c. 1810, pen, washed ink on paper, Rijksprentenkabinet, Rijksmuseum, Amsterdam.

'of the unarranged image as it is caught by the visual pyramid.'⁵⁹ (Fig.5). It is, therefore, not the camera which produced the photographic perspective; it is the opposite: intellectual and social 'inner preparedness'⁶⁰ stands at the beginning of every new technical development. This can be seen in the increase of the use of the camera obscura, the camera lucida and other optical aids such as the black mirror, by painters at the end of the 18th and early 19th centuries (Fig. 6). Schwarz proved the contrary to what Jonathan Crary asserted in his famous book *Techniques of the Observer*,⁶¹ namely, that the importance of the camera obscura as an artistic aid decreased after the middle of the 18th century; it is actually precisely the opposite.

Schwarz placed his hypothesis on the quasi-photographic character of art before 1839 at the centre of his lecture *Before 1839: Symptoms and Trends* which he held in Baltimore, Maryland in January 1963 and, in the following year, at George Eastman House in Rochester. John Szarkowski, director of the Photography Department of the MoMA, was in the audience and was most impressed. In 1979, five years after



Fig. 7: August von Pettenkofen: *Venetian Street Fighting*, 1887, oil on wood, 93 x 27cm, Österreichische Galerie Belvedere, Vienna.



Fig. 8: Unknown photographer: *Venetian Street Fighting*, 1887, photograph, published in Heinrich Schwarz (ed.), *Künstlerdokumente zu den Werken der Galerie des 19. Jahrhunderts*, (exh. cat.) Österreichische Galerie Belvedere, Vienna 1928.

Schwarz's death, Szarkowski commissioned the young art historian, Peter Galassi, with the preparation of an exhibition based on the central topic of Schwarz's lecture. The exhibition, which opened in 1981 under the title, *Before Photography* (and later toured the USA) made a great impact; it was stormily acclaimed and contested at the same time.⁶² Seeing that Galassi only knew of the Schwarz lecture by hearsay, he naturally altered his thesis; he reduced Schwarz's treatise to purely stylistic aspects which somewhat weakened it.⁶³

Here, Schwarz was at least identified as being the initiator of the popularised theses which others promulgated but, in another case, his influence was much more hidden. So far, it has been completely overlooked that he delivered a lecture with the title *After 1839* at the Metropolitan Museum of Art on 19 October 1958 where he investigated the influence of photography on painting and graphic arts in the second half of the 19th and first half of the 20th centuries from the opposite perspective. He gave his address four times, in slightly different forms, at various locations before 1970.⁶⁴

The manuscript of this lecture is a kind of short version of his never-written book mentioned above and it is published in *Techniken des Sehens* for the first time.⁶⁵ It shows that, long before his colleagues Van Deren Coke, Aaron Scharf and J. A. Schmall gen. Eisenwerth published books on the topic in the sixties, he had already broken one of the taboos of art history, namely, dealing with the function of photographs as an aid for painters. As early as in 1928, Schwarz had compared a preparatory photograph with the consequent painting: August von Pettenkofen's *Venetian Street Fight* (1887), (Figs. 7, 8) (in the catalogue of the exhibition *Künstlerdokumente zu den Werken der Galerie des 19. Jahrhunderts*). This is one of the first examples of an art historian investigating these circumstances. The photograph plays only a secondary role, is merely an aid, as Schwarz summarises in the catalogue:

‘A mechanical aid for the reproduction of the location and the arrangement of the figures in the painting, which allows the depiction of the perspectival construction, costumes and other details based on numerous studies, sketches and drawings:



Fig. 9: Anton von Werner: Study of Costume and Saddle for the Painting 'Moltke with his Staff near Paris', 1871, published in Wolfgang Schade, *Europäische Dokumente*, Stuttgart-Berlin-Leipzig 1932.

expansion of the segment of painting, perspective concentration on the group of fighting men, elimination of disturbing anachronistic elements (street lanterns), increase in three-dimensionality and enlivening of the foreground by the cloak.⁶⁶

In 1933, Schwarz came across the book of photos *European Documents*, edited by Wolfgang Schade, which made him recognise the significance of photographic models in 19th century painters' ateliers: a grotesque portrait of Count Moltke on horseback by the Prussian history painter Anton von Werner (Fig. 9), and a snapshot of a manoeuvre in the possession of Adolf von Menzel who was also well known for his photographic painting style. In his review, Schwarz wrote, 'Even more notable ... are two pictures which lead us into a new territory of art history and open up perspectives previously unknown to the experts although

fundamental investigations into the understanding of the artistic creations of the 19th century should take such documents as their point of departure.'⁶⁷

In his lecture *After 1839*, it occasionally occurs that Schwarz invests the photograph with a higher artistic value than the ensuing work of art. When dealing with Etienne Carjat's portrait of Charles Baudelaire, which was the basis for Georges Rouault's lithograph, Schwarz notes that, 'Given the choice I would be rather inclined (with all respect to Rouault) to choose the photograph and not the lithograph'.⁶⁸

Photography in the Middle Ages

The third and last section of *Techniken des Sehens* contains three essays on the mirror and the camera



Fig. 10: 'Heiltumweisung' in Nuremberg, coloured woodcut, published in Peter Vischer: *Wie das hochwirdigst Auch kaiserlich heilighum ... Alle Jaer außgerüfft vnd geweist wirdt. In der löblichen Statt. Nüremberg. Nuremberg 1487, Munich, Bayerische Staatsbibliothek.*

obscura.⁶⁹ In 1933 Schwarz had already dealt with the camera obscura;⁷⁰ precisely at the time when only photography and technology historians were showing any interest in it.

The essay *The Mirror of the Artist and the Mirror of the Devout* was originally published in the festschrift for Schwarz's fellow emigrant Wilhelm (now, William) Suida and is relatively unknown.⁷¹ Among other things, it deals with the question of what Johannes Gutenberg, the inventor of the printing of movable type, actually thought when he planned to go into mirror production on a large scale at the end of the 1430s. The intention was to sell these mirrors to the faithful on their pilgrimages to the German Imperial cities which displayed their most precious relics. It was usual for the German bishops and canons to display these holy relics on so-called Heiltumsstühlen [relic stools], on stands in public squares, where they were presented to the believers as shown in an illustration in the Nuremberg Relic Book from 1487 (Fig. 10). In the marvelling host of people, one can identify two women holding up round discs. Schwarz identified these discs

as round, convex mirrors, the most common form of the time, as can be seen in numerous depictions. These mirrors had the function to reflect the image of the holy relic so that something of its miraculous powers could be taken back home; an interpretation which has, meanwhile, been confirmed in numerous studies on the history of medieval piety.⁷² These mirrors of the devout functioned like a primitive pocket camera or modern mobile phone with a camera with which one captures the most important events (and that was Gutenberg's business idea for he always had a feeling for mass media). In his text, Schwarz does not write directly about photography but, once again, he shows that the desire to capture an image and reproduce it (technical reproducibility, which Walter Benjamin erroneously first attributed to photography)⁷³ is much older than photography itself, even much older than the era of art.⁷⁴

Notes

1. The following essay is a revised version of a lecture which was given on 16 September 2006 on the occasion of *Gespräche zur Fotografie* at Gallery Fotohof, Salzburg, 7.11.2006 at the presentation of the book *Techniken des Sehens* by Heinrich Schwarz (see fn. 5 below) at the Österreichische Galerie Belvedere, Vienna. A different, partly shorter, partly enlarged version was published with the title *Der Photoanwalt aus dem Belvedere: Zur Wiederentdeckung des vertriebenen Kunsthistorikers Heinrich Schwarz* in: *Belvedere* 12, no. 2, 2006, pp. 58–71. I am very grateful to Anna Auer, Michael Mauracher, Robert Scott McInnes, Uwe Schögl and Andrew Phelps for their cross-reading of the text.
2. Heinrich Schwarz, 'Notes on Photography part III', from 'Talk on the Exhibition, Great Masters of Early Photography: Calotypes by D. O. Hill and R. Adamson, 1843–1847', Davison Art Center, Wesleyan University, 14 February 1962', mimeographed typescript, published in: William E. Parker (ed.), *Heinrich Schwarz, Art and Photography: Forerunners and Influences. Selected Essays*, Chicago, London, 1987 (new ed.), 95 pp., p. 96.
3. Martin Gasser, 'A Master Piece: Heinrich Schwarz's Book on David Octavius Hill', in: *Image* 36, Nos. 1–2, 1993, pp. 32–53, p. 33, mentions that the only monographic book preceding it is *Julia Margaret Cameron: Victorian Photographs of Famous Men and Fair Women*, London 1926, with two introductory essays by the novelist Virginia Woolf and the artist, art historian and critic Roger Fry.

4. Gasser: *A Master Piece*, 1993, pp. 32–53.
5. Anselm Wagner (ed.), *Heinrich Schwarz. Techniken des Sehens – vor und nach der Fotografie. Ausgewählte Schriften 1929–1966*. Introduction Monika Faber, Salzburg 2006.
6. Unless stated otherwise the following biographical details are based on Ulrike Wendland, *Biographisches Handbuch deutschsprachiger Kunsthistoriker im Exil. Leben und Werk der unter dem Nationalsozialismus verfolgten und vertriebenen Wissenschaftler*, part 2, Munich 1999, pp. 630–635; the personnel file on Heinrich Schwarz in the archive of the Österreichische Galerie Belvedere, Vienna; and a c.v. which Schwarz wrote c.1942 and revised c.1972 in his estate at the Getty Research Center, Los Angeles: The Heinrich Schwarz Papers (hereafter: HSP), 920033, box 10, folder 1. I would like to sincerely thank Michael Krapf, Vienna, and Wim de Wit, Los Angeles, for allowing me to do research in the two archives.
7. Published posthumously in Vienna in 1988, Elisabeth Herrmann-Fichtenau (ed.).
8. Monika Faber, 'Heinrich Schwarz. Die Entdeckung der Naturwissenschaften und technischen Apparate durch die Kunstgeschichtsschreibung', in: Dieter Mayer-Gürr (ed.), *Fotografie und Geschichte. Timm Starl zum 60. Geburtstag*, Marburg 2000, pp. 51–57, p. 51.
9. Johannes Feichtinger, *Wissenschaft zwischen den Kulturen. Österreichische Hochschullehrer in der Emigration 1933–1945*, Frankfurt a. M., New York 2001, pp. 140–145, p. 155.
10. As described in a letter from Haberditzl's daughter Magdalena to Heinrich Schwarz dated 3.3.1946, private archive Magdalena Magnin, Boulogne/Seine (hereafter: MM). I am very grateful to Madame Magnin for granting me permission to consult her correspondence with Heinrich Schwarz.
11. An unauthorised edition, as an illustrated book without Schwarz's text was published in 1940. This is how the heritage of the banished Jewish scientists was treated.
12. Peter Weiermair, 'Von der Kunstfotografie zur Neuen Sachlichkeit', in: Verein zur Erarbeitung der Geschichte der Fotografie in Österreich (ed.), *Geschichte der Fotografie in Österreich*, vol. 1, Bad Ischl 1983, pp. 187–203, p. 199.
13. Gasser: *A Master Piece*, 1993, p. 52, fn.73.
14. Wagner: *Heinrich Schwarz*, 2006, p. 32.
15. 'Conversation with the Editor by Dr. Heinrich Schwarz (Vienna)', in: *The Gallery of International Photography 1*, no. 5, 15 July 1933, pp. 60–63, p. 62. German Translation in Wagner: *Heinrich Schwarz*, 2006, pp. 111–120, p. 120.
16. Letter from M. Magnin to the author, 8. 9. 2006.
17. Feichtinger: *Wissenschaft*, 2001, p. 397.
18. Letter from Schwarz to Franz Martin Haberditzl, 13.4.1939, MM.
19. Letter from Schwarz to M. Magnin, 18.1.1948, MM.
20. Letter from Newhall, 19.10.1940, Emergency Committee, File Heinrich Schwarz, Receiving Aid Box 32, New York Public Library, quoted after Wendland: *Biographisches*, 1999, p. 634.
21. Feichtinger: *Wissenschaft*, 2001, p. 433.
22. Letter from Newhall, 5.8.1941, see 20, file Heinrich Schwarz.
23. For Schwarz's activities in Providence: Carla Mathes Woodward, 'Acquisition, Preservation, and Education: A History of the Museum', in Franklin W. Robinson (eds.), *A Handbook of the Museum of Art, Rhode Island School of Design*, (2nd ed.) Providence, RI 1988. Also at http://www.risd.edu/museum_history_overview.cfm.
24. Schwarz's letters to M. Magnin dated 18.1.1948 and 22.2.1950, MM.
25. Schwarz's letters to M. Magnin dated 25.10.1953.
26. Schwarz's letters to M. Magnin dated 30.5.1954, 14.7.1954, and 18.8.1954.
27. Alan Shestack, 'A Tribute to Heinrich Schwarz', in: *Davison Art Center: Selected Acquisitions 1955–1972*, (exh. cat.) Middletown, Conn. 1972, pp. 2–4, p. 2.
28. 'Heinrich Schwarz, ex-curator, Wesleyan Art Professor, dead', in: *New York Times*, 22. 9. 1974, p. 54, quoted in: Wendland: *Biographisches*, 1999, p. 634.
29. Letter from Elisabeth Schwarz, Heinrich Schwarz's widow, to M. Magnin dated 6.5.1975, MM.
30. B. Newhall to Martin Gasser, letter dated 21.3.1989, quoted in: Gasser: *A Master Piece*, 1993, p. 36.
31. HSP, box 29, folder 8.
32. Letter from Schwarz to M. Magnin dated 27.2.1947, MM.
33. *Magazine of Art* 42, no. 11, November 1949, pp. 252–256, reprinted in: Parker: *Heinrich Schwarz*, 1987, pp. 109–117; Italian translation in: Paolo Costantini (ed.), *Arte e fotografia. Precursori e influenze*, Turin 1992, pp. 34–43; German translation in: Wagner: *Heinrich Schwarz*, 2006, pp. 121–133.
34. *Magazine of Art* 42, no. 11, November 1949, pp. 249–251.
35. *Parnassus* 6, no. 5, October 1934, pp. 24–29.
36. 'Grant no. 2668 – Penrose Fund (1959)', in: *The American Philosophical Society, Year Book 1963*, 1 Jan. 1963 – 31 Dec. 1963, p. 599.
37. Richard Paul Lohse (curator), 'Kunst und Photographie' (on occasion of the world exhibition of photography, Luzern 1952), published in: Richard Paul Lohse, *Neue Ausstellungsgestaltung. 75 Beispiele neuer Ausstellungsform*, Zürich 1963; Jean Adhémar (ed.), *Un siècle de vision nouvelle*, exhib. cat. Bibliothèque nationale, Paris 1955. Adhémar was Schwarz's friend since 1947, as Schwarz mentions in a letter to M. Magnin dated 15. 6. 1947, MM.
38. On 27 November 1954 J. A. Schmolli gen. Eisenwerth gave a lecture on the occasion of the opening of the exhibition *subjektive fotografie 2* at the Staatliche Schule für Kunst und Kunsthandwerk in Saarbrücken with the title 'Vom Sinn der Photographie' (published in: Otto Steinert, *subjektive fotografie 2: ein bildband moderner fotografie*, Munich 1955, pp. 25–40). In October 1955 Helmut Gernsheim spoke about the relationship of painting and photography at the Victoria & Albert Museum in London, see (interview with) 'Helmut Gernsheim', in: Paul Hill, Thomas Cooper (eds.), *Dialogue with Photography*, (8th ed.) Stockport 2005, pp. 133–168, p. 160.
39. Fritz Novotny, *Painting and Sculpture in Europe 1780–1880*, Harmondsworth 1960, p. 248, fn.11.
40. Correspondence in: HSP, box 29, folder 12.
41. André Vigneau, *Une brève histoire de l'art de Niépce à nos jours*, Paris 1963.
42. Van Deren Coke, *The Painter and the Photograph: From Delacroix to Warhol*, (exhib. cat.) The Art Gallery of The

