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Experiments in
Light and Movement

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Experiment: Photography

photograms by László Moholy-Nagy and György Kepes

Márton Orosz

Both László Moholy-Nagy (1895–1946) and György Kepes (1906–2001) were teaching at the successor of the New Bauhaus, the School of Design in Chicago, when *Popular Photography*, the New York-based American magazine, commissioned them in 1939 to write an article in which they explain how photograms are made. Moholy-Nagy asserted that he encountered the field of photography through photograms by discovering that it created a new medium of expression which he defined as “painting with light.”¹ On the other hand, Kepes emphasized its plastic qualities, drawing a parallel between photograms and sculptures. “Imagine molding and shaping light as a sculptor does clay!” he argued.² Neither Moholy-Nagy nor Kepes claimed to be a photographer, instead preferring the word “Lichtner”³ (manipulator of light); nevertheless both played a significant role in the evolution of camera-less photography.

While its history traces back to the eighteenth century, artists of the early twentieth-century avant-garde rediscovered the technique by adding their personal footprints to it, terming their own version differently. The British photographer Alvin Langdon Coburn (1882–1966) called his non-objective compositions *vortographs*, while Christian Schad (1894–1982), a member of the Zurich Dada group, referred to his camera-less experiments as *schadographs*. With or without knowing these predecessors, the American-French artist Man Ray (1890–1976) claimed the medium to be his own invention by also calling them after his own name—*rayograms*—in 1921. At the same time, Moholy-Nagy was the first who in 1922, by analogy with the word “telegram,” came up with the term

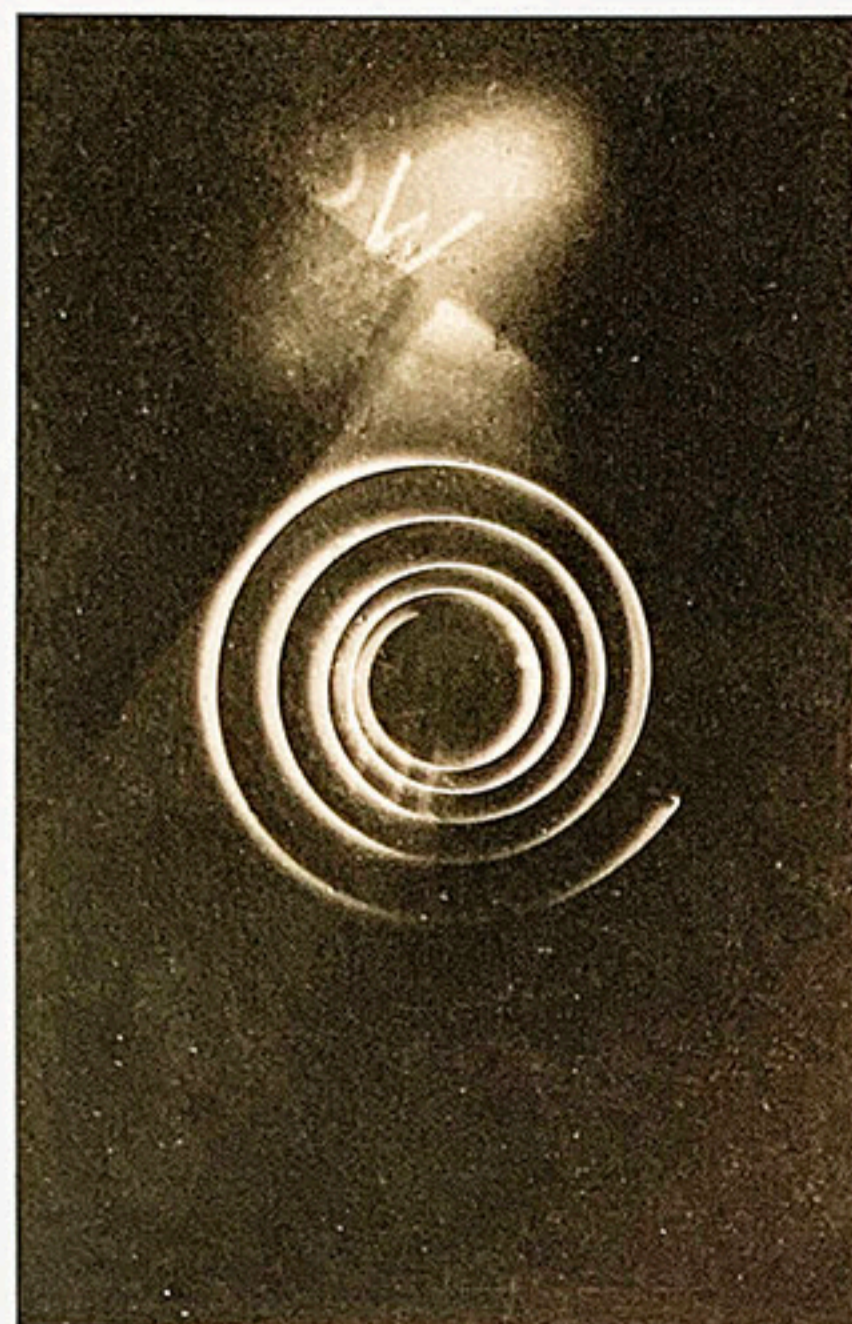
photogram, while Kepes, who was enriching the possibilities of the technique some two decades later, with his *Photogenic Paintings* conjured up the ‘salted paper process’ of the early British pioneer of photography, Henry Fox Talbot (1800–1977), who called his own camera-less compositions *photogenic drawings*.

