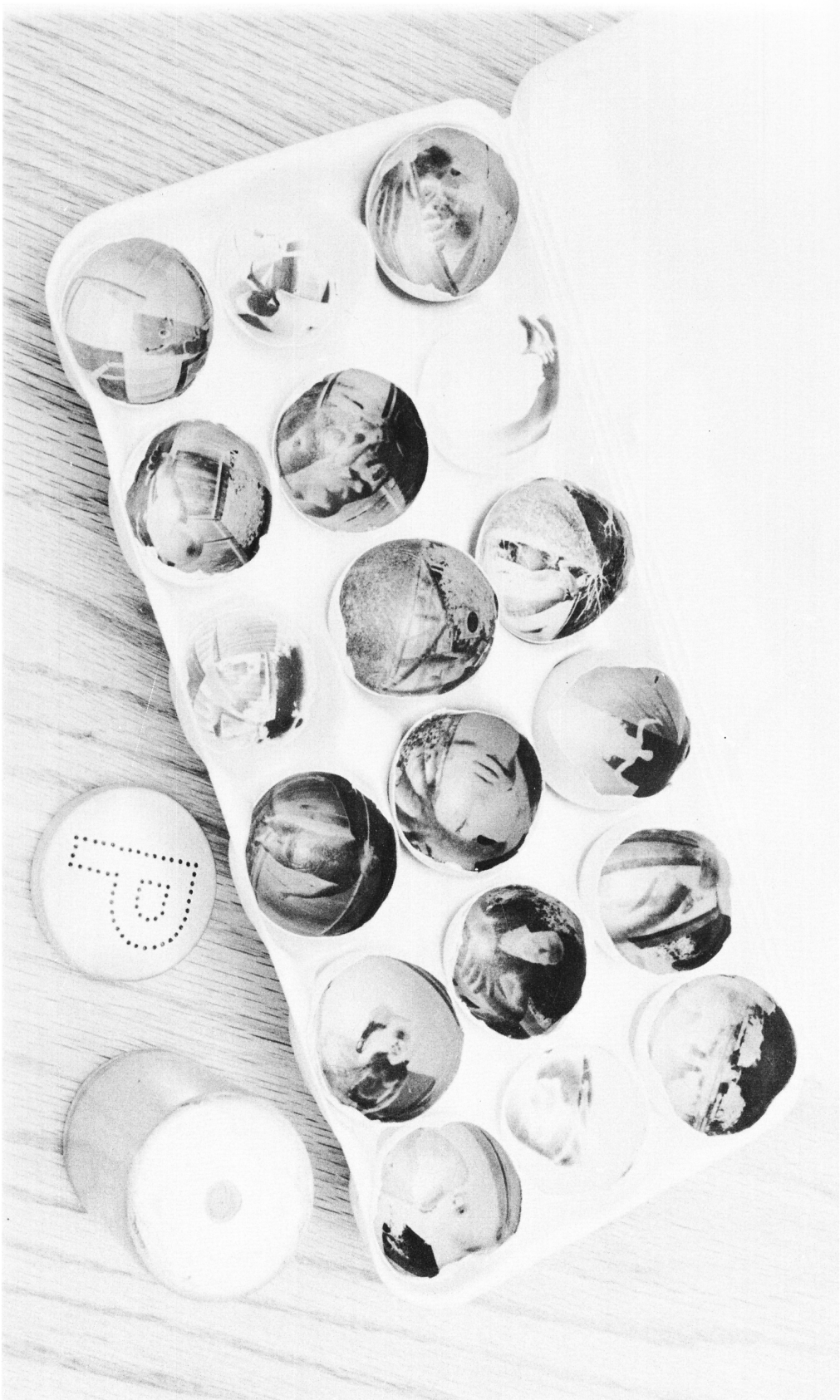


*Multiples/
The Gaia Effect
Vol. 5 #2*



Jeff Fletcher **Bromide eggs** Eggshell coated with "Liquid Light", egg then placed inside pepper shaker, each image is made with one pinhole, lens photograph of 18 pinhole images, 1989

PINHOLE
JOURNAL

Pinhole Structures Gottfried Jäger/West Germany

Generative Photographic Works 1967–1974

Translation from German: Jean Särken

Abridged summary:

Pinhole structures are—technically speaking—photographs that have been made on the optical principle of the camera obscura. This is not, however, photographic reproduction in the usual sense of the word. We are dealing with the creation of a new dimension of pictures. Artistically, it pursues the ideal of a work of art which offers a great variety of possibilities to aesthetic perception, thus supporting the thesis of Herbert W. Franke, a German expert on the theory of art, who states, “Works of art are structures that are adapted in the best way possible to the process of perception.”¹

The works shown here date from 1967; they were inspired by new theories in “rational aesthetics” (information theory and information aesthetics), all influenced by cybernetics, and they were also inspired by new technologies in the fine arts (computer art). They give expression to the idea of “generative”, picture-producing kind of photography, based on systematic Constructivism which regards itself as part of the historical line of development of Constructivism in art. The aesthetic techniques involved here are taken from the repertoire of sequenced, programmed composition.²

I.

Taking a look today at the works selected for this publication and dating around 1968, I am reminded of a restless, yet at the same time incredibly creative period of my own personal development and general development around me. I am reminded of a phase which gave leach to and produced a wealth of new ideas and hopes.

Towards the end of the 60's there was a pervading sense of change in the Federal Republic of Germany. The years of recovery after the Second World War had seen a general settling of the economy; however, important social reforms, for example in the field of education, had not materialized. The student movement at West German universities around

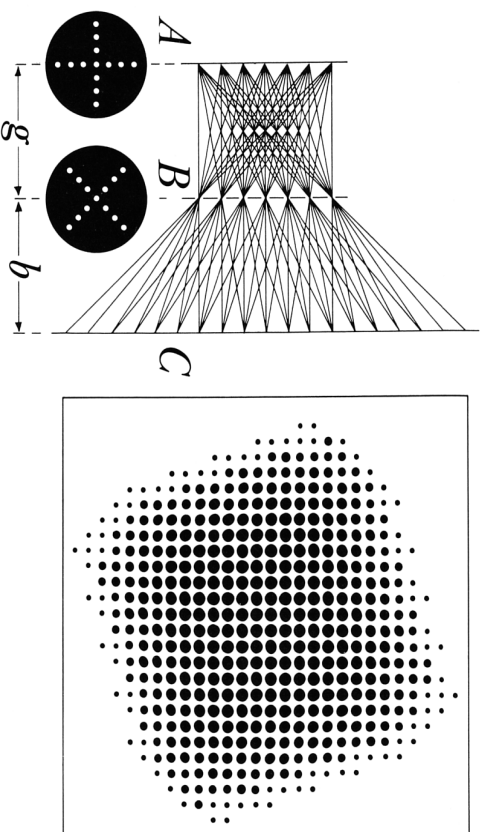


Fig. 1

Apparatus system of **Pinhole Structures**. Multiple pinhole camera combined with light pattern subject. A: Light pattern subject, variable. B: Multiple pinhole, variable. g: Distance A-B, variable. b: Distance B-C, variable. C: **Pinhole Structure**, result.