- University of New Mexico, Albuquerque, 1964 (expanded editions 1972, 1975).
43. Otto Stelzer, *Kunst und Photographie: Kontakte, Einflüsse, Wirkungen*, Munich 1966, (2nd ed.) 1978. In his preface, p. 7, Stelzer mentions that 'theme and matter' of his book are based on a lecture which he held in the winter semester of 1959/60.
 44. Aaron Scharf, *Art and Photography*, Harmondsworth, 1968 (reprinted 1969, 1974, 1975, 1979).
 45. J. A. Schmoll gen. Eisenwerth, *Malerei nach Fotografie. Von der Camera obscura zur Pop art*, (exhib. cat.) Münchner Stadtmuseum, Munich 1970 (2nd ed. 1971).
 46. Monika Faber, 'Verkehrschao: Ein Pionier der Erschließung von kunsthistorischem Neuland', in: Wagner: *Heinrich Schwarz*, 2006, pp. 13–25, p. 15.
 47. Parker: *Heinrich Schwarz*, 1987, pp. 252–256, *Magazine of Art*.
 48. *Photographische Korrespondenz* 65, no. 5, 1929, p. 156, reprinted in: Wagner, 2006: 27–30, p. 28.
 49. Wagner: *Heinrich Schwarz*, 2006, p. 157, respectively p. 29.
 50. Gasser: *A Master Piece*, 1993 still being the best analysis of this book. For the historical context of its making and reception see: Bodo von Dewitz, 'In einsamer Höhe'. Zur Geschichte des Buches, David Octavius Hill – Der Meister der Photographie' von Heinrich Schwarz (1931), in: Bodo von Dewitz, Karin Schuller Procopovici (eds.), *David Octavius Hill & Robert Adamson. Von den Anfängen der künstlerischen Photographie im 19. Jahrhundert*, (exhib. cat.), Museum Ludwig/Agfa Photo-Historama Cologne, Göttingen, 2000, pp. 45–52, p. 260; and Wagner: *Heinrich Schwarz*, 2006, pp. 31–38.
 51. Heinrich Schwarz, *David Octavius Hill: Master of Photography*, Helene E. Fraenkel (trans.), New York 1931, p. 4; reprint of the original German version in: Wagner: *Heinrich Schwarz*, 2006, pp. 39–73, p. 39.
 52. Wagner: *Heinrich Schwarz*, 2006, p. 4, respectively p. 40.
 53. Wagner: *Heinrich Schwarz*, 2006, p. 6, respectively p. 41.
 54. von Dewitz, Procopovici: *David Octavius Hill*, 2000, p. 46.
 55. Wagner: *Heinrich Schwarz*, 2006, p. 64, fn.106.
 56. Edwin Lachnit, *Die Wiener Schule der Kunstgeschichte und die Kunst ihrer Zeit*, Vienna-Cologne-Weimar 2005, p. 35, pp. 100–110.
 57. Heinrich Schwarz, 'Lübeck. Achtzig photographische Aufnahmen von Albert Renger-Patzsch, Berlin 1928', in: *Photographische Korrespondenz* 65, 1929, S. 157; Heinrich Schwarz, 'L'œuvre de Renger-Patzsch', in: *Bulletin de la Société Française de Photographie et de Cinématique* 17, no. 5, May 1930, pp. 149–152; Heinrich Schwarz, 'Norddeutsche Backsteindome. Aufgenommen von Albert Renger-Patzsch, Berlin 1930', in: *Photographische Korrespondenz* 66, 1930, p. 81; Heinrich Schwarz 'Kunst und Photographie' (lecture from 1932), in: Wagner: *Heinrich Schwarz*, 2006, pp. 75–103; Heinrich Schwarz 'Hugo Erfurth', in: *Photographik* no. 2, February 1934, pp. 1–5.
 58. As far as I know this has only been stated before Schwarz by Hermann Beenken, *Das neunzehnte Jahrhundert in der deutschen Kunst: Aufgaben und Gehalte, Versuch einer Rechenschaft*, Munich 1944, p. 142. Beenken recognises in the painting of the 1830s the beginning of a 'photographic vision' which he classifies negatively.
 59. Heinrich Schwarz, 'Before 1839: Symptoms and Trends', in: Parker: *Heinrich Schwarz*, 1987, pp. 97–108, p. 106 (transcript of taped lecture); German translation of the original lecture manuscript in HSP, box 37, folder 14, see: Wagner: *Heinrich Schwarz*, 2006, pp. 183–200, p. 196.
 60. Wagner: *Heinrich Schwarz*, 2006, p. 101, respectively p. 190.
 61. Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*, (10th ed.) Cambridge, Mass. 2001 (1st ed. 1990).
 62. Wagner: *Heinrich Schwarz*, 2006, p. 184.
 63. Gene Thornton, 'The Place of Photography in the Western Pictorial Tradition: Heinrich Schwarz, Peter Galassi and John Szarkowski', in: *History of Photography* 10, no. 2, April-June 1986, pp. 85–98.
 64. Wagner: *Heinrich Schwarz*, 2006, p. 154, also on Schwarz's vain efforts to publish his paper.
 65. Wagner: *Heinrich Schwarz*, 2006, p. 151–182.
 66. Heinrich Schwarz, *Künstlerdokumente zu den Werken der Galerie des 19. Jahrhunderts*, exh. cat. Österreichische Galerie, Vienna 1928, p. 18, fn.51.
 67. Heinrich Schwarz, 'Europäische Dokumente. Historische Photos aus den Jahren 1840 bis 1900. Zusammengestellt und herausgegeben von Wolfgang Schade. Union Deutsche Verlagsgesellschaft. Stuttgart, Berlin, Leipzig (1932)', in: *Photographische Korrespondenz*.
 68. Heinrich Schwarz, 'After 1839: Effects and Examples of a New Vision', in: HSP, box 37, folder 4, p. 30; German translation see Wagner: *Heinrich Schwarz*, 2006, p. 176.
 69. 'Der Spiegel in der Kunst' (The Mirror in Art) 1952, pp. 201–220; 'Der Spiegel des Künstlers und der Spiegel des Frommen' (The Mirror of the Artist and the Mirror of the Devout) 1959, pp. 221–237; 'Vermeer und die Camera obscura' (Vermeer and the Camera Obscura) 1966, pp. 239–256.
 70. Heinrich Schwarz, 'The Camera Obscura', in: *The Gallery of International Photography* 1, no. 9, November 1933, p. 111; Heinrich Schwarz, 'Zur Geschichte der Camera obscura', in: *Die Galerie. Monatsblätter der internationalen Kunstphotographie* 1, no. 11, January 1934, pp. LXXIX–LXXXIV.
 71. *Studies in the History of Art, dedicated to William E. Suida on his eightieth birthday*, London 1959, pp. 90–105.
 72. Wagner: *Heinrich Schwarz*, 2006, p. 223.
 73. Howard Eiland and Michael W. Jennings (eds.), 'Work of Art in the Age of its Technical Reproducibility', in: *Walter Benjamin. Selected Writings*, vol. 4, London 2003, pp. 251–283, p. 253 (Walter Benjamin, 'Das Kunstwerk im Zeitalter seiner technischen Reproduzierbarkeit', in: Walter Benjamin, *Gesammelte Schriften*, vol. VII/1, Frankfurt a. M. 1989, pp. 350–384, p. 352). For critical commentary see: Horst Bredekamp, 'Der simulierte Benjamin. Mittelalterliche Bemerkungen zu seiner Aktualität', in: Andreas Berndt et al. (eds.), *Frankfurter Schule und Kunstgeschichte*, Berlin 1992, pp. 117–140.
 74. This notion refers to the use of images in the Middle Ages as it is demonstrated in Hans Belting, *Likeness and Presence: A History of the Image before the Era of Art*, Chicago, London, 1994 (*Bild und Kult. Eine Geschichte des Bildes vor dem Zeitalter der Kunst*, (6th ed.) Munich, 2004).

Blossfeldt and Surrealism

In the summer of 2006, the Hayward Gallery in London played host to the exhibition *Undercover Surrealism*, an exploration of the ideas and images associated with the magazine *Documents*, which Georges Bataille had edited in 1929–30.¹ As well as paintings, sculptures, objects, film and music clips, the exhibition included many photographs, for *Documents* was one of those Surrealist magazines which made fundamental innovations in the ways that photographs were reproduced, creating new meanings out of their juxtaposition with each other, or with the accompanying text. Some of the photographs were made for the magazine itself: most notably by Eli Lotar and Jacques-André Boiffard; others were ‘appropriated’ from usually anonymous sources, to be celebrated or subverted. There was however one set of photographs which did not quite fit either category. Made by a contemporary photographer of some repute, they were nevertheless pictures that, when reproduced in *Documents*, carried a very different meaning from that intended by their maker.

These were five images by the German photographer Karl Blossfeldt (1865–1932) which depicted details of plants enlarged so that they became monumental and allusive. They are now iconic works in any account of early twentieth century photography, but if one looks back more closely at the history of their reception, they turn out to be complex and sometimes contradictory. This article examines one aspect of that complexity: the unexpected relationship that the images have had with Surrealism, and traces it through the century by looking closely at a number of specific images and texts. However, in order to fully comprehend that story, it is necessary to place it against a larger account of how Blossfeldt’s work came to carry different meanings in different contexts.

Karl Blossfeldt’s five photographs had been published in the third issue of *Documents* in June 1929, alongside an essay by Bataille on ‘The Language of Flowers’ (Fig. 1).² The title is innocuous enough, and

the layout is reserved and formal; each of the photographs being reproduced full page with only the name of the plant as caption: *Campanula vidalii*, *Bryonia alba*, *Equisetum hiemale*, *Hordeum distichum*, *Dryopteris filix mas*. (Along with the order of magnification, Bataille also gives the French names. In English, they are: the Bell-flower, the White Bryony, the Rough Horsetail, Barley and the Common Male Fern.)

This essay also begins quietly with a discussion of the relationship between flowers and love. Even as this extends beyond the sentimental association of red roses into more sexual connotations, Bataille is hardly courting controversy. The concept that flowers are sexual objects was far from new; when Carl Linnaeus published his *Species Plantarum* in 1753, ‘he chose sexuality as the key’, classifying plants by their male and female ‘genitals’ (the stamen and stigma, respectively). As Jenny Uglow noted, ‘There was no escaping the link between Linnaean botany and sex’.³

In the second half of his essay, however, Bataille shifts his tone. The amatory connotations become disturbing: ‘even the most beautiful flowers are spoiled in their centres by hairy sexual organs’, and he describes with relish the disintegration of floral beauty: ‘Risen from the stench of the manure pile – even though it seemed for a moment to have escaped it in a flight of angelic and lyrical purity – the flower seems to relapse abruptly into its original squalor: the most ideal is rapidly reduced to a wisp of aerial manure’.⁴ Finally, he contrasts the glorious head of the flower with its support below ground: ‘in order to destroy this favourable impression, nothing less is necessary than the impossible and fantastic vision of roots swarming under the surface, nauseating and naked like a victim’.⁵

As elsewhere in his writings, Bataille here draws out the symbiosis ‘between cultivation and hidden obscenity, sanctity and sacrilege’;⁶ the ineluctable connection between the high and the low. To emphasise his point with a flourish, he ended his essay with a story

Il est vain d'imaginer uniquement deux aspects des choses, les signes intelligibles, qui permettraient de distinguer divers domaines les uns des autres. Ce n'est qu'une vue humaine, en définitive, qui seules les connaissances de l'existence, au-delà des divers signes, nous aident à les classer d'après des critères et des ordres. C'est ainsi que la vue d'un être vivant, dans un lieu ou un temps d'après des critères et des ordres, est définie d'une façon plane, mais il est impossible de l'attribuer à un objet matériel. Ce qui offre, la vue de cette forme présente dans l'ordre des situations humaines, offre l'interprétation de la fin qu'elle exprime sous plusieurs dimensions de la nature végétale. Ce qui rendait la configuration et le couler de la courbe, ce qui transformait les surfaces du pollen au la brèche du pontil ne peut sous deux points de vue exprimer adéquatement à l'ordre du langage; toutefois, il est possible de saisir, comme on le fait généralement, cette incompréhensible présence stable, et de saisir comme une abstraité patella certaines formes d'interprétation symboliques.

[illegible]

Mais cette interprétation unique de sensibilité paraît surprenante : en effet, l'œuvre peut être donnée, de l'extérieur, comme la fiction d'un monde fini. Ainsi, la symbolisation serait due, ici, à une forme particulière d'écriture, non à l'impact psychologique du sensibilité humaine. Et si, à partir de ce point de vue, nous nous l'impact psychologique du sensibilité humaine. Et si, à partir de ce point de vue, nous nous l'impact psychologique du sensibilité humaine.

On se débarrasserait ainsi de bon compte d'une opinion nuisant à laquelle les hommes ont



COMPAGNIE DES ACRES (CAMPELA TRUL) MARSEILLE 4 FOS

concerning the Marquis de Sade who, ‘locked up with madmen ... had the most beautiful roses brought to him only to pluck off their petals and toss them into a ditch filled with liquid manure’.⁷ It was this reference that particularly irritated André Breton when he launched his attack on Bataille in the *Second Surrealist Manifesto* of 1930; for Breton, Bataille’s insistence on the baseness of existence offered no sort of transience but only degradation: ‘It remains none the less true that the rose, stripped of its petals, remains *the rose* ...’⁸

Yet he also reproduced one of Blossfeldt's most delicate photographs of the sinuous tendrils of the

In *Undercover Surrealism*, the five pictures by Blossfeldt were placed at about the midway point of the exhibition and their presentation in a row on a wall was as sober as it had been in the magazine. However, an extract from Bataille's text sat to their right and the pictures on either side of them circled round one of Bataille's key concepts: the *formless*. To the left was a

photo by Boiffard of a squashed fly while on the other side, there were other natural history images by Jean Painlevé – close-ups of crustacea this time – which also undermined our usual sense of their physical presence. In this context, the formal logic of the plants (and indeed of the photographs) started to look much less stable.

However, one of the most intriguing and poignant objects in this space was in the glass case in front of the five Blossfeldt images. Surrounded by manuscripts, photographs, pamphlets and magazines, was a battered brown envelope. Stamped and postmarked, ‘Rue de la Boétie, 15.30, 17 - 8’, it was addressed from *Documents* to ‘Monsieur Prof Blossfeldt [sic], 6 Stefanstr, Berlin Suedende, Allemagne’.¹⁰ On the afternoon of 17 August 1929, then, Bataille in Paris sent this envelope to Blossfeldt in Berlin. There is no indication of what was in it, but the envelope is just a little too small to contain an actual copy of the magazine; perhaps, Bataille was here returning the prints that he had used for reproduction. But this started me wondering if Blossfeldt in fact ever saw the magazine, whether he could read French, and, if so, just how disconcerted (and possibly outraged) he might have been by this use of his images. However, this was not the first time that Blossfeldt’s photographs had been appropriated to support an argument quite different from his original intention to examine the plant as ‘a wholly artistic-architectonic structure’.¹¹ In order to understand just how radical Bataille’s use of these pictures was, it is necessary to backtrack; to look at the process whereby the pictures had been made and how they first became famous.

By the time of Bataille’s essay, Karl Blossfeldt was 64. Born in 1865, he had, at the age of 19, gone to Berlin to study at the Academy of the Royal Museum of Arts and Crafts.¹² In 1890 he won a scholarship to work in Italy with the drawing professor Moritz Meurer. The aim was to collect botanical samples

which would enable an understanding of the basis of design in natural forms. Blossfeldt’s initial job as a modeller was rather lowly, but it seems he started taking photographs soon after to help in this study. Returning to Berlin in 1898, he was appointed as an Instructor at the Academy where he taught ‘Modelling from Plants’ for the next 31 years. As part of this work, he slowly and surely built up his collection of about 6000 close-up photographs of plant forms, always utilising the same plate camera, a plain, flat background and a minimal number of variations in lighting. As Gert Mattenklott put it, ‘Blossfeldt was no camera enthusiast. How could he otherwise have put up with this monotony? He was a plant-lover’.¹³

Through this time, Blossfeldt’s work gradually fell more and more out of step with what was happening in German art, to the point that his classes came to be seen as something of a backwater. This changed, however, in 1926, when his photographs were exhibited for the first time outside of their original pedagogical framework. It is uncertain how they came to the attention of the banker, collector, gallerist and impresario Karl Nierendorf, but when he showed Blossfeldt’s work at his Berlin gallery (alongside some African sculptures), the time was right for the pictures to be seen not as retrogressive but as avant-garde.