However while Talbot’s aim was to exploit the representational character of the medium, its avant-garde practitioners, such as Moholy-Nagy, regarded photograms as “the most completely dematerialized medium which the new vision commands.”⁴ They were not only interested in the aesthetic qualities of this new type of visual expression but approached them as theoreticians, investigating their philosophical aspects, arguing that this form of design has the ability to perfect our vision. According to Moholy-Nagy’s statement published in his first book *Painting, Photography, Film* (1925), photograms are certain types of “light-composition[s], in which light must be sovereignly handled as a new creative means, like colour in painting and sound in music.”⁵ Along with Kepes, he considered photograms the next development of artistic creation, in which the painter’s canvas is substituted by the photographic emulsion, traditional paint, such as oil and pigments, by light, and the brush by natural or synthetic materials. Typically photograms are produced by placing three-dimensional objects on light-sensitive paper. Their spatial effect is created by the arrangement of the objects and surfaces and the creative control of the light that reflects from them. The objects are merely there to allocate a certain form to the composition, while the real photographic subject

1 | László Moholy-Nagy

Untitled, Berlin 1922

Museum Folkwang, Essen



of these images is the pure light itself. The photogram “is a method of designing with lights and shadows,” writes Kepes.⁶ Artistically speaking it is rather a synthetic than an analytical process while technically a very sensitive and sensible form of visual expression, as the image can represent the sublime gradations from glowing white through the uncountable shades of grey all the way to the deepest black. Photograms are not created mechanically through the physical operation of any equipment (neither a camera nor a lens), but the artist is there to control the development of the forms; he or she is the contributor, the vital part of the process.

Moholy-Nagy’s first, postcard-format photograms were produced around 1922 on printing-out paper and developed under direct sunlight. This simple way of creating images helped him to learn how to take control in the process as the image evolved gradually in front of the artist’s eye. These pictures were direct records of easily recognizable organic forms, such as flowers, plant leaves, and various household objects. According to Moholy-Nagy, one of the first photograms he ever created “was a record of a spiral of metal.”⁷ In the most iconic version of the series he did on daylight printing-out paper in 1922 in Berlin, apart from the witty placement of the artist’s monogram working as a visual pun in the upper leftish part of the composition, the only motif of the image that takes up the middle and overlaps a collage-like rectangular shape happens to be just like this, a spiral form, as a snail or the spring of a mechanical watch-work (fig. 1). The importance of the piece explains why it was chosen to be the cover image for Moholy-Nagy’s seminal 1925 book. Similar but far more eccentric

and ambiguous is the series that the artist made in Dessau in 1925, created with a leaf catcher that is typically used for a drain pipe on a gutter (cat. p. 216). The final result of another variant of the image happened through multiple exposures, combined with either a semi-transparent disk, a glass vase, a circular piece of wired screen, or some translucent frame units stacked upon each other (cat. p. 215).

The tension between the familiar and yet unknown elements in the picture proved to be valid compositional logic in Moholy-Nagy’s practice with camera-less photography. As early as 1922, when he published his “Production—Reproduction” essay in *De Stijl*, he warned the reader that “the creations are valuable only when they produce new, previously unknown relationships.”⁸ This sentiment was characteristic in those photograms that depicted photographic imprints of body parts, such as the artist’s hand or head, retaining their representational character while providing an individual, transfigurative reading in an utterly new manner. A Janus-faced photogram produced in 1926 is an iconic example of the double portraits of Moholy-Nagy and his wife, Lucia Moholy (1894–1989), laying their heads on the photographic paper in each direction, one after the other, while a double exposure was made from their profiles (cat. p. 217).