1968 and the subsequent change in the political climate at the beginning of the 70's are an expression of this turbulent period. In addition, there were the first signs of a new technological era, ushered in by the new media and the computerization of society, a development that became very apparent not only in the field of technology, but also in intellectual areas such as schools and universities, in art and in culture. Many of my age group regarded this, despite the problems connected with this development, as an indication of a better world, because of an improved flow of information. They expected a more communicative and therefore better world. Exhibitions like “Computers and Visual Research” (Zagreb 1968/1969), “Some More Beginnings”, organized by the group “Experiments in Art and Technology” (New York, 1968), or the international touring exhibition organized by Herbert W. Franke “Wege zur Computerkunst” (Towards Computer Art) —beginning at Karlsruhe 1969—, at which the works shown in this publication were on display, were the first artistic signs of and reactions to the general development.

In 1968 I organized the exhibition “Generative Photography”¹ in Bielefeld. It was a direct response to the prevalent trends in West German photography at that time. On the one hand, it was a reaction to “Subjective Photography”, dating back to the 50's and 60's and now on its last legs. The

latter had been increasingly reduced to a formal level and had shown lack of innovation. It was also a reaction to the ideas championed by Karl Pawek, the German philosopher, and propagating “Total Photography”, a metaphysically legitimated photo-realism on a journalistic basis which disclaimed any semblance of art in photographs right from the start. Both tendencies aimed in their own particular way at expression and effect and at a magically captivating picture. In contrast, generative photography aimed at clarity and transparency. It did not want to convey anything magical or mysterious in its pictures. On the contrary, it aimed at enlightenment and rationality. Using a methodical, step-by-step procedure and being completely open about its method, it endeavored to avoid the enigmatic in art; instead, it attempted to make inherent ideas and forms understandable to everybody at all times. The sequenced composition, based on a programme previously defined, was here one of its essential means.

It aimed in its own way for objectivity and lucidity. It wanted to reveal the basic elements of photography and be accountable to an increasingly critical public that wanted to be involved in the composition of a work of art, and should be, too. Nothing was to remain obscure. An elementary, abstract, systematic, constructive, indeed “democratic” picture language was the result. Form had no “top” or “bot-

tom", there was no hierarchy amongst the pictures. They were all, taken together, of the same significance and importance as the others (Fig. 3).

"Generative Photography" thus presented itself as the continuation of the trend begun in the 20's, i.e. Constructivism and Elementarism, as defined by Theo van Doesburg, Moholy-Nagy and others, "Elementarism is an intellectual rebel, a troublemaker, deliberately disrupting the tranquility of bourgeois life with its regularity and repetition at the cost of its own peace and quiet."²

II.

My contribution to this subject was the "pinhole structures". In January 1967 I was experimenting with my studio camera in my studio. Instead of the conventional lens I used a do-it-yourself geometrical multiple pinhole lens with 50 apertures. My subject was the very same element. It was lit from behind by a lamp and formed in this way a small illuminated object with 50 luminous points. This number multiplied optically with the 50 holes in the camera, so that there was a total of 2,500 picture points making up the composition on the plate. Depending on the angle of the spotlight behind the illuminated object the brightness varied, as did the colour effect according to the diffraction of light. By partially covering the lens, new geometrical patterns and interrelations developed. In short: there was a fascinating spectacle taking place on a small stage, enacted in and by my camera. Fig. 1 shows the schematic structure of the composition. Fig. 2 shows the camera with mounted multiple pinhole lens, and Figs. 3 and 4 show two pictures, the result of a 17-part series of my first pinhole works ever, for which I used a colour negative film. The series is not yet "complete" in the way envisaged, but I could see that this method offered many new possibilities of creating a picture in the sense described above. The camera became a generative system for producing a new perspective characteristic of itself and its own particular features.

Later, I continued this complicated work with the studio camera on an especially modified enlarger in the darkroom. I produced direct pinhole structures on black-and-white and colour film, necessarily refining the technical and aesthetic concepts as I went along.

1. Städtisches Kunsthhaus Bielefeld/Gottfried Jäger (concept and realization), **Generative Photography**. Contributing authors: Kilian Breier, Pierre Corder, Hein Gravenhorst, Gottfried Jäger Text: Herbert W. Franke, Catalogue, Bielefeld, 1968.