The term *Neue Sachlichkeit* had been coined in 1923 to describe a tendency in German art that developed after the Great War and in reaction to Expressionism (*sachlichkeit* is most usually translated as *objectivity*, but it can also mean ‘reality, impartiality, detachment’¹⁴). Initially applied to the work of painters, such as Beckmann, Dix and Grosz, it was soon recognized that there were parallel shifts in the New Photography being made by Renger-Patzsch, Moholy-Nagy, Lerski and Sander. The ‘camera eye’ was to be valued for its impersonal scrutiny of surface and its ability to capture form and detail that the human eye could not see.

It was into this new context that the photographs Blossfeldt had made over the previous thirty years now emerged and were seen to exemplify many of the principles of the New Photography. Soon, they were to be found in contemporary magazines of art, design and architecture; *Uhu* for example placed Blossfeldt's picture of a 'Rough Horsetail' opposite the dome of the Marmeluke graves in Cairo to illustrate an article on 'green architecture'.¹⁵ In 1929, Blossfeldt was invited to show his work at the Bauhaus and Moholy-Nagy included Blossfeldt's photographs in the epochal exhibition *film und foto* in Stuttgart.

The widest circulation of the work came in 1928 when Nierendorf arranged with the well-known architectural publisher Wasmuth for 120 of Blossfeldt's pictures to be presented in the book *Urformen der Kunst* (Archetypal Forms of Art).¹⁶ It was this volume, severe and simple in design with a brief if inexplicit introduction by Nierendorf himself, that carried the images around the world. Foreign editions followed: *Art Forms in Nature*, published in London and New York, *Kunstformer i naturen* in Stockholm and *La plante* in Paris. (It was there that Bataille most likely came across the work.)¹⁷ However, it does not seem as if Blossfeldt himself quite understood the nature of his sudden fame. When he published a second volume *Wundergarten der Natur* in 1932, his own introduction reiterated his original, conservative and functional intentions for the pictures.¹⁸ He died later the same year but by then his images had floated clear of those intentions to become iconic examples of modernist photography. In that process they exemplify the sense of photography as a medium whose signifiers can be very fluid indeed. The interwar years were a period of particular flux in the understanding of photography's status. During the same period, the images of the recently deceased Eugène Atget were shifting from being photographic documents (like Blossfeldt, Atget's stated intention was to provide 'Documents pour artis-

tes') to being a primary example of a new genre: documentary photography.¹⁹

Still, Bataille's resiting of Blossfeldt's pictures in *Documents* was very extreme indeed. To move from a functional context to the aestheticised reading of New Objectivity was one shift, but one can see how these two positionings both valued the direct, factual, formal quality of the images. The shift to a Surrealist reading of Blossfeldt's pictures as strange and unnerving is a step sideways and seems not so much an extension as a distortion of the values that underpinned the work.

Yet some early critics understood that severe formality and disturbing strangeness coincided in these pictures; that indeed the rigor and directness exacerbated the edge of fantasy. In this respect, it is interesting to look at the reviews written by two men who themselves stood astride that apparent divide between New Objectivity and Surrealism: Walter Benjamin and Paul Nash.²⁰ Their texts are double-edged. Both men spend most of their time praising Blossfeldt's pictures as examples of a new, camera-based vision, yet both seem unable to resist the element of the fantastic they contain.

A native Berliner, Walter Benjamin had experienced first hand the developments in German art in the mid 1920s, but an extended stay in Paris in 1927–28 also brought him into influential contact with Surrealism; it was then that he began work on the important essay on Surrealism that would be published in 1929.²¹ By the time his review of Blossfeldt's book, entitled *New Things about Plants* was published in *Literarische Welt* on 23 November 1928, he was living back in Berlin. In it, Benjamin largely follows Nierendorf, remarking, 'These pictures disclose an unsuspected wealth of forms and analogies which we never imagined existed in the plant world', and adding: 'Only photography is capable of revealing these'.²² He contrasts Blossfeldt's images of flowers with drawings made in the nineteenth century by Gérard Grandville,

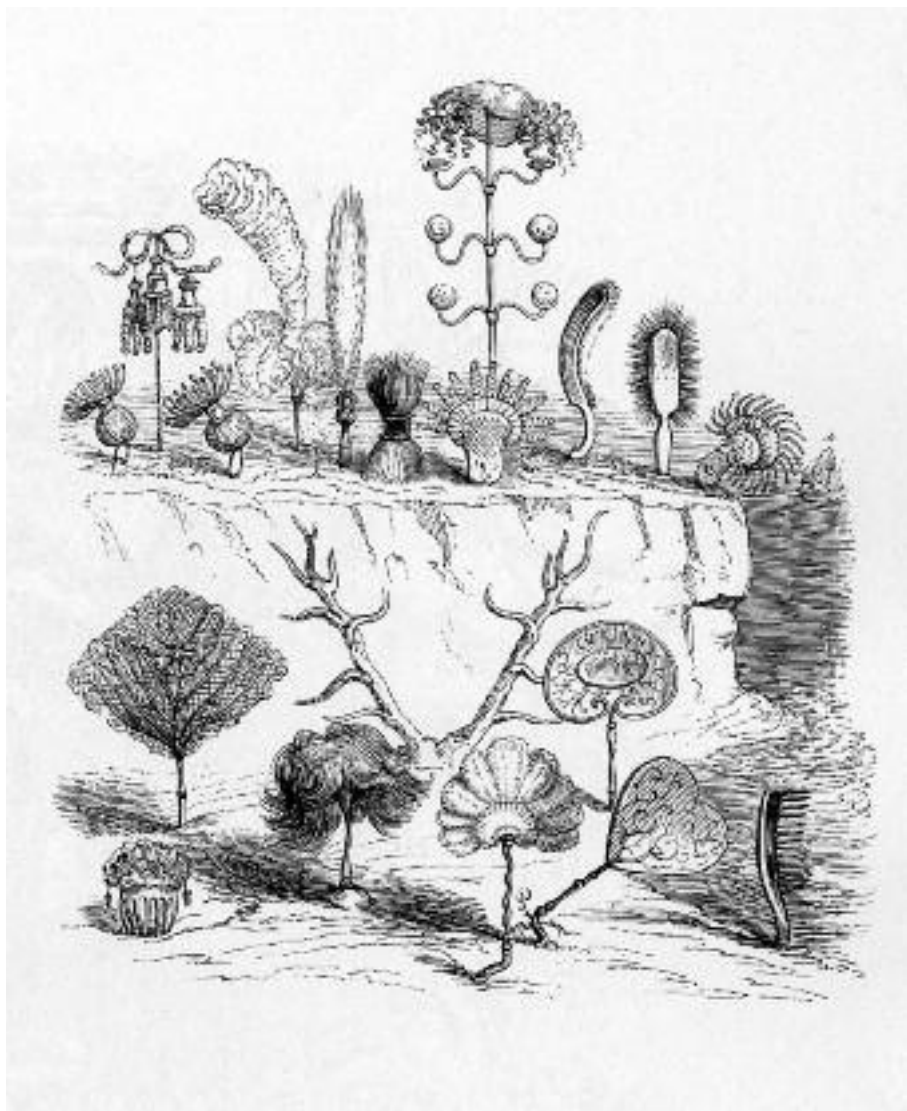


Fig. 2: Gérard Grandville: 'The marine life collection', 1844.

just as we discover the instinctual unconscious through psychoanalysis'.²⁴ This is a notoriously ambiguous proposal, but among other things, it extends the concept of the 'camera eye' into the area of the uncanny, 'the most precise technology can give its products a magical value', and the microscopic world that Blossfeldt's images reveal is 'meaningful yet covert enough to find a hiding place in waking dreams'. For Benjamin, Blossfeldt's pictures could help to demonstrate how 'the difference between technology and magic' might be resolved and perhaps transcended.²⁵

the Parisian caricaturist who Benjamin wrote of elsewhere (Fig. 2).²³

Grandville 'showed the whole cosmos springing from the plant world' while 'Blossfeldt approaches the matter from the opposite direction – he marks these seemingly pure products of Nature with the undeniable stigma of man'.

Walter Benjamin, though, was not simply contrasting Grandville's fantasies with Blossfeldt's realism. Indeed, at the end of his review, he wrote, 'We wander among these giant plants like Lilliputians'; the fantastical element in the photographs could not, it seems, be denied. Three years later, in his essay 'A Small History of Photography' he would return to Blossfeldt's images as he formulated his concept of the 'optical unconscious': 'it is another nature that speaks to the camera than to the eye: other in the sense that a space informed by human consciousness gives way to a space informed by the unconscious ... It is through photography that we first discover the existence of this optical unconscious,

When the English painter Paul Nash wrote his review of Blossfeldt's second volume in 1932,²⁶ his own practice was being influenced by both New Objectivity and Surrealism. In 1931, his wife Margaret had bought him a camera and his first photographs, made on board ship en route to the USA, were formal arrangements of masts and funnels in the style of Renger-Patzsch. But Surrealist elements were also apparent in his painting, with influences particularly coming from de Chirico, and soon his own photography would show that influence as well.²⁷

The first half of Nash's review of Blossfeldt's book sounds a, by now, conventional note, stressing 'the peculiar power of the camera to discover formal beauty which ordinarily is hidden from the human eye'.²⁸

Nash then turns to the influence of photography on contemporary painters and the particular example he cites is that of his friend Edward Burra. In Burra's interest in 'solid, individual shapes ... a high degree of finish ... intense concentration on highlights, ... a



Fig. 3: Jindřich Štyrský: Photomontage from 'Emilie Comes to Me in a Dream', 1933. Credit: Martin Parr.

peculiar insistence upon isolated objects', he detects the influence of photography (all those effects might be connected back to Blossfeldt). Yet he could also be discussing his own work of the period, and he might have put these effects down to the influence of de Chirico as much as to photography. When he describes Burra's images as 'extraordinary fantasies', he also suggests that the result of this intense concentration on physicality was a shift into something strange and disturbing.

There are other connections between Blossfeldt's pictures and Surrealism that have been or might be proposed. The tactic of rendering the natural 'unnatural' or indeed 'hypernatural' was a common tactic in Surrealist photography; one thinks of the way that Dora Maar used excessive magnification to turn a baby armadillo into a portrait of Ubu;²⁹ or, later on, in the 1930s, the anthropomorphisation of natural forms in the photographs of the rocks at Ploumanach by Eileen Agar, or the trees in 'Monster Field' by Paul Nash. Already, in Germany in 1927, Franz Roh had connected Blossfeldt's photographs with the frottages made by Max Ernst under the title *Histoire Naturelle*.³⁰ And one might also propose some actual influence from Blossfeldt on Surrealist photography. As Dawn Ades remarked, the photographs by Man Ray and Brassai of Art Nouveau architecture, reproduced in *Minotaure* in 1933, might have been meant

'intentionally to answer' Blossfeldt's pictures in *Documents* four years earlier.³¹

There was, however, a more tangible way that Surrealist artists could work with Blossfeldt's pictures – by including them in montages. This was probably quite common, for the plants offered forms that could be easily metamorphosed. There is, for example, a montage of 1933 by the Polish artist Kazimierz Podsadecki entitled *Gestures*, in which a number of human figures: a bodybuilder, a diver, a nude model and a moustachioed thinker, raise their arms above their body and the gesture is echoed in Blossfeldt's photograph of a Monkshood shoot as it opens.³² More centrally Surrealist was the use of another Blossfeldt photograph, the well-known image of a *Horsehair* which had been reproduced in both *Uhu* and *Documents*, in photomontages by two Czech Surrealists Jindřich Štyrský and Karel Teige, also from the 1930s. Both appropriated this photograph for its erotic suggestiveness, indicating not only how well known it was but also how easily this particular symbolism could be read into it.

The image by Štyrský is one of ten that he made in 1933 for a little book titled, *Emilie Comes to Me in a Dream*.³³ In these photomontages, Štyrský deliberately pushes at the line between the erotic and the pornographic. Here, the *Horsehair* seems to stand enormous and stiff on a beachfront promenade, surrounded by a horde of tourists, while down on the beach next to the sea lie two women, their heads away from us and their legs open to display their genitalia (Fig. 3). The image is deliberately excessive, using humour to critique its sexual connotations. In his introductory text, Štyrský wrote: 'The sister of the erotic is the involuntary smile, a sense of the comic, shudder of horror. The sister of pornography, however, is always only shame, a feeling of disgrace and distaste. You will look at some of these strongly erotic photomontages with a smile of your face ...'³⁴ And indeed, the phallic reading of the plant has become so excessive as to be utterly risible.

The collage that Karel Teige made with Blossfeldt's *Horsehair* is less overt and confrontational than Štyrský's (Fig. 4). Teige was the major theorist of the Prague Surrealist group, writing extensively about many aspects of the avant-garde, including photography.³⁵ At the same time, he was privately making his own work in the area of photomontage. From the mid 1930s through to his death in 1951, he made many hundreds of these works.³⁶ Antonín Dufek referred to them as a 'diary';³⁷ certainly, they represent a highly personal, almost delirious outpouring of eroticized imagery. Teige culled pictures from the world around him to be reworked through his own psyche, though the fact that much of this reworking involved the deformation and fragmenting of the naked female body might make a contemporary viewer somewhat wary.

But there is one subset of Teige's collages that works slightly differently. In quite a few works, Teige's source material comes not from the popular media but from the field of art photography. Photographs by Štyrský, Moholy-Nagy, Florence Henri, Man Ray, Bill Brandt, Brassai and Blossfeldt are all transformed by collaged additions, often from Teige's familiar repertoire of naked torsos.³⁸ In this particular image, the now familiar *Horsehair* stands erect while a female hand reaches out to fondle it. But the space of the collage is far less coherent than that of Štyrský's image, with a row of shoe lasts, a jumble of breasts and an open mouth seemingly piled up on a sandy surface, while above a butterfly flies free.

One way to read Teige's reworkings is as a reflection back on to the original 'straight' photographs, a commentary on the latent, unconscious meanings which those images held, for him personally and for culture more generally. Between Štyrský's *Emilie* in 1933 and Teige's collages of the late 1930s, the Czech Surrealists had become interested in straight photography, and Štyrský himself had made an important body of documentary photographs.³⁹ While overtly commenting on



Fig. 4: Karel Teige: *Untitled and undated photomontage*. Collection of the National Museum of Literature, Prague.

the surrealism of everyday life, they also expressed Štyrský's own subjective impulses. Teige, we might surmise, wanted more openly to reveal the unconscious and indeed erotic forces within the documentary process.

Blossfeldt's images are, of course, still with us, and their later placement both within the history of photography and within a wider culture has continued to reveal the dual power that they carry. Studies of the photographic archive always reference Blossfeldt's work as an important example,⁴⁰ and it has in particular been seen as prefiguring the tactics of typologisation, as pre-eminently represented by the work of Bernd and Hilla Becher. James Lingwood, for example, argued that Blossfeldt's pictures 'may represent the closest formal parallel to the Bechers' project'.⁴¹

On a more popular level, the pictures have become style icons, frequently appearing on posters and postcards. The British store Habitat, for example, sells framed Blossfeldt photographs alongside their range of functional modernist furniture. The high art version of this stylishness could be found in the work of a photographer such as Robert Mapplethorpe, whose images of flowers have often been connected with Blossfeldt's. But they are, in their lighting and composition, far



Fig. 5: Joan Fontcuberta: '*Braohypoda frustrata*' from *Herbarium*, 1985. © Joan Fontcuberta.

sleeker; moreover, the sexual connotations of the flowers are overt in Mapplethorpe's pictures. But then, the sense of a sexual element in Blossfeldt's own work also persists. In 1995, the Centre Pompidou in Paris staged an exhibition titled *fémininmasculin*; in the catalogue, a page of four Blossfeldt plant photos were placed opposite images of flowers by Tina Modotti, Edward Weston, Imogen Cunningham and Mapplethorpe, all evidently sexual in connotation.⁴²

In the 1980s, Blossfeldt's status as a 'Modern Master' was inevitably questioned within the newly fashioned concept of postmodernism. Sherrie Levine made her reputation by copying and re-presenting the work of photographers such as Walker Evans and Edward Weston as her own – an appropriation that undermined conventional notions of authorship and ownership. It was perhaps fitting that, in one of her later series made in 1990, she went on to appropriate Blossfeldt; after all, as we have seen, his own status within modern photography was itself the result of an appropriation. 'Photography is always magical for me', said Levine, 'and this double-photography is more magical'.⁴³

In 2005, this reworking of Blossfeldt's images was taken a stage further by the young British artist Idris Khan, as part of a series in which he layered sequences of images by a previous photographer into one

photograph (other sources were the Bechers' photos of gasholders and Nicholas Nixon's portraits of the Brown Sisters). The result moves on from Levine's work as a critique of seriality in photography while also producing images that are in themselves haunting and ghostly; as Lucy Soutter remarked, Blossfeldt's photographs superimposed in this way produce 'a strange atomic mushroom'.⁴⁴ If the work of Levine and, more recently, Khan celebrate and critique Blossfeldt's reputation as a 'modern master', there had, in 1985, appeared another body of work which subjected Blossfeldt's photographs to an even sharper scrutiny, one moreover edged with surrealism: Joan Fontcuberta's *Herbarium*.⁴⁵ Born in 1955 in Barcelona, Fontcuberta had in his early work of the 1970s been explicitly inspired by Surrealism (Catalonia had of course been a fertile breeding ground for Surrealists such as Dalí and Miró). Some of his images from this period are montages while others are (apparently) straight, including a number taken in Natural History Museums which are significant for the trajectory of his later work.⁴⁶

The 28 photographs that constituted *Herbarium* were visually much simpler, following Blossfeldt's mode of presenting plant forms in tight close-up on a neutral white background. Indeed, one might at first take them to be a simple extension of Blossfeldt's work, each plant complete with Latin name, but then a closer examination of some of the images alerts one to the true nature of what one was looking at. Are not the dangling pods of *Astrophytus dicotiledoneus*, one long one with two small ones on either side, just a little too overtly phallic? Why are the thorns on *Braohypoda frustrata* stuck into the stem rather than emerging out of it (Fig. 5)? And does not the flower of *Lavandula angustifolia* look rather like the underside of a reptile's head (Fig. 6)?