The enigmatic, unpredictable character of Moholy-Nagy’s photograms are represented by those compositions that are entirely unrecognizable; the opacity of the real or indirectly present objects is eliminated and dissolved by the direct or reflected light. The 1926 assemblage (cat. p. 223), in which the artist recreated an earlier camera-less composition he did in Weimar in 1924, can be regarded as an investigation into the new “types of spatial relationships and spatial positions”⁹ constituted by the dialogue between the tonal values of the virtual objects and the factuality of the secondary elements placed on the surface. The metaphysical, immaterial, and lyrical character of light that features the earlier version is counterpointed by a Dadaist-like setup consisting of somewhat rigid elements. A picture frame was applied onto the photogram as a support for various materials, such as cardboard, an acrylic plate with painted red and black circles, and a rectangular metal bar. Thus an exceptional work of art was created in which media specificity lost all of its relevance. György Kepes, a compatriot and associate of Moholy-Nagy, produced the largest sum of his photograms while teaching at the New Bauhaus, School of Design from 1937 to 1943 as the head of the Light Workshop. In exercises carried out in the search for new means of expression for the photogram,

he enriched its technical potentials that had since been forgotten. With the further development of *cliché verre*, which was already employed in the nineteenth century by the painters of the Barbizon School, and of *decalcomania*, also popular with the Surrealists, and then combining the two, he reevaluated the language of the medium.

In comparison with Moholy-Nagy, Kepes's photograms offered a similar relation to space; the directions in his images also proved to be invalid, and the up and the down synonymous. However, the interplay between the deliberate and the accidental forms in his compositions did evoke a wide range of associations and meanings, lending them a more poetic character. The spontaneous graphic gestures in Kepes's photograms were produced by using either pocket flashlights or liquid pigments. The latter existed in various viscosities, and by placing them between layers of transparent pages or glass, the light passing through them was modulated, creating an immense spectrum of density. These pieces were termed by the artist "photopaintings" and emphasized the dynamics of macroscopic material processes, such as magnetic fields, electric discharges, or trickling fluids (cat. p. 227).

In Kepes's work titled *Ghost* (1939, cat. p. 222) the unusual design was brought into existence by two concave mirrors reflecting the source of the spotlight that was directed toward them. By capturing the effects of the reflections cast by different surfaces and textures, Kepes's photograms often employed optical devices, such as lenses, distorted glass, or oscillographs, which created light patterns with complex harmonic motion. By examining the entropy of the picture field, his aim was to organize the forces prompted by the relationships of its elements into meaningful, binary entities. The majority of his camera-less photographs shared the notion he referred to as "dynamic equilibrium," manifested in complementary and well-balanced structures.¹⁰ Followed by Moholy-Nagy's objective of recognizing the photogram as an accessory of the modern urban environment¹¹, Kepes also conducted light-drawing experiments, while his student Nathan Lerner (later dean and professor of product design at the Institute of Design, 1913–1997) invented the *light box* in 1938, an observational instrument that served to study the behavior of light in almost clinical, laboratory conditions.

- 1 László Moholy-Nagy, "Making Photographs without a Camera," *Popular Photography* 5, no. 6 (Dec. 1939), pp. 167–69, esp. p. 169.
- 2 György Kepes, "Modern Design! With Light and Camera," *Popular Photography* 10, no. 2 (Feb. 1942), pp. 24–25, esp. p. 25.
- 3 Quoted by Andreas Haus, "Methodische Einführung in das Problem: Ein Maler macht Foto-Geschichte", in *Moholy-Nagy. Fotos und Fotogramme* (Munich, 1976), p. 9 and p. 68, note 3.
- 4 László Moholy-Nagy, "How Photography Revolutionises Vision," *The Listener* (Nov. 8, 1933), quoted by Beaumont Newhall, *The History of Photography* (New York, 1964), p. 161.
- 5 László Moholy-Nagy, *Painting, Photography, Film* (1925) (London, 1969), p. 32.
- 6 György Kepes, "Entering the Eye," *Illustration: A Magazine for Advertisers, Agencies, Designers and Illustrators* (Feb. 1941), n. pag.
- 7 Moholy-Nagy, "Making Photographs without a Camera," p. 169.
- 8 L[ászló] Moholy-Nagy, "Production—Reproduction," in Moholy-Nagy, *Painting, Photography, Film*, p. 30, originally published in L[ászló] Moholy-Nagy, "Produktion—Reproduktion", *De Stijl* 5, no. 7 (July 1922), pp. 98–101.
- 9 L[ászló] Moholy-Nagy, *Vision in Motion* (Chicago, 1947), p. 188.
- 10 György Kepes, *The Language of Vision* (Chicago, 1944), p. 207.
- 11 Moholy-Nagy, *Painting, Photography, Film*, p. 30.

This book is published in conjunction with the exhibition *Bauhaus and America. Experiments in Light and Movement*, November 9, 2018 – March 10, 2019 at the LWL-Museum für Kunst und Kultur, Westfälisches Landesmuseum, Münster

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100 Jahre bauhaus im westen is a project of the Ministry of Culture and Research of the State of North Rhine-Westphalia and of the regional councils of Rhineland and Westphalia-Lippe.

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The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available on the Internet at <http://dnb.dnb.de>.

Printed and published by:

Kerber Verlag, Bielefeld
Windelsbleicher Str. 166–170
33659 Bielefeld, Germany
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Kerber publications are available in selected bookstores and museum shops worldwide (distributed in Europe, Asia, South and North America).

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ISBN 978-3-7356-0561-0
www.kerberverlag.com

Printed in Germany