2. Theo van Doesburg, **Malerei und Plastik, Elementarismus** (*Manifestation*), in: *De Stijl* Nr 78, 1927

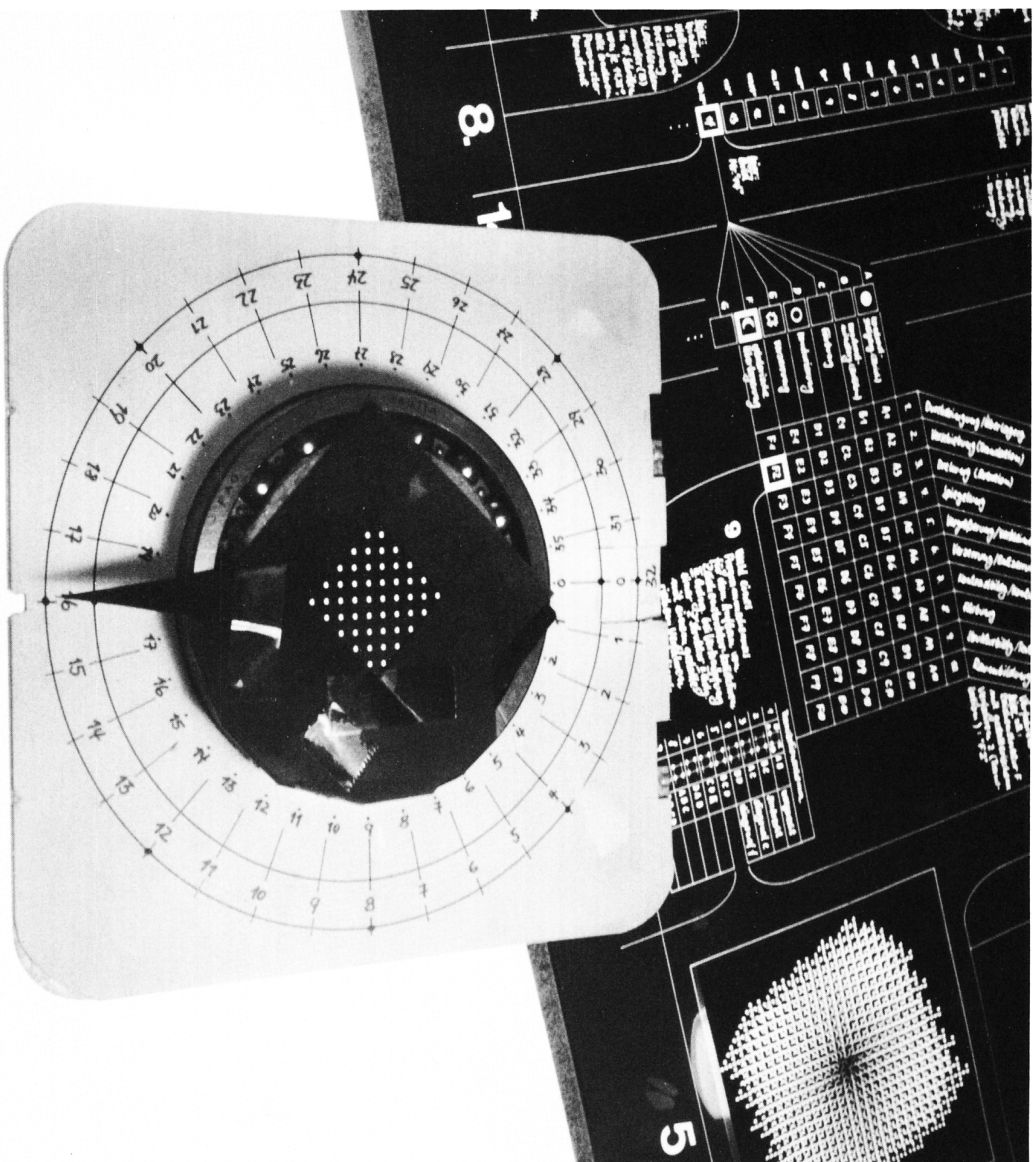


Fig. 2

The self-created multiple pinhole sheet, mounted on a ballbearing on plate, prepared for studio camera. The background shows a part of programme description of the **Pinhole Structures**.

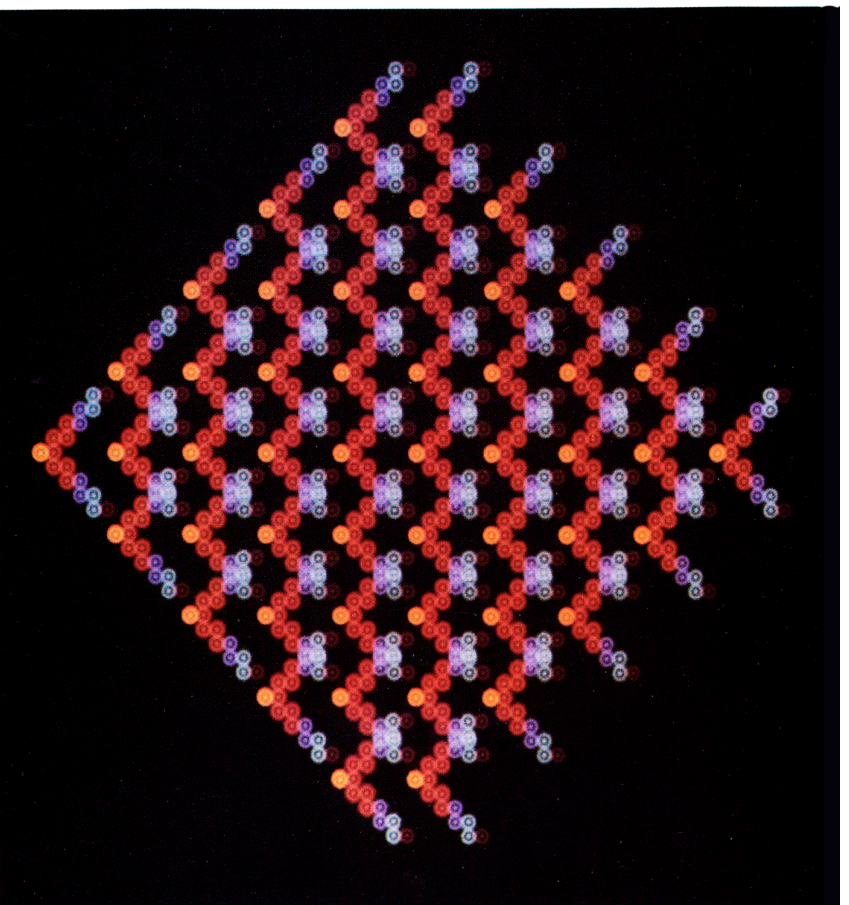


Fig. 3

Pinhole Structure, light graphic work 3.12.3, color print (type c-print), 24x24 cm, 1967.