In fact, these are all 'pseudo-plants' which, as Fontcuberta said, were 'constructed from industrial debris, pieces of plastic, bones, plant parts and animal

limbs from many different species which he would find as he roamed the industrial zones around Barcelona'.⁴⁷ Their effect is double-edged, acting as a commentary on our attitudes to both nature and photography. 'Blossfeldt', wrote Fontcuberta, 'celebrated nature and fifty years later *Herbarium* can only confirm our ironic disappointment with that same nature'.⁴⁸ As with his subsequent and more extended project *Fauna*,⁴⁹ Fontcuberta is here concerned to explore an 'artificial kind of nature', a nature which man has constructed for himself rather than merely found.

Fontcuberta's scepticism is also directed towards photography – more precisely, the use of photography to provide scientific evidence: 'I have tried to negate the assumption that photography equals realism or that it is a neutral, objective depiction of reality. For Blossfeldt, the camera was a tool to celebrate nature; for me, it is a way to create fiction.'⁵⁰ (As Fontcuberta remarked elsewhere, 'Photography no longer documents; instead it metadocuments'.)⁵¹ Yet of course, this is not a simple opposition of 'documentary' versus 'constructed'. Blossfeldt's documentation of his plants was in fact highly constructed, both through actual tampering with the plant itself and through the act of close-up photography. While Fontcuberta's fictional images still rely upon the optical fidelity of photography which seems to offer access to the actual object while simultaneously keeping us at arm's length.

There are many significant echoes of Surrealist ideas in *Herbarium*. The interest in a kind of hybrid, uncertain Nature, thoroughly impregnated with human activity, was already there in Surrealism, and Fontcuberta's reference to roaming the industrial zones around the city must remind us that the Surrealists liked to do this as well.⁵² The Surrealists also had a profoundly sceptical attitude to the claims of scientific, rational understanding, but they also donned what Michael Sand called 'the white coat of objective observation' in order to precisely undermine those claims; one might



Fig. 6: Joan Fontcuberta: '*Lavandula angustifolia*' from *Herbarium*, 1985. © Joan Fontcuberta.

say of much Surrealist documentary photography what Sand says of *Herbarium*, that the pictures 'are all the more fantastical for their unadorned simplicity'.⁵³ Finally, Christian Caujolle has seen in *Herbarium* 'a subtle tribute' to Antoni Gaudí, 'whose luxuriant architecture is so often inspired by plant forms'.⁵⁴ Here, then, there may be a final twisting back on the Surrealists' own interest in Art Nouveau and its connection with Blossfeldt's photographs.

Herbarium was intended as both 'an ironic homage to' and an 'exorcism of' Karl Blossfeldt and his work and in that double-edged comment, we can see both admiration and scepticism.⁵⁵ But it perhaps also suggests that these fictional and artificial elements always were there, embedded, albeit unacknowledged, in the pictures and waiting to be drawn out. Already in Blossfeldt's own intention to find the 'archetypal forms of art', we can see a desire to impose upon the plants a reading through human culture. But, a century later, our sense of the relationship between 'nature' and 'culture' is a good deal less comfortable.

Now, of course, the history mapped here, the interventions of Nierendorf and Bataille, Benjamin and Nash, Štyrský and Teige, Levine, Khan, and finally Fontcuberta, is part of our historical understanding of Blossfeldt's work and cannot be disentangled from it.

In that process, Surrealism has played a significant role in destabilising the fixed meaning of Blossfeldt's pictures and proposing that beneath their overt meaning, there are elements that are more problematic and troubling. Yet, in returning to the photographs as they sit on the pages of *Urformen der Kunst* – as they sat on their wall in *Undercover Surrealism* – one cannot help but remark upon their resilience. None of these speculations and appropriations would have been possible if the pictures themselves were not so stark, so silent. But it is ultimately these very qualities which render the presence of these images uncanny and enduring.

Notes

1. See Dawn Ades and Simon Baker (eds.), *Undercover Surrealism*, London: Hayward Gallery, and Cambridge, Mass.: MIT Press 2006.
2. Georges Bataille, 'Le Langage des fleurs' *Documents*, 3 (June 1929), pp. 160–168; translated as 'The Language of Flowers.' In Allan Stoekel (ed.), *Georges Bataille, Visions of Excess: Selected Writings 1927–1939*, Manchester: Manchester University Press 1985, pp. 10–14.
3. Jenny Uglow, *The Lunar Men*, London: Faber and Faber 2002, p. 271. As Uglow notes, this caused problems for the study of botany by ladies and children.
4. Stoekel: *Visions*, 1985, p. 12.
5. Stoekel: *Visions*, 1985, p. 13.
6. Gert Mattenklott, *Karl Blossfeldt – The Alphabet of Plants*, Munich: Schirmer 1987, p. 17.
7. Stoekel: *Visions*, 1985, p. 14.
8. André Breton, *Manifestoes of Surrealism*, Ann Arbor: University of Michigan Press, 1969, p. 186. Breton also questioned the veracity of the story about Sade; Bataille apparently asked the Sade expert Maurice Heine to verify it but the story turned out to be apocryphal. See: Allan Stoekel, 'A Commentary on the Texts.' In Stoekel: *Visions*, 1985, p. 258.
9. Simon Baker, 'Doctrines (The appearance of things).' In Ades and Baker: *Undercover*, 2006, pp. 39–40.
10. Illustrated in Ades and Baker: *Undercover*, 2006, p. 91, in the catalogue it is item No.6. The date given 1930 is unlikely, given Blossfeldt's photographs were reproduced in the issue for June 1929. The envelope is in the Karl Blossfeldt Archive, Zülrich.
11. From Blossfeldt's introduction to *Wundergarten der Natur* (1932) which, as stated below, was his only full statement of his intentions with this work. This translation is from Christoph Schreier, 'Nature as Art – Art as Nature.' In Ann and Jürgen Wilde (eds.), *Karl Blossfeldt: Photography*, Ostfildern: Cantz, no date, possibly 2001, p. 16. The whole of Blossfeldt's text is translated in David Elliott (ed.), *Karl Blossfeldt: Photographs*, Oxford: Museum of Modern Art, 1978.
12. For a full biography, see Jürgen Wilde, 'Karl Blossfeldt – A Photographer's Life.' In Wilde: *Blossfeldt*, 2001?, pp. 5–10.
13. Translated in Rolf Sachsse, *Karl Blossfeldt: Photographs*, Cologne: Benedikt Taschen, p. 84.
14. For an overview, see: Wieland Schmied, *Neue Sachlichkeit and German Realism of the Twenties*, London: Arts Council of Great Britain, 1979. Dictionary definition of 'sachlichkeit' p. 6; Schmied writes on Neue Sachlichkeit painting pp. 7–32 and Ute Eskildsen on photography pp. 85–97.
15. Robert Breuer, 'Grüne Architektur', *Uhu*, 9 (1926); the spread is reproduced in Schmied: *Neue Sachlichkeit*, 1979, p. 87, where, however, it is dated 1929.
16. Karl Blossfeldt, *Urformen der Kunst*, Karl Nierendorf (intro.), Berlin: Verlag Ernst Wasmuth 1928.
17. Details of these and other editions are given in Wilde: *Blossfeldt*, 2001?, p. 159.
18. Karl Blossfeldt, *Wundergarten der Natur*, Berlin: Verlag für Kunstwissenschaft, 1932.
19. On the early development of Atget's reputation see: Maria Morris Hambourg, 'Atget, Precursor of Modern Documentary Photography.' In David Featherstone (ed.), *Observations*, Carmel: Friends of Photography, 1984, pp. 29–39.
20. Both Benjamin's and Nash's reviews are reprinted, along with Nierendorf's introduction to *Art Forms in Nature*, in David Mellor (ed.), *Germany: The New Photography 1927–33*, London: Arts Council of Great Britain, 1978, pp. 17–24.
21. Translated as 'Surrealism: The Last Snapshot of the European Intelligentsia.' In Walter Benjamin, *One-Way Street*, London: New Left Books, 1979, pp. 225–239.
22. Walter Benjamin, 'New Things about Plants' in Mellor: *Germany*, 1978, p. 20.
23. Benjamin cites Grandville at several points in his Arcades Project and, in his 1935 outline 'Paris – The Capital of the Nineteenth Century', entitled one of the sections: 'Grandville or the World Exhibitions.' See: Walter Benjamin, *Charles Baudelaire*, London: Verso 1983, pp. 164–166. Susan Buck-Morss, in *The Dialectics of Seeing*, Cambridge, Mass.: MIT Press, 1989, pp. 156–157, juxtaposes one of Grandville's drawings with four Blossfeldt photographs.
24. 'Kleine Geschichte der Photographie', first published *Literarische Welt*, 7 (1931), Kingsley Shorter (trans.), as 'A Small History of Photography.' In Benjamin: *One-Way Street*, 1979, p. 243.
25. On the 'optical unconscious' see the essays by Esther Leslie and Detlef Mertins in Alex Coles (ed.), *The Optic of Walter Benjamin*, London: Black Dog, 1999, pp. 196–219. For a further discussion of the concept in relation to Surrealist photography see: Ian Walker, *City Gorged with Dreams*, Manchester: Manchester University Press, 2002, pp. 172–173.
26. *Wundergarten der Natur* was published in Britain by Zwemmer as a second volume of *Art Forms in Nature*. Nash's review, 'Photography and Modern Art' was published in *The Listener*, 27 July 1932, p. 130. It is also reprinted in Andrew Causey

- (ed.), *Paul Nash: Writings on Art*, Oxford: Oxford University Press, 2000, pp. 76–78.
27. For Nash's engagement with European photography, see: Andrew Causey, *Paul Nash's Photographs: Document and Image*, London: Tate Gallery, 1973; for an analysis of the relationship of Nash's photography to Surrealism see: Ian Walker, *So Exotic, So Homemade: Surrealism, Englishness and Documentary Photography*. Manchester: Manchester University Press, 2007, chpts. 1, 2.
 28. Paul Nash, 'Photography and Modern Art.' In Mellor *Germany*, 1978, p. 23.
 29. On this image, see: Mary Ann Caws, *Dora Maar: With and Without Picasso*, London: Thames and Hudson, 2000, pp. 78–79.
 30. Franz Roh, 'Max Ernst und die Stückungsgraphik', *Das Kunstblatt*, 11 (1927), pp. 397–400. On Roh's text see: Mattenklott: Blossfeldt, 1997, p. 18).
 31. Dawn Ades, 'Photography and the Surrealist Text.' In Rosalind Krauss and Jane Livingston (eds.), *L'Amour Fou*, Washington: Corcoran Gallery, and New York: Abbeville Press 1985, p. 179. This connection is reinforced on p. 178 where two of Blossfeldt's pictures are reproduced with two images from *Mino-taure*: a praying mantis photographed by Le Charles and one of Brassai's pictures of a Paris metro entrance. Recently, Blossfeldt's photographs were again connected with Surrealism in the exhibition *Surreal Things* at the Victoria and Albert Museum, London, 2007. A particular influence was noted at the house built by Edward James at Monkton in Sussex, where the balcony balustrade was carved in the form of curling fern fronds in probable imitation of Blossfeldt's photograph of a fern. See Ghislaine Wood (ed.), *Surreal Things*, London: Victoria and Albert Museum, 2007, pp. 48–49, illustration p. 51.
 32. The photomontage, now in the Muzeum Sztuki w Łodzi, is illustrated in Stanisław Czekalski, 'Kazimierz Podśadecki and Janusz Maria Brzeski: Photomontage between the Avant-Garde and Mass Culture', *History of Photography*, 29:3 (Autumn 2005), p. 267.
 33. Jindřich Štyrský, *Emilie přichází ke mne ve snu*, Prague: Edice 69, 1933, (edition of 69 copies). The book also contains a text by Štyrský translated in Michael Richardson (ed.), *The Dedalus Book of Surrealism: The Identity of Things*, Sawtry: Dedalus, 1993, pp. 96–101; Štyrský evokes flower-metaphors at several points but interestingly they all reference female sexuality.
 34. Quoted in translation in Martin Parr and Gerry Badger, *The Photobook: a History*, vol. I, London: Phaidon, 2004, p. 103. The source of the translation is given as Vladimir Birgus and Jan Mloch, *The Nude in Czech Photography*, Prague: Kant, 2001, p. 21.
 35. See: Eric Dluhosch and Rostislav Svácha (eds.), *Karel Teige 1900–1951: L'Enfant Terrible of the Czech Modernist Avant-Garde*, Cambridge, Mass.: MIT Press, 1999.
 36. There are over 350 photocollages by Teige in the collection of the National Museum of Literature in Prague. For a selection of 85 images see: Karel Srp, *Karel Teige*, Prague: Torst, 2001. Also see: Vojtech Lahoda, 'Karel Teige's Collages, 1935–1951: The Erotic Object, the Social Object, and Surrealist Landscape Art.' In Dluhosch and Svácha: *Karel Teige*, 1999, pp. 292–323.
 37. Antonín Dufek, 'Imaginative photography.' In Jaroslav Anđel (ed.), *Czech Modernism 1900–1945*, Houston: Houston Museum of Fine Arts, and Boston: Bullfinch Press, 1990, p. 142.
 38. Srp: *Karel Teige*, 2001 includes collages using the work of Man Ray (Nos. 21, 27 and 43 among others), Henri (44), Moholy-Nagy (50) and Brassai (62).
 39. On Štyrský's photographs see: Karel Srp, *Jindřich Štyrský*, Prague: Torst, 2001 (text in Czech/English) and Ian Walker, 'On the Needles of these Days: Czech Surrealism and Documentary Photography', *Third Text*, 67 (March 2004), pp. 103–118.
 40. For example, see: Russell Roberts, *In Visible Light: Photography and Classification in Art, Science and the Everyday*, Oxford: Museum of Modern Art, 1997.
 41. James Lingwood, 'Working the System.' In Marc Freidus (ed.), *Typologies*, Newport: Harbour Art Museums and New York: Rizzoli, 1991, p. 92. For an analysis of both the parallels and differences between Blossfeldt's images and recent typological and conceptual work see: Ulrike Meyer Stump, 'Introduction'. In Wilde: *Blossfeldt*, 2001?, pp. 16–18.
 42. See: Marie-Laure Bernadac and Bernard Marcadé (eds.), *féminin masculin: le sexe de l'art*, Paris: Centre Georges Pompidou/ Gallimard, 1995, pp. 236–237. For an overview of flower photography see: William A. Ewing, *Flora Photographica*, London: Thames and Hudson, 1991.
 43. Interview with Jeanne Siegel, 'The Anxiety of Influence – Head On.' In *Sherrie Levine*, Zurich: Kunsthalle 1991. The exhibition included 20 photographs from the series *Untitled (After Karl Blossfeldt)*, 1990. One of them is also reproduced in Elizabeth Janus (ed.), *Veronica's Revenge*, Zurich: Scalo, 1998, p. 39.
 44. Lucy Soutter, 'The Collapsed Archive', *Source*, 49 (Winter 2006), p. 46. This is a review of Khan's exhibition at the Victoria Miro Gallery, London, 2–30 September, 2006.
 45. Joan Fontcuberta, *Herbarium*, Vilém Flusser (intro.), Göttingen: European Photography 1985.
 46. A number of these early images are illustrated in Christian Caujolle, *Joan Fontcuberta*, London: Phaidon 2001.
 47. Joan Fontcuberta, *Contranatura*. Alicante: Museo de la Universidad de Alicante, 2001, p. 24.
 48. Fontcuberta: *Contranatura*, 2001, p. 24.
 49. Joan Fontcuberta and Pere Formiguera, *Fauna*, Seville: Photographie y Museo de Arte Contemporáneo, 1989.
 50. Joan Fontcuberta, 'Spanish Photography: A Historical Overview.' In Betty Hahn (ed.), *Contemporary Spanish Photography*, Albuquerque: University of New Mexico, 1987, p. 12.
 51. Fontcuberta: *Contranatura*, 2001, p. 24.
 52. Walker: *City Gorged*, 2002, chpt. 6, pp. 114–143.
 53. Michael Sand, 'Unreliable Witness.' In Fontcuberta: *Contranatura*, 2001, p. 19.
 54. Caujolle: *Joan Fontcuberta*, 2001, p. 9.
 55. Hahn: *Contemporary Spanish*, 1987, p. 12.