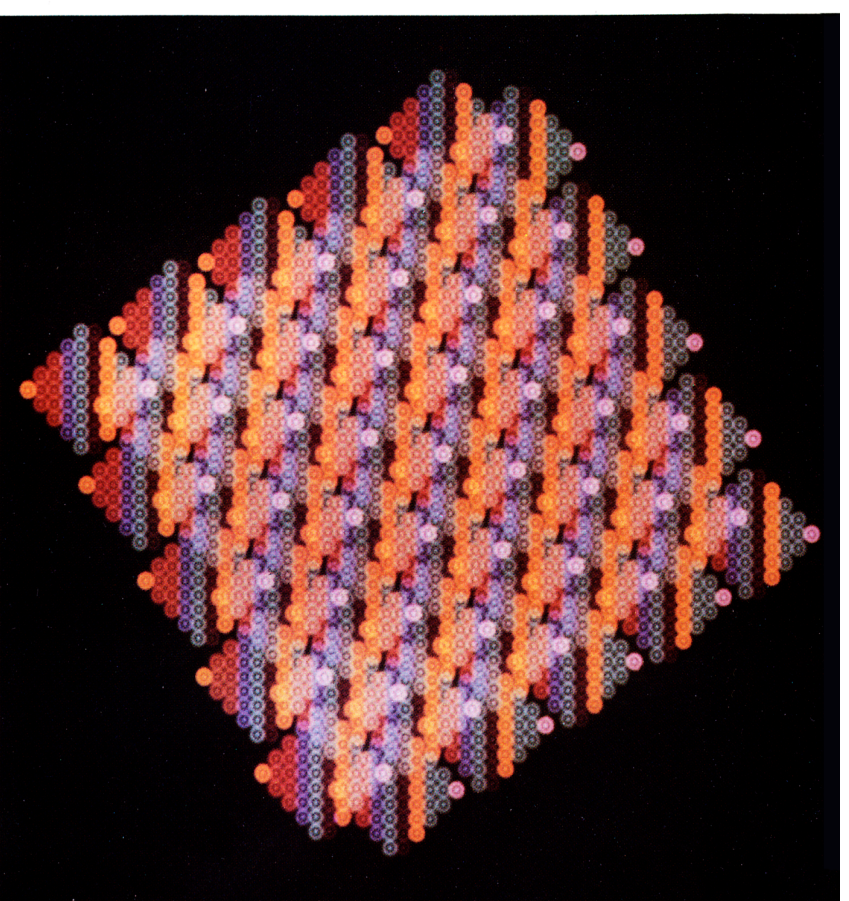


Fig. 4

Pinhole Structure, light graphic work 3.12.12, color print (type c-print), 24x24 cm, 1967.

III.

Finally, I modified the results thus obtained by further compositional steps. A series of sub-programmes emerged. For example, using the method of multiple exposure, based on the principle of translation (Figs. 8-10) and rotation (Fig. 11), colouring (Fig. 10) or contour definition (Figs. 11-15). The picture structures became increasingly complicated, and they also integrated chance as a creative element (Figs. 12, 14, 15).

The collection of pinhole structures covering the period 1967-1974, comprises a total of 254 photographic works of varying sizes, up to 118 x 110 cms. (Fig. 8). Of these 208 are black-and-white and 46 are colour. Most of them are prints from negatives, only 14 are originals. The "pinhole structures" have been published and exhibited many times. Some are to be found in Photographic Collections, as, for example, in the International Museum at George Eastman House in Rochester, N.Y.

As from 1973 I moved away from the field of pinhole work and, for the purpose of experimentation, used a factory-made multiple lens (Kowa Multilens) with up to 57 individual lenses in geometrical order, so as to achieve an even greater degree of precision in my pictures and give them an even greater degree of variety. Here, too, I have always tried to convey the creativity of things technical and have integrated a technical apparatus as a creative factor in my concepts.¹

1. Gottfried Jäger, **Fotografik-Lichtgrafik-Lichtmalerei: Bildgebende Fotografie**. Ursprünge, Konzepte und Spezifika einer Kunstform. DuMont Buchverlag, Köln, 1988

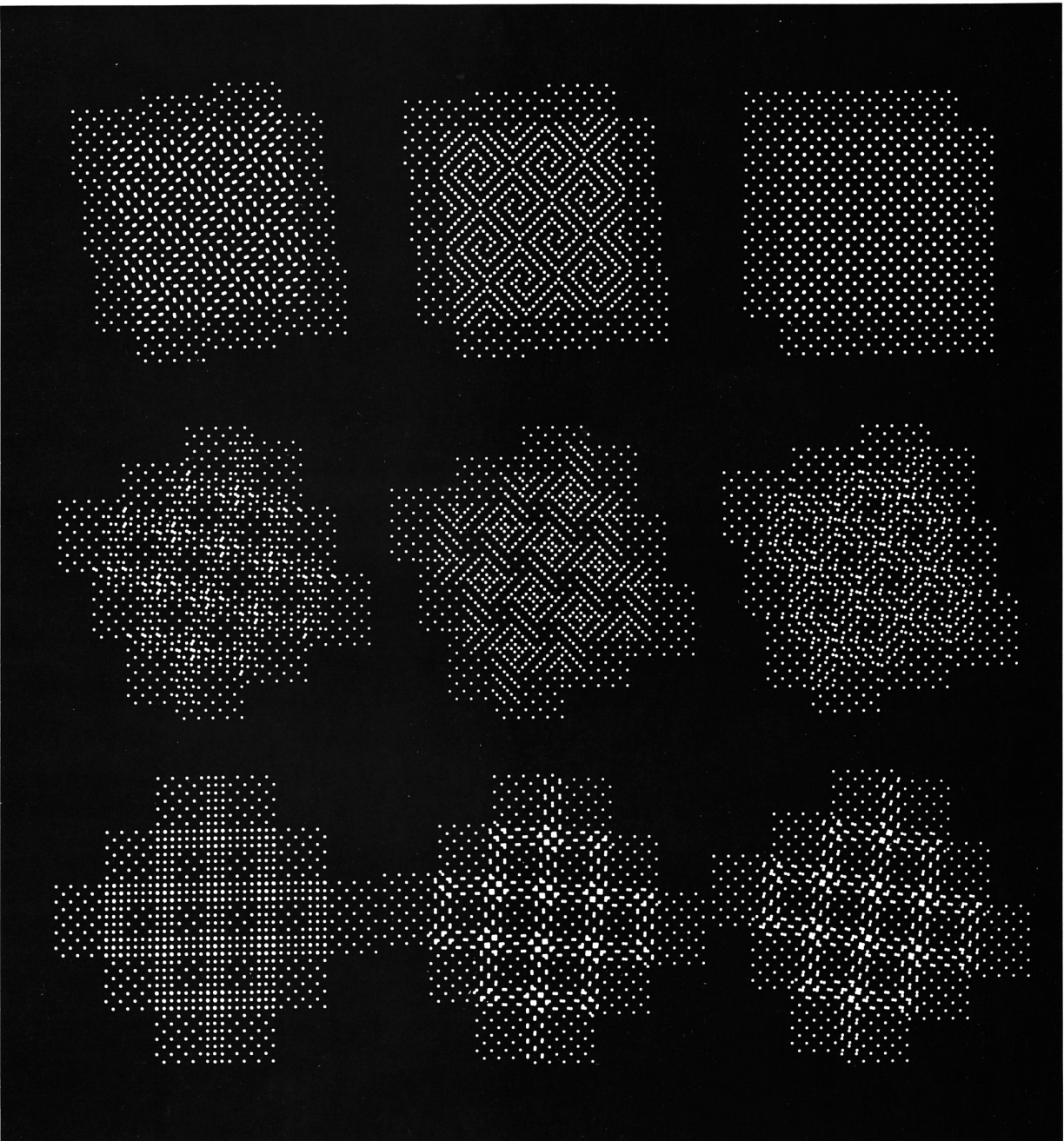


Fig. 5

Pinhole Structure Collective, light graphic work 3.9, 1-9, gelatin silver print, 50x50 cm, 1967.