Christian Schad: 'My pictures are in no way meant as illustrations'

Christian Schad (1894–1982) first became internationally recognised as a painter belonging to the genre of the *New Realism* and many of his oil paintings which are known to the general public were painted in Vienna between 1925 and 1928. To regard his graphics and photograms as subservient to this genre does not, however, do justice to his work. He personally preferred the wider and without a doubt more appropriate concept of *Magical Realism* for his art, believing in the magic and mystery of real life. Everything that happens and surrounds us was, for him, the expression of an ever-present, albeit ephemeral, infinity.

At a very early age Schad discovered both his special interest in creating images and his enjoyment in experimentation. As a teenager he was already keenly interested in black-and-white photography and he constructed his own enlarger. As a result, from his time at the grammar school onwards, he was used to looking for outlines and contrasts which he perceived with eyes schooled by photography in order to transform them into pictures. When I was still a teenager he told me that I ought to take an interest in photography and he gave me a small camera.

From the beginning Schad was fascinated by the strong visual contrast provided by chiaroscuro. That, together with his particular enjoyment in working with wood, caused him to turn to the woodcut. In 1913, when he had just turned nineteen, he created his first woodcut *Steps* (Fig.1). This work is particularly impressive because of the stark contrast between the extensive black surroundings and the very economical use of white in the drawing. The drawing represents the steps towards the personal development and maturity of a person. At the top of the steps there stands a wise man with a lotus flower on his head. This woodcut is definitely pointing to the inward looking nature of the human expression, a deep rooted condition which was already beginning to influence him and which would permeate his life.

All of Christian Schad's works that have so far been discussed exist within the limits of concrete objects and real possibilities. He had, however, already come into contact with abstract and surreal forms of expression through connections with the Dadaists as a young man which had arisen as a result of his inner sense of rebellion. For him the strength of Dadaism lay in its sweeping away of traditions and dogma and creation of a feeling of unlimited freedom to do anything one wanted. His photograms and some abstract wooden reliefs belong to this period of his creativity. As a young artist he was primarily interested in innovation. Between 1918 and 1920 in Geneva he returned to his previous experiments with photography from his period at the grammar school, creating a series of photographic images without using a camera. Setting aside all rules of conformity, he placed relatively flat objects which created shadows, for example, curtain rings, all kinds of textiles, upholstery nails and pieces of newspaper in an often provocative and chaotic arrangement on a sheet of photo-sensitive paper. The arrangements were then placed under plate glass and put into a small wooden copy frame. These were then exposed to sunlight for differing periods of time. Afterwards he developed and fixed the pictures in a gold tone fixing bath. This was the method of production of the first photograms by an artist in the twentieth century.

It was the characteristic infinite variations between light and shade and, once again, the effect of chiaroscuro that so fascinated him in these early photograms. Schad later wrote in his autobiographical notes about his choice of objects: 'One should only use objects that have some kind of magical effect and that is not always as easy as it sounds.' The shadows of the objects do not only have an individual effect. The perception of their individual effect is in turn further enhanced by the interplay of their relationship to the other surrounding objects. The individual shadows are linked, in accordance with one's memory, to form a

pattern, the grey shades of which result in a three-dimensional effect. The shadows of the objects in a photogram combine to create an area of tension which is intentionally used by the artist to create a state of spatial balance.

Schad's early photograms take leave of traditional concepts of symmetry at the edges of the pictures. These borders are cut in an irregular manner, thus reducing the area of the background and attracting the complete attention of the beholder to the contents of the pictures. This process of cutting, however, demands from the cutter a particularly precise sense of the position of the different forms in space and an exact idea of how the dimensions in space are to be created. This knowledge is inherent in all of his photograms, as well as in many of his graphic works. In spite of the abstraction and complexity of the contents they are absolutely clear compositions without any chaotic fragmentation or destructive disorderliness.

Schad's Austrian childhood friend, Walter Serner, was enthusiastic about the first new photograms and took them with him to Zurich to show to the Dadaists. He left these photograms in the care of Tristan Tzara who then showed them to the Dadaist group in Paris and apparently also to Man Ray in the course of Man Ray's later visit in 1921. In 1920 Schad left Geneva, where he had created 31 photograms. These were all entrusted to Tzara who later described them as 'schadographs'. In spite of repeated requests by Schad, Tzara never returned them. Later they were found in American, Swiss and German museums and in several private European collections.

Christian Schad had discovered the magic of inanimate objects in these shadow pictures. The mystery of their secret, symbolic energy remained with him for the rest of his life. The reason for this was that these 'schadographs' appear to possess the ability to delve below the surface to expose the basic elements of things. That this artistic effect was absolutely



Fig. 1: Christian Schad: Steps, 1913, first woodcut, 17.5 x 12 cm. Credit: Christian-Schad-Stiftung, Aschaffenburg, Germany.

intentional is evident when one regards his later photograms. This intention is also apparent in his graphics and paintings. Dadaism had led Schad to an abstraction that robbed objects of their material weightiness and transported them to a world that was independent of space and time. Fifty years later Schad wrote retrospectively about Dadaism: 'The shock effect succeeded, however, only in the formal sense of the word as the spiritual, dynamic centre was lacking. Even senselessness has, in order to be effective, to be directed towards sense itself'.

In 1960 Schad returned to his work with photograms after Helmut Gernsheim (1913–1995), the photographic historian, asked him to create two further photograms for his collection. L. Fritz Gruber had also inquired about the whereabouts of the early schadographs which Schad had created in Geneva between 1918 and 1920. The Museum of Modern Art in New York possesses some of these early examples and displayed them in the exhibition 'Abstraction in Photography' in 1951.

At first Schad began to compose some photograms in the Dadaist manner, similar to those from his time in

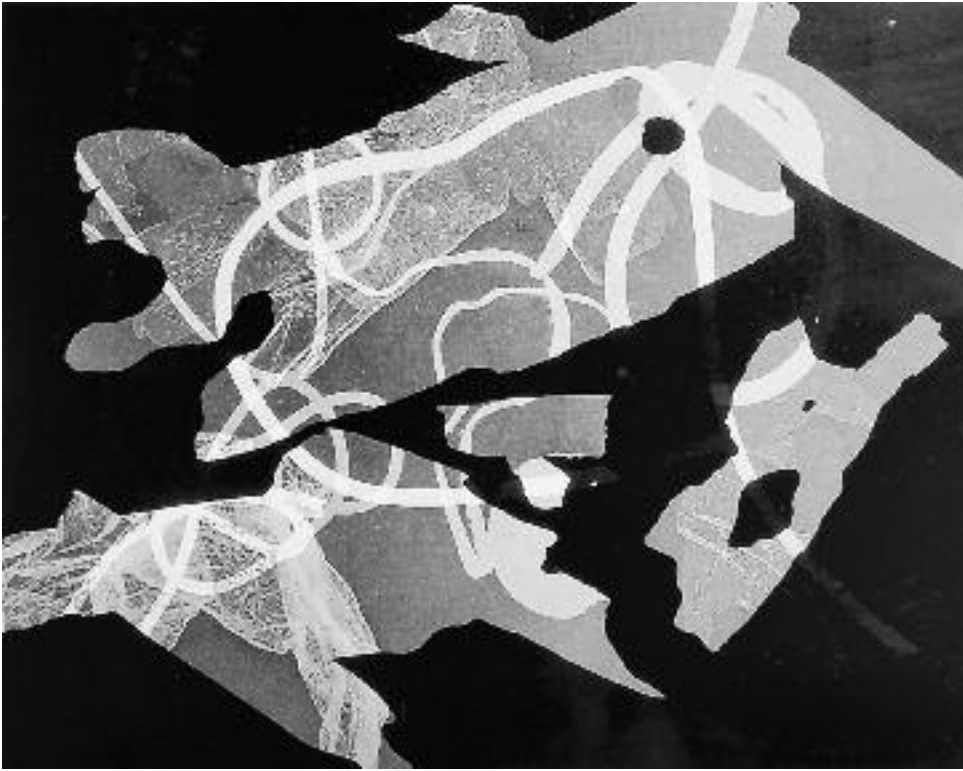


Fig. 2: Christian Schad: No 14, Schadograph 1960, 23 x 18 cm. Credit: Christian-Schad-Stiftung Aschaffenburg, Germany.

Geneva (Fig.2). From then onwards he worked, in contrast to his earlier works, in the dark room. He initially used the shadows of purely geometric shapes. He then added those of plants, textiles and material which he put flat onto a two-dimensional surface. For a while the language of his pictures was still influenced by the geometric and abstract form of Dadaism. He later wrote about these works: 'The first of the schadographs that I created from 1960 onwards were a continuation of my experiments in 1918, but I was soon no longer contented with playing the game of surface and form.' Finally he became freshly astonished and enthusiastic about the surprising results that had in the meantime arisen within the interplay and field of tension created by the shadows of given, variable compositions of objects. For that reason he searched in the process of creating forms for an expression of new dimensions. In these photograms there is neither a future nor a past, only a powerful present.

The photograms created from this moment in time onwards are completely new in their conception. The previous fission of the surface gives way to suggestive dynamics in space in as much as, from 1962, a three-dimensional arrangement of the shadows of the objects is increasingly to be found. This is achieved by varying, finely-graduated shades of grey and differing degrees of clarity but, above all, because more and more shadows of people, animals or gnomes are added

to them. This in turn adds to the liveliness of the contents of these pictures.

His negatives of living beings sometimes appear to emanate a sensual, often even erotic atmosphere, even when the figure itself only remains as a grey shadow in the background. Schad then made use of additional, movable sources of light for the exposure which produced a much deeper and faster blackening effect limited to specific points. He also often used a differentiated collage technique in the process of which he only included material that had been produced in his own photograms. In order to intensify the illusion of spatial depth he borrowed important artistic effects from photography and painting, such as perspective or the loss of clarity in the background and in the transparent zones. By using this new technique he succeeded in presenting objects with blurred shadows or whose outlines are all that remains to be seen. Schad wrote about this process in 1981:

'When I came into contact with the work of the French poet Aloysius Bertrand in 1962 I was fascinated by the spiritual relationship between his prose poems and the new dimension in my schadographs: a fantastic, timeless present world, sharply etched by a sudden light, came into focus for a moment against the dark of night. What had happened beforehand and what was about to come remained hidden for eternity.'

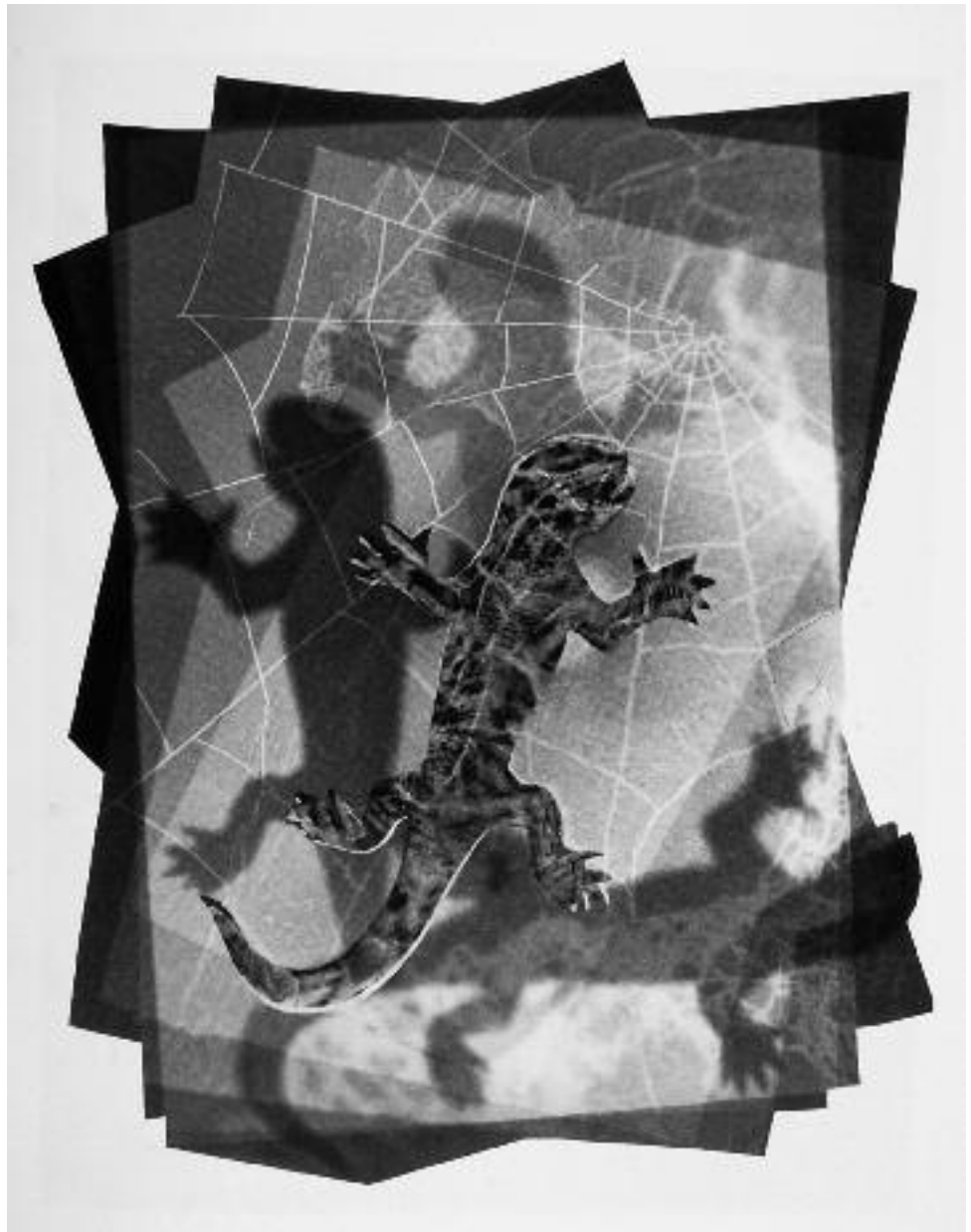


Fig. 3: Christian Schad: Untitled, No 159, Schadograph, 1977, 25.3 x 21 cm, Credit: Christian-Schad-Stiftung, Aschaffenburg, Germany.

In 1980 Schad had translated a selection of twenty prose poems by Aloysius Bertrand from French into German and published them, together with some graphics and schadographs, in a folder entitled 'Gaspard De La Nuit' (Edition G. A. Richter).

After a break of twelve years, at the age of 80, Schad's pleasure in experimentation led him to return to his photograms for a third time. Beginning at a new level of consciousness, he wanted to impart something of his personal journey, including the suffering that it must have entailed as part of a never-ending progression towards the attainment of an inner freedom and widening of experience.