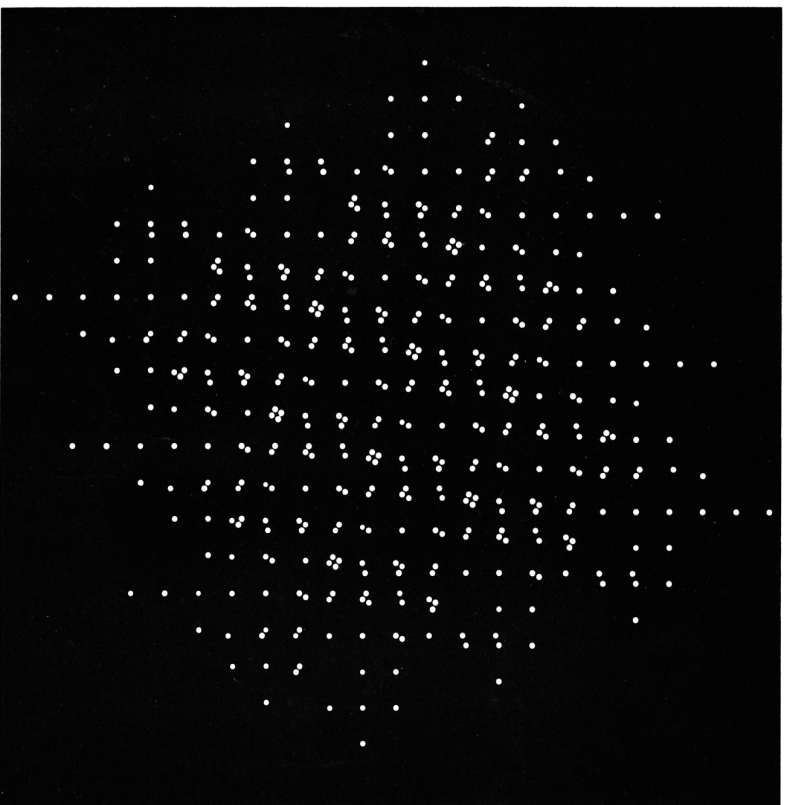


Fig. 6

Pinhole Structure, light graphic work 3.17, gelatin silver print, 50x50 cm, 1970.

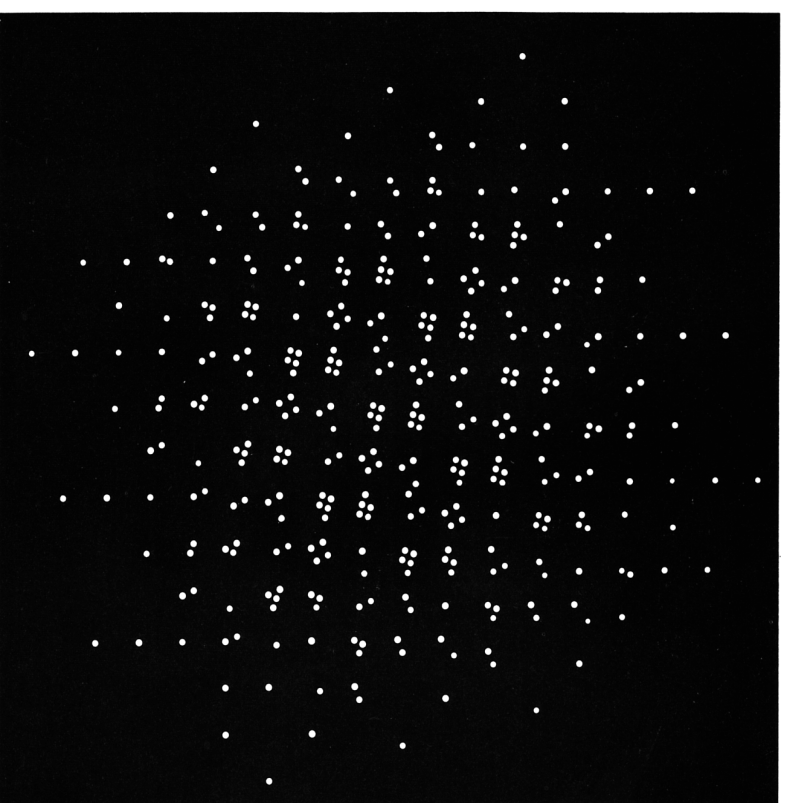


Fig. 7

Pinhole Structure, light graphic work 3.19, gelatin silver print, 50x50 cm, 1970.