The photogram seemed to represent for him the artistic technique most suited to expressing this process. Formerly he had always created a dominant area of tension by using the shadows of real objects. In

the schadographs that followed he created fresh areas of interplay which were those between the shadows of the forms represented and those which were 'not represented', that is, those caused by the emptiness or the dark space surrounding them. This emptiness became a most essential formal element which he then combined in the composition. This inner space often pointed towards a much larger, more comprehensive outer space whose shadows appeared to be like a section of a potentially infinite continuity. It is as if one were to find oneself on a second, far more expansive plane of reality. Schad discovered parallels to 'the art of leaving out' in the depth of intensity in Chinese and Japanese art and philosophy. Since the early 1930s he had intensified his own continued interest in Taoism and Zen-Buddhism. The emptiness of the background in many of his graphics, drawings and paintings, together with the darkness



Fig. 4: Christian Schad: *Untitled, No 100, Schadograph*, 1975, 19.3 x 12.7 cm Credit: Christian-Schad-Stiftung Aschaffenburg, Germany.

of his photograms, represented for him a visual quietude that was also to be found in the Buddhists notation of harmony with the universe.

Christian Schad was taken up with the idea of what was cyclical and ever-returning in life, but he was also aware of the ephemeral and fleeting nature of whatever was still in the process of development. Above all, he believed in the elementary flow of what was apparent and in the energy involved in the processes of life and death. He was particularly interested in including the element of dynamism in a composition in order to alleviate the weightiness of the shadows and imbue the static forms with animated movement, thus giving them a pulsing, rhythmic continuity. As such his late schadographs are an expression of movements that have just taken place or which are about to take place before becoming far-reaching. In the photograms his artistic meticulousness aimed at freeing the shadows from their static connections and the tensions that were connected to these states. On the one hand this was achieved by a minimal displacement and short new exposition and, on the other hand, by an alteration in the

intensity and in the angle of the lighting. A blurring of the edges and a distortion of the contours were also sometimes employed. In a fleeting, never-to-return moment of exposure the form appeared out of the darkness in its full luminous intensity. Each impression of movement created, alongside the intuition of a certain order of events, the impression of a three-dimensional widening space whose boundaries were removed. Different shades of grey, as a result of the variability of the transparency of the objects, appear to cause similar effects. The more transparent the shadows are, the less the impression of heaviness is given by the weight of the solid mass of the objects creating the shadows.

In this way the shadows acquire an intense momentum of their own. They appear to be disembodied and floating, as if they have been woken to life in a magical way, enabling the beholder to simultaneously experience their rhythmical transformation and gain an idea of the unity of space and movement.

Schadograph No 159 (Fig.3) shows a particularly fascinating interplay of light and shade. It is the cut, but above all, the projections of light which alter the shadow object from different angles, creating the impression of multi-layers descending in depth. The collage of the shadow of a single salamander appears to multiply, resulting in three further shadows of differing size and intensity. This increases the impression of a very plastic sense of depth. The boundaries between the poetical language which is evoked in the later schadographs and the magical always remain in a state of flux. Again and again Schad experimented afresh with the interplay between light and shade that he found so fascinating in order to express this process in his photograms. Thus these turned into mirrors which allow us greater insight into the spiritual development of the artist. The 'Portrait' of a clown, for example, reveals his subtle sense of humour. Peter Ustinov's comment that 'Humour is simply a comical way of being serious' also applies to Schad, *Schadograph No 100* (Fig.4).

Schad's deep, lifelong desire to free himself from a rigid, dogmatic way of seeing things and his yearning for transformation and reincarnation were represented symbolically in *Schadograph No 165* in 1977. Here a phoenix is shown flying over the shadow of a human figure lying entangled in a net, thus representing the dark, repressed side of humanity. In contrast the phoenix, the mythological, legendary bird, represents both death and rebirth out of the cleansing flame of the ashes, that is, the constant succession of life in the cycle towards immortality. In this way human beings are shown as being partly on winged feet and partly captive.

Schad was aware that natural processes reinforce themselves and that, from a certain threshold onwards, they are able to trigger off antagonistic reactions (duality). It was in his last phase of photograms that he particularly attempted to release the continuous, mutually exclusive polarity of dark and light between the shadows of the objects and bodies and the empty spaces from the confines of statics and dynamics. In this process he attempted to harmonise the perception of whatever was contradictory or crassly opposite. *Schadograph No 169* (Fig.5) symbolises the duality of the moon, or our 'double', the existence which turns towards or away from the light. The moving hand of a person is visible, hidden behind the veil; a symbolic hand such as we have already encountered in prehistoric cave paintings. It is in this way that the last schadographs inform us of Christian Schad's synoptic view of the universe which led him to search for solutions to this dilemma until the end of his life. The *cosmic symbolism* of the pictures offers an added dimension to their interpretation without detracting from their immediate value. In the periods between 1960 and 1963, and 1975 and 1978, he created 184 schadographs in this new manner.

Christian Schad's oeuvre is capable of arousing the desire of the beholder to ask which message is to be



Fig.5: Christian Schad: *Untitled, No 169, Schadograph, 1977, 24.8 x 21.7cm. Credit: Christian-Schad-Stiftung Aschaffenburg, Germany.*

found behind the picture. There is a special kind of 'quietude' which can not be overheard in his work and is preserved in the static of many of the graphics and drawings. Furthermore, in the late, rather dynamic schadographs one can sense not only a 'faint murmur' of movement, but also their stillness and floating transcendence. The circle is thus completed between the beholder and the work of art. What remains is the astonishment at the large bow that Schad drew in his graphic works and photograms. The inner world of the artist is shown without ever being completely revealed. In his oeuvre Schad always indicates a truth that he has discovered which is deeply bound to the reality of the forms and their shadows. 'Spirituality' was inherent in his work and it also determined his life. In this manner Schad's art, with its sensuous, magical turning towards the timelessness of spirituality echoes the words written by Daniel Barenboim in 1998: 'In my opinion, however, each work of art has two sides to it: one is dedicated to contemporary time and the other to eternity.'

All quotes are taken from the author's personal notes, January 2006. Extracts are from Nikolaus Schad, *Graphics, Drawings, Photograms*, published in the exhibition catalogue, *Christian Schad*, May 2006, Alfred Kubin Galerie, Schärding, Austria.

In the laboratory of light: The photogram in contemporary art and its interrelationship with 1920s avant-garde practice

In recent years more and more contemporary artists have revived the long underestimated photogram as their artistic medium. Possibly this observation is linked to the proceeding evolution and utilisation of digital photography that has for many profoundly changed conventional image-making. Today anyone can become an artist, and anyone a photographer. The relationship between photography and reality are thus fundamentally questioned. As a response to these changes, the photogram, easy to handle, provides a new notion of 'artistic' handicraft. This idea of 'back to the roots' is not meant in a conservative way, but it shows how contemporary artists enhance the ideas of the avant-garde in the 1920s, including well-known artists, such as Christian Schad, Man Ray or László Moholy-Nagy. The contemporary works deal with topics as the staging of nature, the tactile, experiments with light, and finally the intermedia aspect that seems to be the most effective contribution of the photogram to modern art with its full significance not yet explored. This essay, following an exhibition at the Künstlerhaus in Vienna¹, seeks to cast light in the darkroom of the photogram, with a focus on the interrelation of the contemporary photogrammatic practice and the experiments of the avant-garde movement at the beginning of the 20th century. It is natural to take naturalistic objects as a starting point for art's inherent processes. Nature exists, it is free, and it is permanently in our mind, consciously or not. Hence it is not surprising that some of William Henry Fox Talbot's early *photogenic drawings* made between 1834 and 1839 (in modern terminology 'photograms') reflect naturalistic material as negative prints. In 1841 Anna Atkins was the first person to publish a book illustrated exclusively with photogram images. Her *British Algae: Cyanotype Impressions* established photograms as an accurate medium for scientific illustration, documentation and archiving.

Some of these naturalistic academic aspects are reinterpreted by modern artists. Pablo Picasso first got

in touch with the photogram through Dora Maar, whom he met in 1930. Together they studied the photogram with Maar's Surrealist friend, Man Ray. Picasso's second series of photograms, called *Diurnes*, was produced in the *découpage*-technique. Fascinated by Provence, where Pablo Picasso and his friend, the artist André Villiers lived, they decided to create something together in 1958–1960. They stuck cut-outs of a typically Picassian fauna and mythology onto landscapes, connected with natural elements photographed by Villiers, thus combining photograms and conventional photographic prints.

It is interesting to realise that several contemporary artists also deal with the naturalistic photogram and add new and complex issues to the subject. The works of the Austrian artist Robert Zahornicky (Fig. 1) are created, in contrast to Picasso's, in a classic way; no other strange medium is involved in its origin. Strong memories of the photographic works of the artist, however, also become perceptible here.

Zahornicky's works are based on objects derived from nature; branches, leaves or individual blossoms. One single plant is draped across a sheet of photographic paper at a time. While exposing it, he starts moving the plant around; thus minor shifts or twists are captured in the photogram. The manipulations can be seen in different component movements that reveal the depth and spatial graduation of the object.

The object is stripped of its familiar features, showing new twists and lines that were not visible initially. Thus the plant is reduced to a mere object that has to submit to the creative wishes of the artist. Freed of its functional content, it now has to meet various overriding formal criteria. In doing so, a reduction of the plant is occasionally accepted, which can appear as a fractional and fragmentary depiction. We can only vaguely recognise it by our collective memory. Although the viewer does not know the original, the very transformation still leaves a certain sense of unease and

irritation. At the same time, the twists and turns suggest a new reality; movement is suggestive of growth, a process that is plant-specific, yet on this occasion is presented solely by the artist. Reality and fiction are melted into one. Growth also means change; it simulates the course of time, something that is also characteristic of the medium of film. As in a film that has been repeatedly exposed, the events are projected on top of one another, thus seemingly granting insight into both the present and the past.

At first, the works of Wolfgang Reichmann (Fig. 2) look clearly readable. The artist experiments with plants. Closer inspection makes the objects show peculiar un-sharpness. You can see dark or very bright reflexes on the edges or drop-shaped structures, reminding one of etchings. Different steps of brightness, intensely colourful and clearly outlined as well as slightly pale shades of colours can be found. The working process slowly discloses itself to us. After Wolfgang Reichmann has draped his objects on the photographic paper, he leaves it alone and the factor time becomes effective. While he chooses the location of the photographic paper carefully, he controls the photogram decisively. The silver salts contained in the paper react to light and also to air humidity and, hence, have a determining part on the origin of the photogram.

During the extremely long exposure the organic objects wilt, juices leak and well onto the paper. These liquids dry up in the course of time and leave tracks which resemble brushstrokes. The picturesque moment reminds us of a vanitas motif. The plants are drying slowly. This process has also an effect on the sheets and blossoms. In the first moment of wilting, they lay down onto the paper. After they have dried, they rise up again. Like in a film the motion sequence of the objects is reproduced on the photogram. The different steps of the process seemed to be reflected in single stills, each overlaying the other. As the conditions of this process cannot be repeated the object of art is absolutely unique



Fig. 1: Robert Zahornicky: Untitled 2001, photogram, 40 x 30 cm. Credit: The artist.

in its form. Time is important in two different ways: You can see an object, as well as a process; both of which do not exist any more. Now time is presentable, it flows. In some of his works Reichmann uses two or more sheets of paper. The process and timeflux seem to be disconnected by the space between the photographic papers. In Wolfgang Reichmann's works temporary factors are documented by serial production, and thus archived.

Contemporary artists who use plants and natural objects in their photograms focus on a staged aspect instead of a scientific one. They place leaves, stalks and flowers onto the photographic paper for the mere reason of producing a pictorial composition through the direct imprint by light. The avant-garde of the 1920s, who at first examined the photogram from an artistic point of view, did not use natural but every-day objects to create light drawings.² Man Ray, whose first photograms date from 1922, understood them as drawings and compared the creative possibilities of light with those of the brush.³ He worked with the immateriality of light rays but focused at the same time on the real object as the basis of his picture. His comparison of the depicting function of light and the brush as the

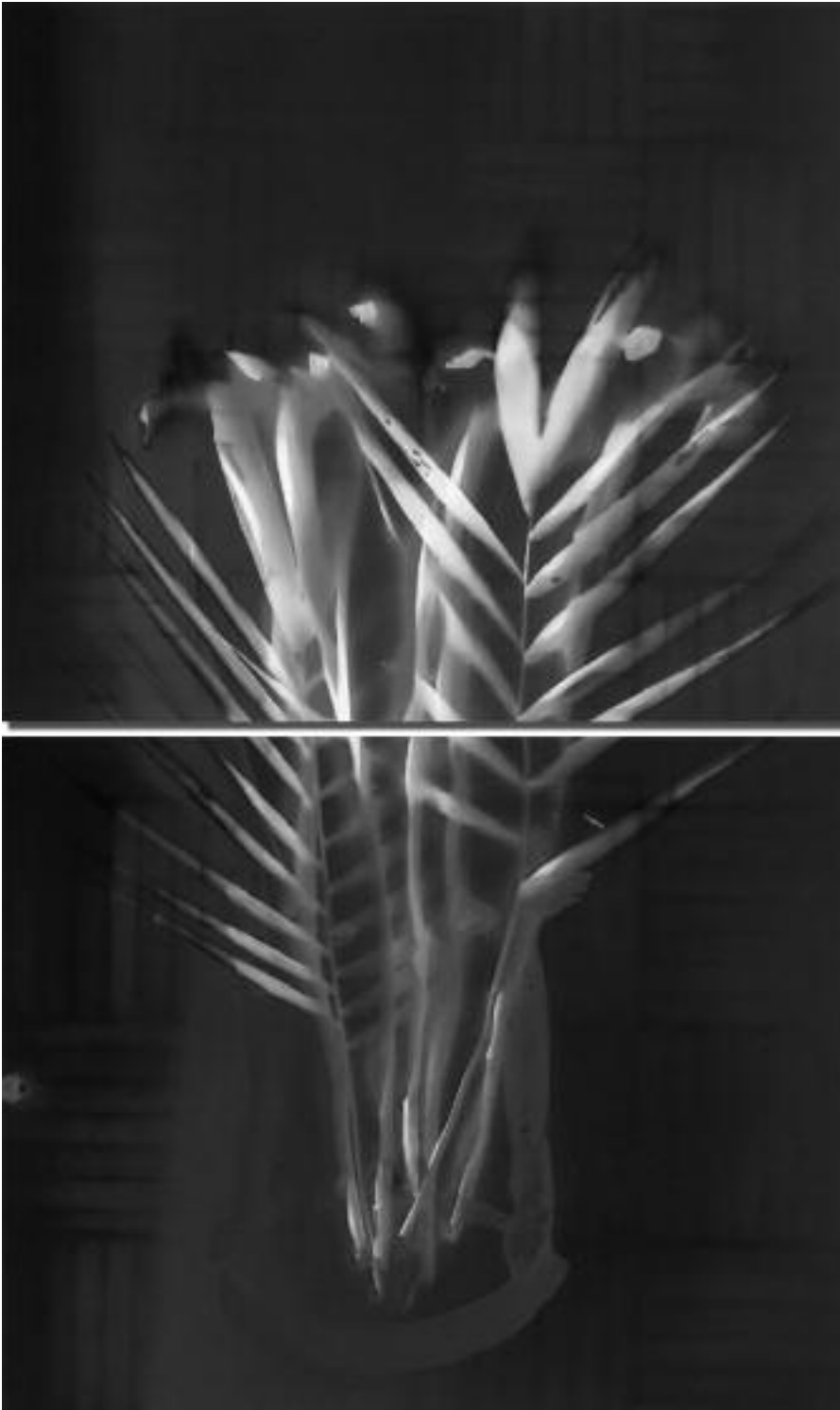


Fig. 2: Wolfgang Reichmann: PRIME piece 02#01, 2002, New York, photogram, Gelatin silver prints on aluminium, 2 parts, each 50 x 60 cm, total size: 101 x 60 cm. Credit: Galerie Johannes Faber.

their original destination highlights the difference to the mimetic character of photography. Photography in the shape of the photogram ceases to document reality. Instead, it handles objects in a very open manner. As a result, the identity of the objects sometimes can not be easily deciphered anymore by the viewer. A widely known rayograph from 1923 consists of a composition of a candle, a bra and a lace doily that evokes the illusion of a human face. Two vague shadows reach from the left and right hand side into the centre of the picture which resembles two eyes. These shapeless forms can only be the hands of the artist above the objects at the moment of exposure. Man Ray declared the artist's hands to be the most important means of

most important tool of a painter reflects the special position of the photogram. It is a means of artistic expression and therefore equal in value to the traditional fine arts.