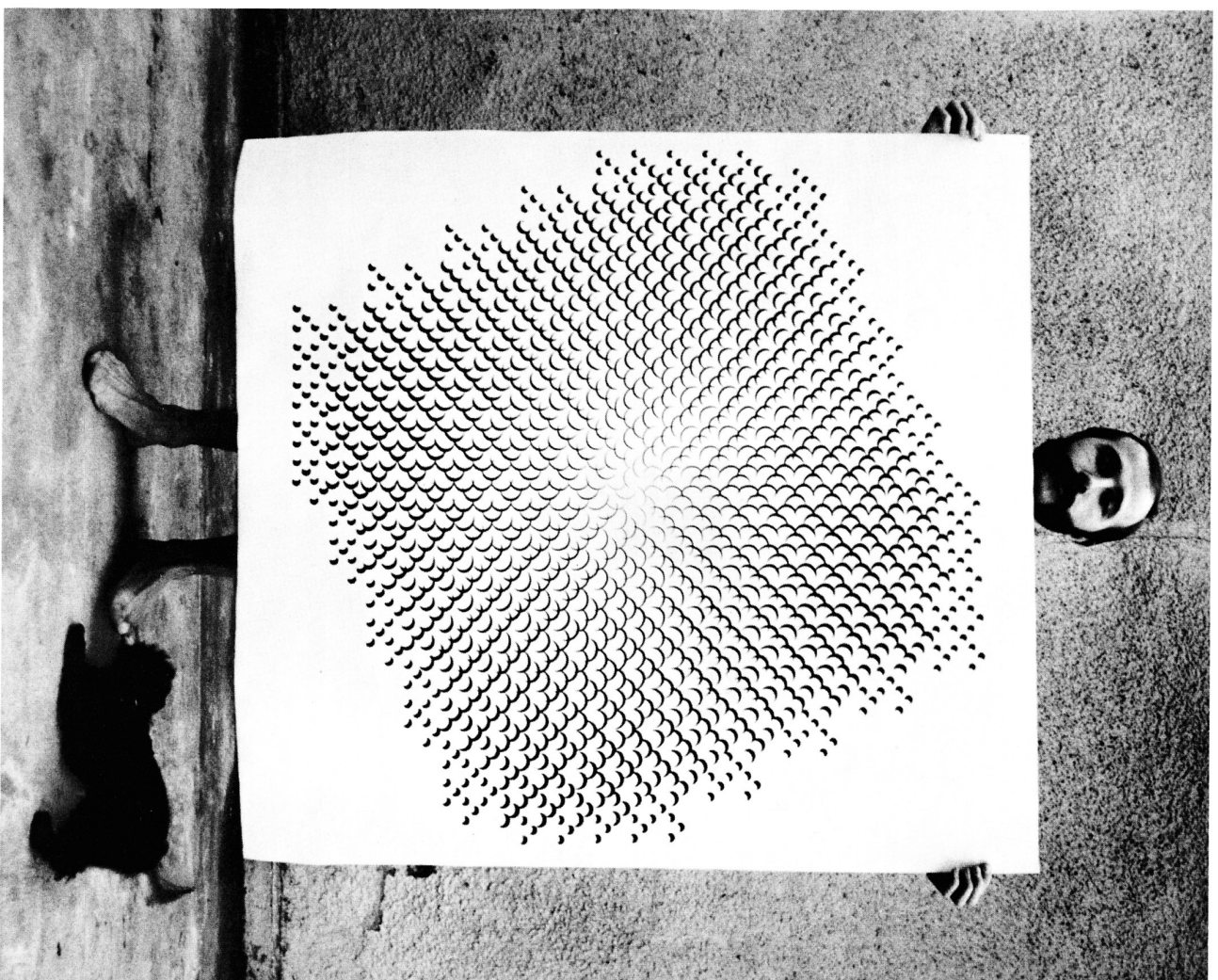


Fig. 8

The author with **Pinhole Structure**, light graphic work 3.8.14, modification F 2.6, gelatin silver print on canvas, 118×110 cm, 1967. Photo: Ursel Jäger, c. 1968.

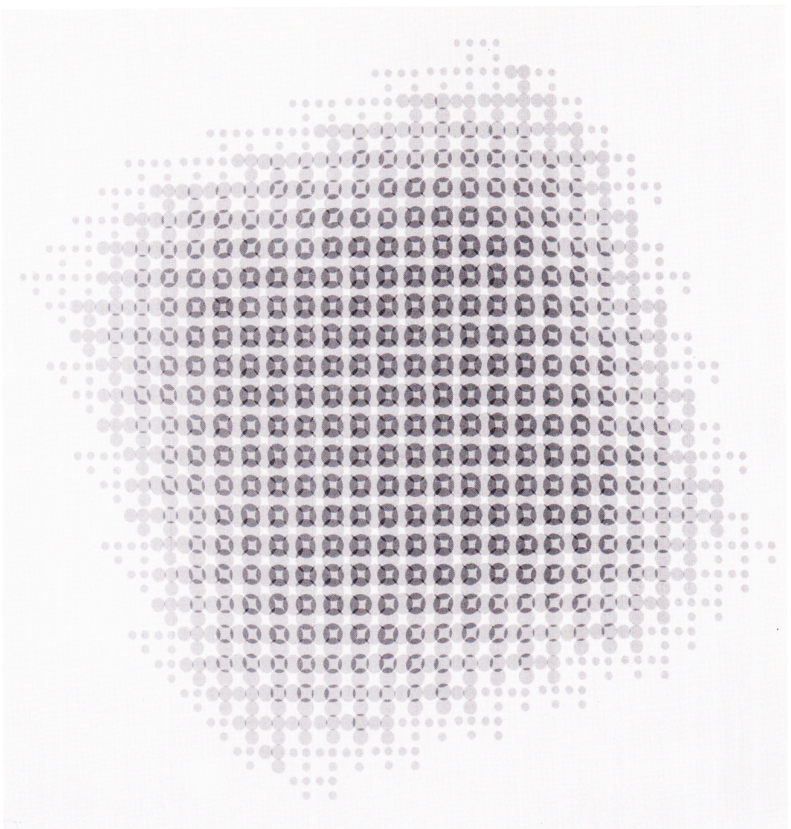


Fig. 9

Pinhole Structure, light graphic work 3.8.14, modification B 2.6, gelatin silver unique, 25×25 cm, 1974.

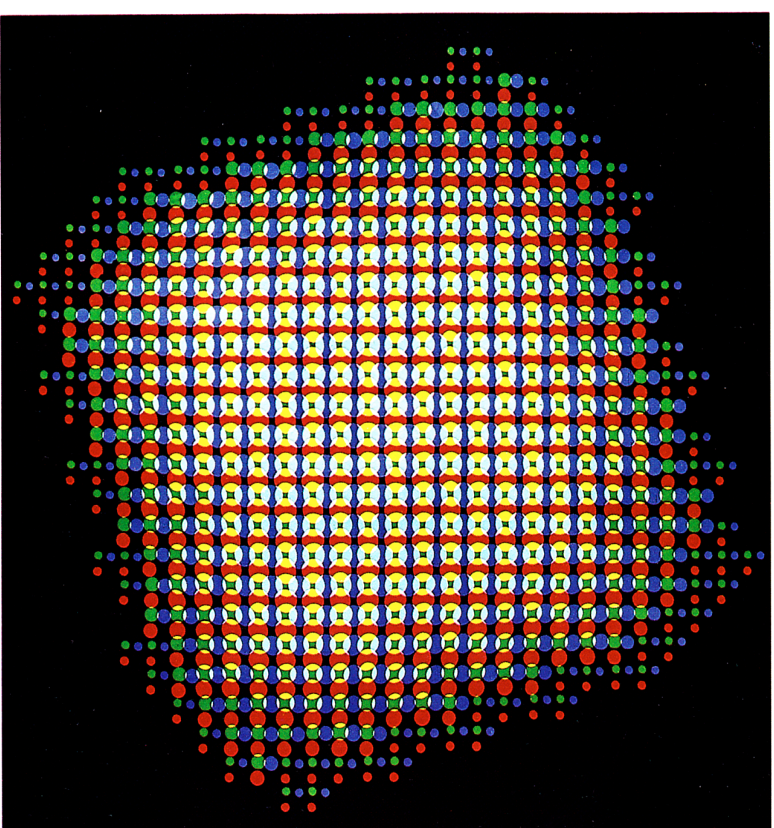


Fig. 10

Pinhole Structure, light graphic work 3.8.14, modification C 2.8.1, color print (type c-print), 50×50 cm, 1967.