Thus Man Ray positioned the photogram in contrast to photography which is generally understood as a faithful tool to reflect reality. Since its official invention in 1839 photography has been seen as a 'mirror of nature'. On the contrary, the rayograph dedicated itself to an artificial reality which only aims at an artistic statement. Especially the artistic use of objects outside of

the mise-en-scène. In contrast to photography which has always been described as an art of vision, the photogram focuses on the sense of touch. Every object must be touched, turned around and manipulated before its white shadow is inscribed on the photographic surface. In his latest article Floris Neusüss characterised the photogram as a 'picture of touch.'⁴ His definition is derived from the fact that the object touches the light-sensitive material. In our opinion, this definition does not go far enough. We would suggest considering a further aspect, namely the touch of the object by

the artist's hands. Photogram artists are never content with reality as it is; they are keen on changing it. The photograms of the 1920s are a very early example of 'staged' photography despite the fact that photo-historians are dating it 50 years later. With the help of props, Man Ray constructed a pictorial reality only aiming to be fixed on the light-sensitive photographic surface. Following A. D. Coleman's well-known definition of staged photography⁵, the photographer creates events consciously and intentionally for the only purpose of making pictures. He can either intervene in the real event or produce a *mise-en-scène*. In each case something happens that would not be possible without the photographer. Given the literal meaning of *mise-en-scène*, the artist acts as a stage director. In the case of the rayographs the baseboard of the enlarger functions as a stage on which the objects are exposed to light.

It is striking how many photograms show hands as motifs. One example out of many⁶ is Schad's *Schadograph 142* (Fig. 3). Here the hand can be interpreted as a symbol of the tactile element of the photogram. Sometimes the hands appear with sharp outlines as the result of a static exposure; sometimes their shapeless forms refer to motion. Not only at times when photograms of the whole body were technically impossible, imprints of hands were the most simple and direct reference to the artist. The hand as tool for applying colour or as stencil has been used in art since the cave paintings in Lascaux.⁷ Later, the invention of photography and also photograms emphasises the indexical character of hand imprints. Photographs can be understood semiotically as a light-sensitive surface on which traces of real objects are imprinted. The hand is another index, much more material than light rays. In photograms, it always refers to the staging of an artificial world in contrast to photography's recording of a given reality.

In our digital age the traditional technique of the photogram is a very clear artistic statement. Artists



Fig. 3: Christian Schad: *Schadograph 142 Undine* 1977. Credit: Christian-Schad-Stiftung Aschaffenburg, Germany (Foto: Ines Otschik).

handle real objects, deal with scissors, experiment with light-permeable materials and arrange stencils on the photographic paper. They even often choose a display that widens these tactile qualities of the photogram. Let us quote the artist book as an example, a medium that is intensely used by the Austrian artist Waltraud Palme. In her artist books, Palme establishes a narrative context through the sequence of pages. Her works invite the active viewer to find visual connections and to formulate stories. The artist book can also double the photogram's aspect of touch. The viewer's tactile appropriation of the artist book can be compared to the photogram artist's manipulation of objects. Moreover, both media distinguish themselves by their uniqueness: the photogram is an original without negative and Palme's books are unique works of art.

The photogram guides the viewer directly towards the important moment of exposure as a single moment in time. The emphasis on the shadow and the detachment from a mimetic description of reality singles out questions concerning the materiality of the used objects and the genesis. The result of the renunciation of the camera is a shifting from the eye of the photographer towards the hand of the stage director. In the



Fig. 4: Edgar Lissel: *Bakterium-Vanitas*, lambda on cibachrome, 2000–2001, 80 x 80 cm. Credit: The artist.

case of the photogram the exposed objects change into the main actors on stage. Their only aim is to convey an idea – well-knowing that light is the most essential element for its appearance.

In 1928 László Moholy-Nagy entitled one of his works *Photogrammiertes Selbstbildnis des Erfinders der Photogramme*⁸ [Photogrammed self-portrait of the inventor of the photogram] a overhasty choice, because Christian Schad and Man Ray created their schadographs and rayographs even before Moholy-Nagy did his first experiments on his so-called photograms. His results of research, however, experimental as well as theoretical, are indisputable. *Dieses Jahrhundert gehört dem Licht*⁹ Moholy-Nagy certainly devised. He connected space with light, virtuously. The resulting depth-space is overlapping and becomes comprehensible as a tactile fragment¹⁰. By contrast in Man Ray's works shapes appear in light whereas their surroundings as such are not evident.

Moholy-Nagy was highly influenced by Constructivism, especially by works of Kasimir Malevich and El Lissitzky which he had seen in exhibitions. He arranged his objects stringently abstract in extreme black and white as well as in lines, tangents, faces and helixes on the photographic paper. He used floating shaded transitions similar to the ones of Man Ray in his later work. Man Ray's objects seem to be transformed with light, whereas Moholy-Nagy turns the appearance (or phenomenon) of light by the specific surface

texture of his items. The substances used, such as water, oil, acids, crystals, metal, glass or textiles, refract light and illuminate subtly.

Moholy-Nagy's geometric items and the lighting effects evoke movement; they are strongly suggestive of the medium of film. He talked about *fließendes Licht*, *Tempo* [flowing light], and about artistic *Licht-raumgliederung*¹¹ [light space arrangement], figuratively as a kinetic reconstructing system. The composition of his film *Lichtspiel Schwarz-Weiß-Grau* [movie black-white-grey], and the construction of the *Licht-Raum-Modulator* [light-space-modulator] for light and shadow presentations in 1930 point at the connection of the media photogram, film and sculpture.

The photograms of the Hungarian artist Ágnes Eperjesi are created in a classic way. In her photogram series, *Coloured Shadows*, she used (real) kitchen objects detached from any content-related context. The physical constitutions of the substances are very important, as well as the tactile surface textures. The preferred items are glass or metal, and their shape highly transfers or reflects light. Two light sources are used at the same time; one produces white, the other coloured light. At the moment of production two coloured shadows can be seen, but the colour photographic paper correctly recognises two different shadows; one is coloured, the other one is grey.

The name *photogram*, created by László Moholy-Nagy, does not really apply to Edgar Lissel's art works (Fig. 4), in contrast to William Henry Fox Talbot's historic description as photogenic drawings. The act of drawing is important. It requires progressive action, demands manipulation, and needs intervention.

Edgar Lissel used a light source as a starting point, activating a chemical process which forms the image at last. This translation does not start by the action of light on photographic paper to activate a physical reaction, but it needs a multitude of especially cultured photo-

graphic bacteria. The artist starts the manipulation by illuminating a slide, mostly a vanitas motif, on the bacteria; their specific characteristic is to move to the light. The process is like an act of drawing. The bacteria move easily. Their action recalls a performance. The running process is consciously and carefully controlled. The act of movement stops in a volitional break after something between eight hours and fifteen days. The illumination ends, the translation stops by the new manipulation. Only this determined act of destruction is able to finish the routine. Like the end of an uncoiled film, the process is terminated. It is used to take a photograph from the finished art objects as a new starting point. Now they are conserved and fixed for the future.

In the works of Johannes Stoll (Fig. 5) two media are united with the help of light. Basic material is a film strip which he transforms into a photogram. Stoll turns around the usually illustrating function of the photogram, as well as the film, while he declares the putative picture carrier to the picture itself; that is: the process activates the coloured pigments of the film, the film then projects itself. The approach is to be understood as a slow technical process. A small film strip is pulled out of the reel in the darkness and is briefly exposed to the light. Then the process is repeated. These rhythmical sequences find themselves in single colour segments that produce independent fractal structures similar to a bar code as a token of a digital language. It is also inherent to film-stills being perceived as a result of single proceeding sequences and, due to their frame limitations, also as single pictures. Now the film strip loses its original function. It presents itself as an independent piece of art. In some cases Johannes Stoll wraps the film also arbitrarily. Through the process of exposure the perforation of the upper layer becomes visible on the ones underneath. The film acts in two ways as an effigy of itself: it becomes effective by its own colour values and, on the other hand, by the self-imprint of and on the roll of film itself. The reel is



Fig. 5: Johannes Stoll: *Rollenbild B_77* (leading role model B_77), 2004, C-Print, laminated onto aluminium sheet, 24 x 30 cm. Credit: The artist.

presented as a photographic material, and at the same time as an art object; it can also be understood as a sculptural work. The works of Johannes Stoll puts the play between the media of photogram, film, photograph and sculpture, as well as the change between the different spatial dimensions under the uniting ductus of the light and are directly related to the works of the artists using intermedia.

It is no surprise that the photogram appears at the time in art when rigid limits between different genres were being overcome. The simple handling of the photogram stimulated some artists of the early 20th century to experiment freely and playfully with objects and light, chemicals and paper. Thus the 'inventors' of the artistic photogram itself were the first to push the limits of this medium in different directions; namely: collage, poetry and film.

Christian Schad pressed his objects trouvés under the glass of a copy frame and joined the resulting photogram with the appearance of his woodcuts by cutting the paper after developing it with the same crystalline outline. Thus he allied in his early photograms the chaotic mix up of his collages with photography and his graphic work.

Man Ray, however, saw the means of the Surrealists' écriture automatique perfectly fulfilled in the photogram. His compositions show an 'enigmatic beauty' that he wanted to be understood as visual poetry. He titled his book, illustrated with 12 early photograms, *Les Champs Delicieux*, following *Les Champs Magnétiques*, a collection of automatic writings by Bréton and Soupault. Furthermore Man Ray was the first to use the



Fig. 6: Hans Kupelwieser: *Bar*, 2001, photogram and bar (aluminium, furniture), 90 x 50 x 280 cm. Installation view Neue Galerie, Graz 2004. Credit: The artist.

photogram for film. In 1923 he produced his first experimental film with the use of the photogram, *Le retour à la raison*. He scattered small objects, such as needles, tacks, spices or rice onto a film roll and exposed them. In this film he did not celebrate the surreal alienation of things as can be seen in his photograms, but pushed abstract filmmaking towards an unknown limit.

As has been mentioned previously, Laszlo Moholy Nagy integrated the photogram into his vast theory of light. In his experiments he tried to lead rays of light not directly, but broken through reflecting materials, crystals or prisma, onto photographic paper. This procedure was mechanised with the *Licht-Raum-Modulator*, a kinetic apparatus which converted with various mirrors, metallic spheres and perforated sheets, the in-falling light into abstract and constantly moving shadow-plays that could be projected onto a screen. For Moholy-Nagy the perfection of this technique lay in its application to the medium of film that was completed in the same year with *Lichtspiel Schwarz-Weiß-Grau*, showing the *Modulator* in rotation.

The photogram remained a major tool for experimental filmmaking. Best known in this context are the

Polish filmmakers, Stefan and Franciszka Themerson. They adopted the qualities of abstraction inherent in the photogram to find a visual equivalent, not to poetry, but to contemporary music in their film *The eye and the ear* (1944–45).

In the post-modern era rigid limits of genres and styles were finally resolved in a variety of artistic expressions. That the photogram has found its position here also is evidenced by works of three contemporary Austrian artists.

Hans Kupelwieser's work oscillates between photogram and sculpture. He adds the question of how to overcome solid mass and transfer it into another medium and spatial dimension to the examination of the malleable material that is most relevant for a sculptor. Well known in this context are his furniture photograms in which Hans Kupelwieser positions chairs, stools and small tables onto photographic paper. After exposure the furniture has been dissolved into white spots; the points of support, and different graduations of grey; the heights and depths of the objects. In his installations Hans Kupelwieser confronts these photograms with the original arrangements of furniture, which are now partly hidden under aluminium covers,



as can be seen in the work *Bar* 2001 (Fig. 6). The furniture consists of a visible and an invisible; in photographic terminology: in a positive and a negative part. The photogram makes you see different things than in the installation. Some things are visible, and others are hidden, depending on the inherent conditions of the medium in use. At the same time Hans Kupelwieser points at the dialectic of the object and its imprint that is constitutive both for photography and sculpture, his favourite media.

Other works show potatoes, spaghetti, rice or eggplants that are freely spread onto photographic paper. The resulting photograms are passage points for further plastic treatment and conversion in various materials and forms. In his *Spaghettograms* Hans Kupelwieser cuts out parts of noodles and the space in between and carves them into steel or rubber. These sculptures are then distorted and knotted and arranged on the floor or wall. Out of the plane surface of the photogram results a new three-dimensional structure; a sculpture.

Jutta Strohmaier is another Austrian artist who integrates the photogram in her comprehensive



Fig. 8: Martin Eiter: *Untitled* 1986, photogram on paper, 84 x 96 cm. Credit: The artist.

Fig. 7: Jutta Strohmaier: *Hecke* 2004, photogram, 180 x 112 cm. Credit: The artist.

investigation of the perception and construction of space. In particular she uses its qualities of transforming space into a plane surface. For her work *Hecke* [hedge] (Fig. 7) the starting point is a real hedge, transformed into a digital photograph. On the light table this photograph is enlarged into a contoured drawing through tracing the lineament of the twigs. She then cuts out the branches and generates a stencil, a silhouette of a hedge. By employing the photogram she is able to re-translate the hedge into photography and comes to a three-dimensional imprint while eluding the central perspective that lies in the physical nature of photography: Double exposures and the moving of the stencil and light source in front of the photographic paper lead to superimpositions and intersections. The illusions of shadows emerge. Three-dimensionality is simulated to our perceptual apparatus where actually there is none. These images have hardly anything in common with the previous digital photography. After having crossed different spatial dimensions and medias, Jutta Strohmaier compares two photographic techniques: The digital photography, whose illusion of

space is always a virtual one; made out of a virtual accumulation of pixels, and the photogram, whose pictorial space relies on the direct and tactile relationship between the photographic paper and the here on reproduced objects is strongly indexical. The stencil of the hedge is also used for an installation, which recaptures real space. The stencil is thus positioned and illuminated in a room, that is similar to the *Licht-Raum-Modulator* of Moholy-Nagy, as it throws fleeting photograms onto the floor and ceiling, swayed by the movement of the visitors.

Austrian artist Martin Eiter, all featuring an elastic perspex rail, are located at the edge or threshold of painting. In his photograms he combines both techniques by painting with the developing liquid. One of his most remarkable works is a photogram, in which you can see the artist's hand curbing the plastic rail in its swinging movement (Fig. 8). This notion of movement is repeated by laying a trace of the artist's body gesture onto the photographic paper or canvas by applying the developing liquid with a brush. Resembling the paintings of the *Neue Wilde*, broad brushstrokes become visible, the fluid disperses freely on the paper, sprinkles of liquid develop as dark stains and undeveloped parts remain white. By using a reducer he is able to intervene in the developing process and is able to partially revoke it. Some areas brighten again; become a special kind of white, chamois. Thus the surfaces of the photograms show painterly qualities, which reminds us of his abstract and fluid paintings.

Martin Eiter's work is just one last example for the revival of the photogram thanks to its interrelation with other mediums. The sheer uncountable possibilities of linking it to other creative techniques, one of its characteristics since the avant-garde, have reserved the photogram's place in the art of the 21st century.