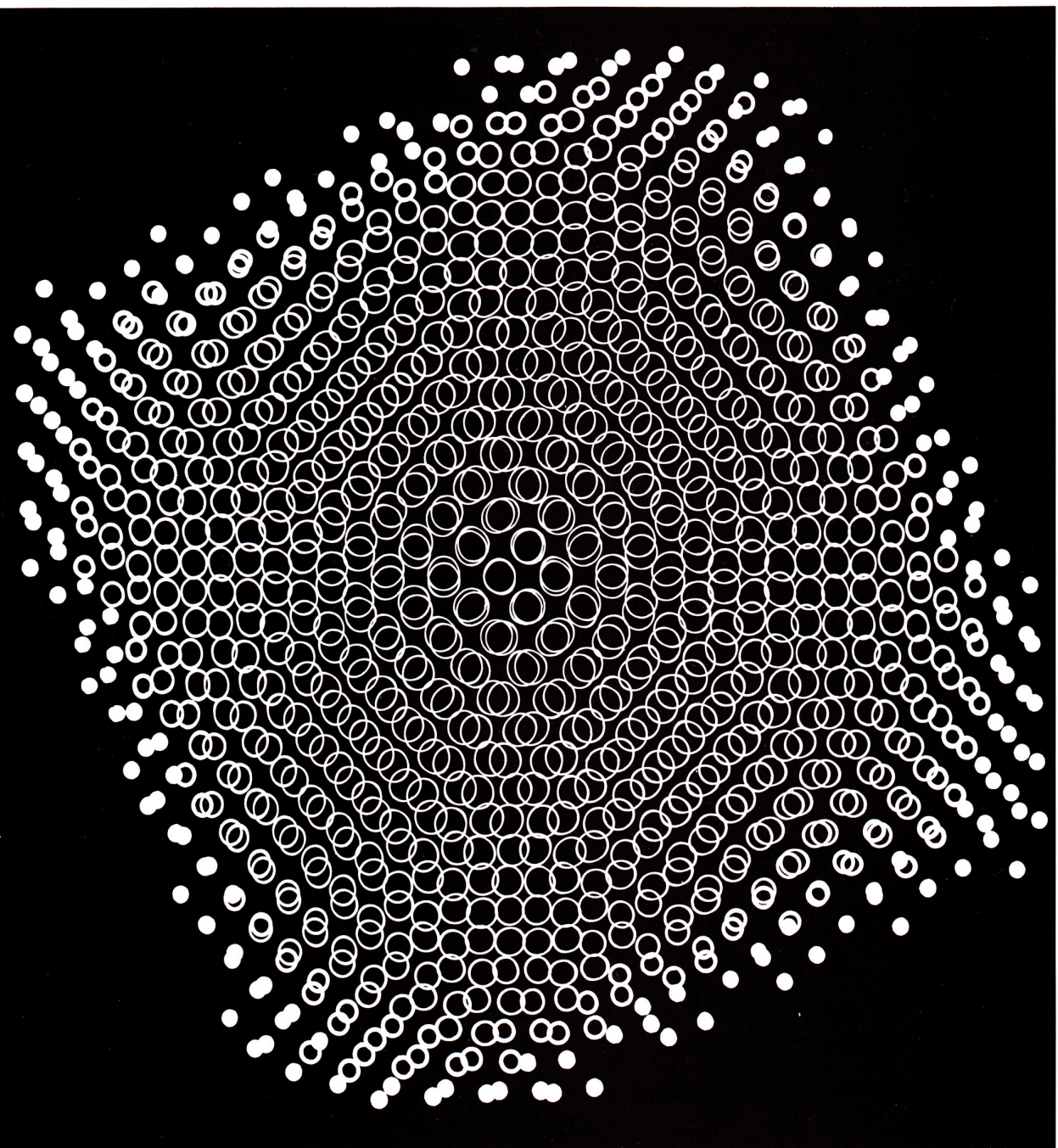


Fig. 11

Pinhole Structure, light graphic work 3.8.14, modification D 3.2, gelatin silver print, 50x50 cm, 1967.