Notes

1. *Fotogramme 1920> now*, exhibition, Künstlerhaus, Vienna, 3.11.06 – 3.12.2006.
This exhibition catalogue can be considered as the first important publication on the contemporary photogram in Austria: Inge Nevole, Maria Schindelegger, Christina Natlacen (ed.), *Fotogramme 1920> now*, Passau: Dietmar Klinger, 2006 can be purchased directly from Dietmar Klinger or the editors (Contact: Inge.Nevole@gmx.at).
2. Compare to the expression of light drawings Talbot's *photogenic drawings*.
3. 'Everything can be transformed, deformed, and obliterated by light. Its flexibility is precisely the same as the suppleness of the brush'. Man Ray, in: Manfred Heiting (ed.), *Man Ray 1890–1976*, Cologne: Taschen, 2004, p.170.
4. Floris Neusüss, 'Wirklich möglich. Das Fotogramm – Erfindung und Entdeckung', in: *kamera los. das fotogramm. Eine künstlerische Position von der Klassik bis zur Gegenwart*, exhibition catalogue, Salzburg/Munich: Pustet, 2006, p.7.
5. A. D. Coleman, 'Inszenierende Fotografie. Annäherungen an eine Definition (1976)', in: Wolfgang Kemp (ed.), *Theorie der Fotografie III. 1945–1980*, Munich: Schirmer/Mosel, 1983, pp.239–243.
6. The classic photogram artists Man Ray, Moholy-Nagy and Christian Schad also show hands as motifs as do Stefan Themerson and Théodore Brauner. Also contemporary artists like Christian Marclay continue this tradition.
7. This follows Philippe Dubois theories developed in *L'acte photographique*, Paris 1983.
8. László Moholy-Nagy, UHU Nr. 5, Berlin, February 1928, Pictures by Floris M. Neusüss / Renate Heyne, *Das Fotogramm in der Kunst des 20. Jahrhunderts. Die andere Seite der Bilder – Fotografie ohne Kamera*, Cologne: DuMont, 1990, p.130.
9. László Moholy-Nagy, 'Die Beispiellose Fotografie' (1927), in: Wolfgang Kemp (ed.), *Theorie der Fotografie II: 1912–1945*, Munich: Schirmer/Mosel, 1979, p.73.
10. Andreas Haus, *Moholy-Nagy. Fotos und Fotogramme*, Munich: Schirmer/Mosel, 1978, p.20.
11. László Moholy-Nagy, 'Malerei, Photographie, Film,' *Bauhausbücher 8*, Munich 1925, p.16.

The artist as photographer, picturing the countryside

The Swedish artist Severin Nilson (1846–1918) was also an amateur photographer. This was rarely mentioned until 1958 when an article in the year-book from Nordiska museet in Stockholm presented him as a photographer and started a change in the view of the artist. Among professionals his photographs are now rated higher than his paintings and much attention has been paid to him as a photographer, in Sweden that is. Except for *The Oxford Companion to the Photograph* (2005), his name is not likely to be found in international nor European histories of photography.

The article of 1958, written by the archivist at the museum Rut Liedgren, was an early statement that painters in the late 19th century often made use of photographs as working material. In an European comparison, Severin Nilson was one of few painters who also took the photographs himself. Furthermore, his photographs were pictures with their own value and merit, often well composed and with a sensitive use of light. However, the discovery that many 19th century paintings were based on photographs, led to photography becoming defined as only an aid to painting. This gave a rather negative air to the photograph and it was surprisingly spread among the public. When the interest in Severin Nilson as a photographer grew in the later 20th century there was a tendency to disregard his paintings and to regard his photographs as ‘documentary’. I think, however, one must consider that Severin Nilson, first of all, was an artist; he made paintings and he also made photographs. The connection between painting and photography has thus many sides.

Living in Stockholm, the Swedish capital, from the age of 18, Nilson kept close contact with his native countryside in Halland, a region in the south-west of Sweden. This dual connection made him familiar with both urban and rural ways of life, with bourgeois and popular culture. Also, you can presume that he had knowledge about rural life in former times. From three stays in Paris in the 1870s and close contact with other

painters he had a broad knowledge of both Swedish and European contemporary art. His own works, both paintings and photographs, reflect the period that runs from the school of Düsseldorf to Naturalism.

As far as I have been able to count, about 3,000 photographs and glass plates are now preserved in different museums and archives in Sweden, such as Moderna museet and Nordiska museet in Stockholm and Läns museet Halmstad in Halland. The motifs he used can be roughly summarised as folk life, buildings, landscapes and nature. The main part seems to have been taken in Halland, quite a lot in Stockholm, but many are taken in other places in Sweden. Severin Nilson was a travelling open-air photographer. In 1887 and 1897 he took on two documentary tasks, the first being illustrations for an article about Halland, the latter being illustrations for a guidebook for the railway between Gothenburg and Dalecarlia. He sent 270 photographs to the editor of the guidebook. He had not made these copies himself, but little is known about how much work he carried out in a dark room.

Severin Nilson might have taken photographs for more than three decades. Yet there are few real facts about his photographic activities. For example, it is not known for sure when and how he came to work with a camera. It has been assumed that it was as a pupil of the French painter Léon Bonnat in Paris in the early 1870s that he learnt to take and use photographs. This I cannot verify; to my eyes one of his earliest photographs is from the late 1870s.

Severin Nilson himself says hardly anything about taking photographs in his many letters to family and friends. Occasionally he wrote on the back of photographs, something that is more like a title, for exhibition purpose perhaps, than strict information about people, places or times. Individual photographs can now be dated in different ways indicating extensive activity in the 1880s and 1890s. This time-aspect is complicated as many photographs depict something in



Fig. 1: Severin Nilson: *Untitled, after 1890 (E 748)*, 9 x 12 cm. Credit: Länsmuseet Halmstad in Halmstad, Sweden.

itself ancient or what could have been arranged as a kind of memorable situation. (Instead of the word ‘arranged’ I prefer to use ‘staged’, as ‘arranged’ became a negative judgement widely spread in a time that desired photography to be purely documentary.)

It has been repeatedly suggested that Severin Nilson was inspired by the work of the Swedish museumcreator Arthur Hazelius (Nordiska museet and Skansen in Stockholm). I find it more fruitful instead to look at the context of contemporary art and photography. Severin Nilson’s photographs often give associations to works by other photographers and even painters. His context seems to be filled with different pictures and picture-creators, and sometimes it seems possible that a painting precedes the photograph. One of his photographs shows a woman and a girl lying asleep with their heads against a hay or corn stack. For me, this is not so much about old harvesting methods or documenting working situations in the Swedish countryside as about the photographer’s knowledge of European art. The motif with two people resting in the harvest had been drawn by the French painter Jean-François Millet (*La Méridienne*), a drawing that even Vincent van Gogh made a personal version of.

Severin Nilson had seen many pictures. One particular source to point out are the magazines of his time, which often were illustrated with works of art, and regardless of their original appearance, always in black and white. I think he had a memory for pictures and an urge to test for himself as many motifs as

possible. As a pupil of the Royal Academy of Art in Stockholm 1864–70 his talent was rewarded with a special medal. It is possible that he started his career with the question *what* to paint, and not *how* to paint. The camera gave him opportunities to try different subjects in a less pretentious way than painting them would have. To put one of Severin Nilson’s photographs next to a work by Jean-François Millet is to suggest such a test.

Beside the questions about context, it was also my intention to study how he pictured the countryside, that is, the people living there. Among photographers devoted to folk life I point to Knud Knudsen in Norway, P. H. Emerson and Frank M. Sutcliffe in England. As with Severin Nilson, these three had their own photographic territories. There is no real proof of any contact, but it is tempting to note that the photographic work of Emerson was spread in the form of several publications and that Knudsen took part in the world exhibition in Paris in 1878, which Nilson is known to have visited. Be that as it may, comparing photographs by these photographers with those of Nilson makes some similarities obvious – witnesses of general ideals and views of the time – but also clarifies the special profile of Severin Nilson.

Like Frank M. Sutcliffe, Severin Nilson presents his country people as both industrious and social human beings. There are joy and smiles and a friendly tone that becomes more obvious in comparison with Emerson’s more severe version of country life. It is



Fig. 2: Severin Nilson: *Untitled*, 1880s (A 141), 18 x 24 cm. Credit: Länsmuseet Halmstad in Halland, Sweden.

striking how many different works they illustrate, the countryside appears to be a diversified working-place (Fig. 1). People are often on their way, going somewhere, not just taking a walk. Sunday, as the day rest, is represented by going to church. ‘Social’ does not mean having festivities or parties, but simply people meeting and chatting. As a whole he seldom took photographs with a group of people, more often with one, or two, or a handful. Also, rather like Sutcliffe, he pictured children; often the relationship between the adult and the child, and often with a physical, though not intimate contact; holding hands, for example. When the adult is an old person and the child is quite small, it becomes a meeting of generations and thus forms an aspect of time.

One question is: what are people representing? Themselves, or a role that he, the photographer, had given to them? For instance, Severin Nilson captured his sister in different work-situations, but did he take photographs *of* his sister or *with* his sister, the latter meaning, rather, pictures of a woman’s work in general. And, to take this notion further: was it his intention that we should identify these photographs, that is, put a name, place and, if possible, a time to them? If we do so, perhaps the main reason should still be to learn more about the way this photographer worked, and not simply to load the picture with hard data.

Though Severin Nilson probably knew many of the people he pictured, there seldom is visible contact between them, the objects, and him, the photographer.

He followed the ideal that people should act as if they were not aware of the act of being photographed. People look down or away, or even sleep, sometimes they read a book or are absorbed by their work. This gives extra stress to the photographs where people do look straight at the photographer, and, in extension, at us who are now looking at the photograph. There is a school class with girls looking at something (someone) behind the teacher’s desk, but one of them cannot help but look in the direction of the photographer (Fig. 2). Perhaps it took too long. Her glance establishes a relation outside the photograph, it reveals the photographic situation. Two unusually tragic and obviously staged photographs picture some dark social conditions. In both a little girl is, at first sight, a passive victim, but also the only one looking straight ahead and thus communicating directly with us, the onlookers, and this gaze makes her the main person.

To my eyes, the photographs of children are Severin Nilson’s real contribution to the field of photography. They are outstanding and taken with respect for young people. Early photographs of his nephew (born 1876) picture the boy as a lonely child with a task; as a gate keeper, a shepherd boy, and as a school boy. One can ask whether this shows the life of the nephew or, perhaps, if he is acting the childhood of Severin Nilson, of himself. Later photographs of children playing together might reflect a new general view on childhood (Fig. 3). He had two children of his own, but known photographs of them are very few. It



Fig. 3: Severin Nilson: *Tones*, 1895 (E 1063), 9 x 12 cm. Credit: Länsmuseum Halmstad in Halland, Sweden.

raises the question: did he ‘document’ his own family? And, if he did, did he have a private album that has not been preserved in any archive?

Grown ups are equally pictured with respect. His sister did not have an easy life, as a single provider and a single mother, but she is pictured as a ‘normal’ woman and not as a victim; sometimes even with the humorous twinkle that is rather characteristic of Severin Nilson. On the other hand, with one exception, she is not pictured with her son, that is, as a mother. The end of 19th century Halland saw massive emigration, but neither this nor more modern phenomena were motifs for this photographer. Something similar has been stated in connection with P. H. Emerson who pictured the countryside looking away from contemporary changes. With several photographs picturing people on the shore, local fishermen as well as city people on vacation, Severin Nilson seems to have followed a contemporary theme within the arts; a theme that painters (although not him) went to Normandy and other parts of the French coast in order to capture. The shore had become an arena where traditional and modern ways of life met.

Notes

This study has been derived from the author’s recently published book: *Konstnären som fotograf. Severin Nilson och bilden av landsbygden*, Halmstad: Länsmuseum 2007, 214 pp, ISBN 978-91-88806-69-7, summary in English, French and German. 125 photographs by Severin Nilson, chosen by the author, together with c.10 photographs and art works by others.

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Christina Natlacen, born in 1976, studied history of art in Vienna, Graz and Lausanne. With the support of a DOC Research Fellowship from the Austrian Academy of Sciences, in 2006 completed her thesis on Arnulf Rainer's photographic self-representations. Has worked at the photographic department of the Albertina, and also as a freelance curator and author of articles on photography within the field of physiognomics. Currently holder of the Manfred & Hanna Heiting scholarship on the history of photography, Rijksmuseum, Amsterdam, Christina Natlacen teaches at the universities of Vienna and Graz.

Inge Nevole, born 1969 in Vienna, studied history of art, philosophy, history and political science in Vienna. Written various articles and publications on architecture, photography and media art. From 2002–2005, editor-in-chief of *Eikon – International Magazine for Photography and Media Arts*; in 2004 a jury member of the media art award of Lower Austria; 2005 organised the Symposium *Photophantasmen*; 2006 curator of the exhibition *Fotogramme.1920 > now*, Künstlerhaus Vienna. Inge Nevole is now a writer, art critic and independent curator.

Prof. Dr. Nikolaus Schad (1924–2007) studied medicine at the Universities of Rome and Munich, specialising in Pediatrics. He then began to work at the University of Zurich, initially in the Pediatrics and

Heart-Surgery department, subsequently in Radiology. Later he was asked to join the staff at Washington University, St. Louis, USA, as an Associate Professor of Radiology, becoming the Head of the Cardiac Section at the Institute and, subsequently, a full Professor. At this point, Schad began to focus his primary interest on the cineangiographic visualisation of small vessels (coronary arteries) and structures. By 1973 he had returned to Passau, Germany, and in 1985 was then called to the University of Siena, Italy, where he was appointed Chairman of the Radiological Institute.

As a teenager, Nikolaus Schad was encouraged by this father, Christian Schad, to explore the exciting elements of photography. Progressing from the box camera to a Kodak small film camera, he eventually found himself using the Leica camera in his photographic 'journey'. And it was in the darkroom that he began to understand the significance of the intensity of shadow effects. All his cardiac research had also sharpened his eyes to carefully observe shadows and had drawn him closer to an understanding of his father's use of shapes and shadows in the Schadographs.

Nikolaus Schad, born 18 May 1924 in Neapel, baptised St Stefan Cathedral, Vienna, 12 December 1925, died on the 30 April 2007, Passau, Germany.

Maria Schindelegger, born 1979 in Vienna, studied history of art and philosophy in Vienna and Hamburg. Master's thesis on Axel Hütte and the photographic tradition of industrial landscape. 2001–2004, was assistant editor *Eikon – International Magazine for Photography and Media Arts*, in 2005 exhibition project on female masquerade at Department of Photography, Pinakothek der Moderne, Munich, 2006 curator *Fotogramme.1920>now*, Künstlerhaus, Vienna. Currently based in Munich as curator for the municipal exhibition *space lothringer13/laden* and as programme assistant for Barbara Gross Galerie. Various publications on photography and contemporary art.

Trevor George Sewell is a photographer, painter and art historian. Born Bedford, England 1957, studied Dunstable College (1974–78), Mander College, Bedford (1981–91), awarded BA (Hons) Art, University of Aberystwyth (1991–95) and completed MA in Art and Art History 1997. Also in 1997, awarded a University of Aberystwyth postgraduate research studentship, completed MPhil in Art History in 2005 with the thesis: *An aspect of early colour photography: from kitsch to art*. He has exhibited in Britain, Italy, Switzerland and is represented in the collections of the University of Aberystwyth and the National Library of Wales.

Anselm Wagner, born 1965, studied History of Art and Philosophy in Salzburg and Munich (MA 1961, PhD 2002) and has held positions as an independent curator, gallery manager, art critic, with teaching posts in Vienna at the University, the University of Applied Arts, the Academy of Fine Arts and the University of Technology. In 2004 he was Research Fellow at Clark Art Institute, Williamstown, Massachusetts and, since 2004, Assistant Professor, Graz University of Technology, and Lecturer at the University Mozarteum, Salzburg, and Karl-Franzens-University, Graz. His many publications are concerned with art and politics, the history of institutions and visual communication. In 2006 he published an edition of selected writings by the Austrian-American art historian, Heinrich Schwarz (1894–1974).

Dr Ian Walker is Reader in the History of Photography at the University of Wales, Newport. He is also Programme Leader for the MFA Documentary Photography course and supervises PhD students in the Centre for Photographic Research. His own research has focused on the relationship between Documentary Photography and Surrealism and he has published two books on the subject, both with Manchester University Press: *City Gorged with Dreams: Surrealism and documentary photography in interwar Paris* (2002) and *So Exotic, So Homemade: Surrealism, Englishness and documentary photography* (2007). Ian Walker is also a photographer and exhibits frequently in Britain and Europe. A particular theme has been the place of ‘classical’ culture in contemporary life; his exhibit *French Gardens / jardins anglais* was shown at the Chateau de Coubertin, Paris, 2006.

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Correction

In Photoresearcher No 10 September 2007 the illustration of the article of Carmen Pérez González *Defining a model of representation for 19th century Iranian Portrait Photography* on p. 19 Fig. 1 should be read as Fig. 2 Abdul Ghassem Mohammad Nuri, 1989, 16 x 11,5cm. Golestan Palace Library. Taken from the book of Yahyar Zoka, *The History of Photography and pioneer photographers in Iran*, Seef, Tehran, 1997, and Fig. 2 became Fig. 3 on page 20.

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