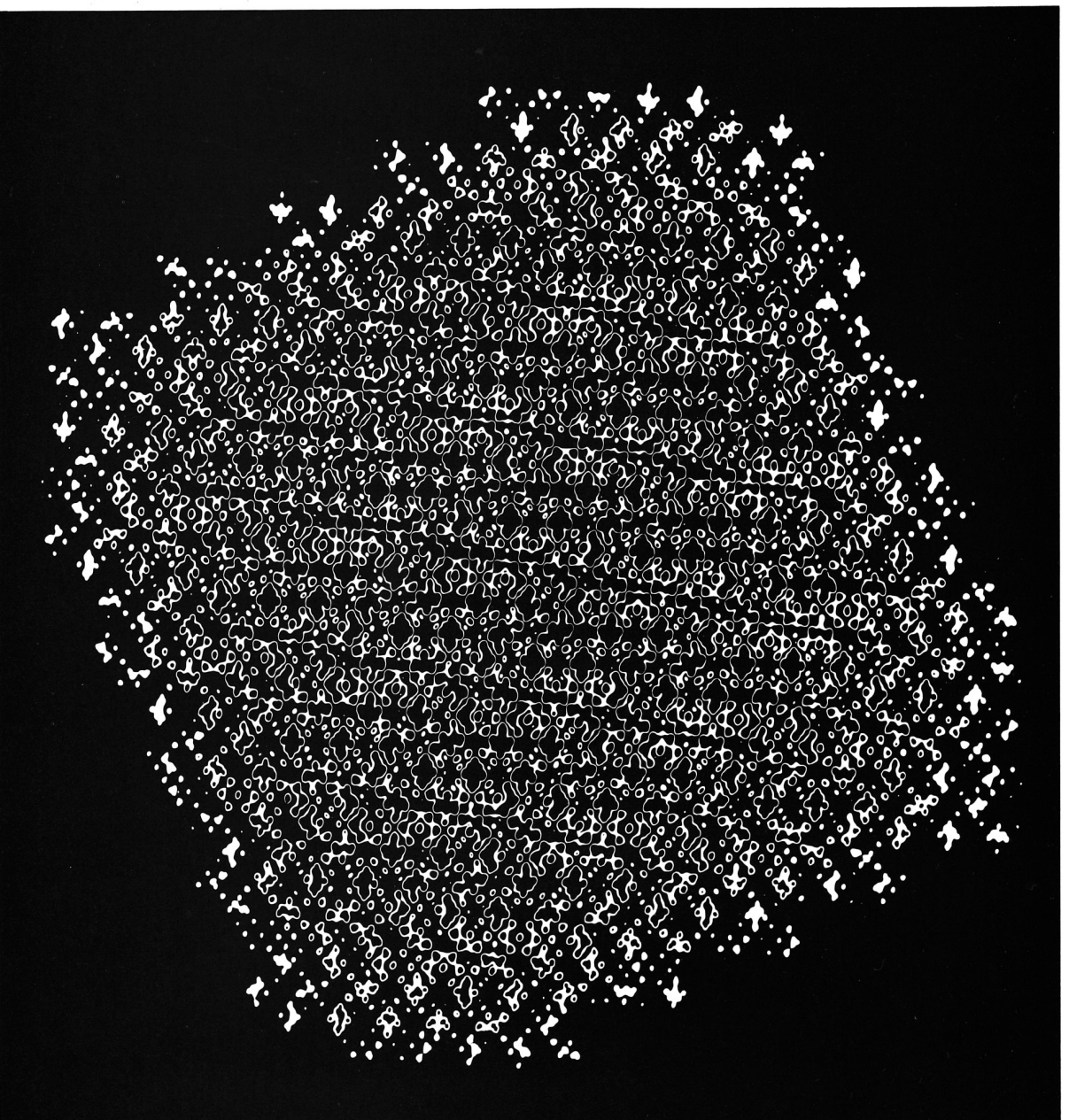


Fig. 12

Pinhole Structure, light graphic work 3.8.14, modification E.3, gelatin silver print, 50x50 cm, 1967.

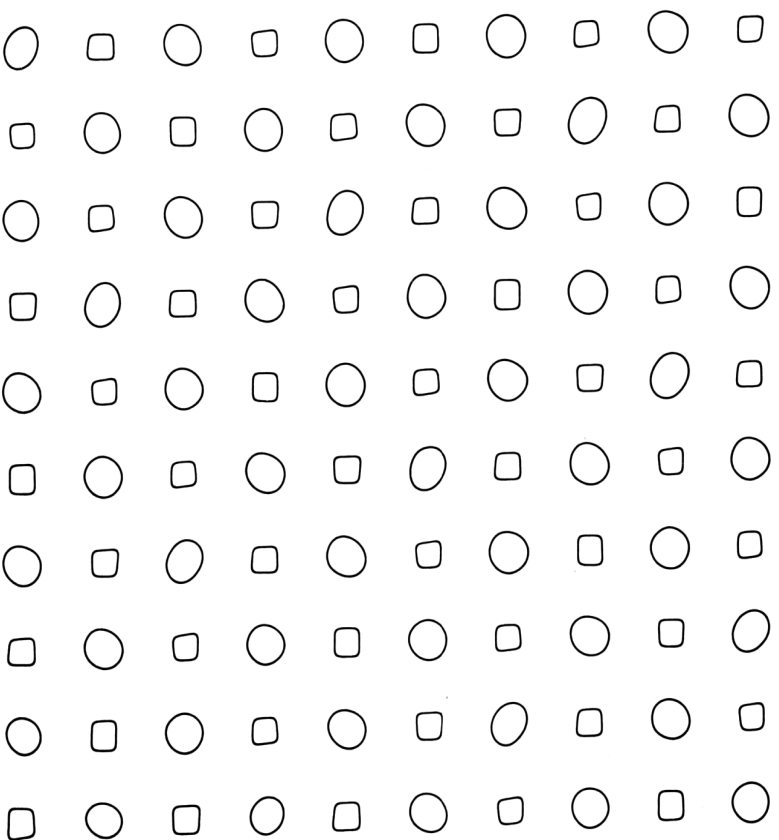


Fig. 14

Grid, light graphic work 6.4, gelatin silver print, 50×50 cm, 1973 (Detail from
Pinhole Structure 3.8.14, modification series D).

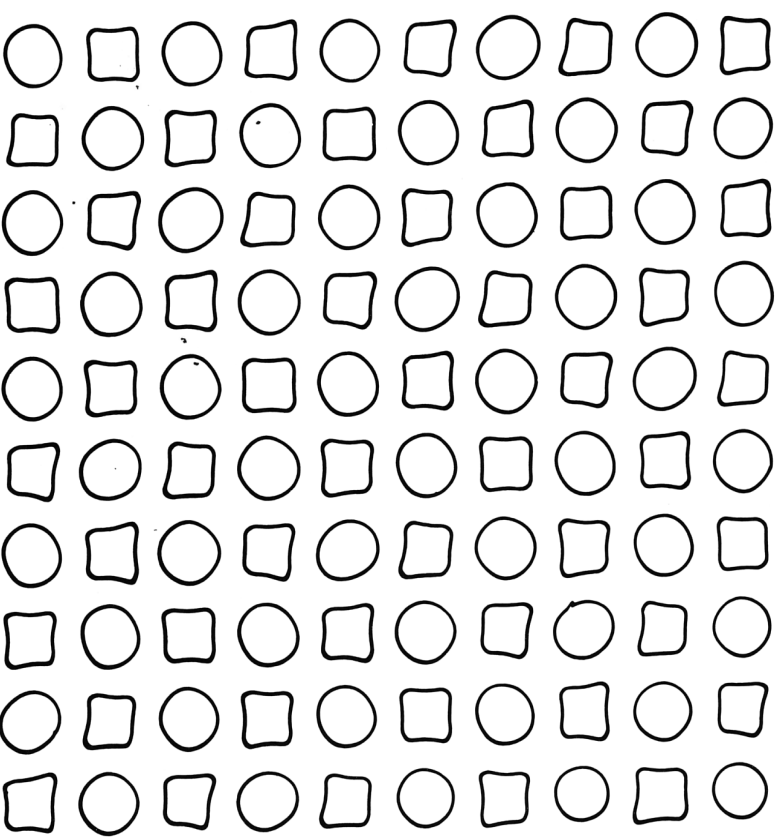


Fig. 15

Grid, light graphic work 6.7, gelatin silver print, 50×50 cm, 1973 (Detail from
Pinhole Structure 3.8.14, modification series D).