

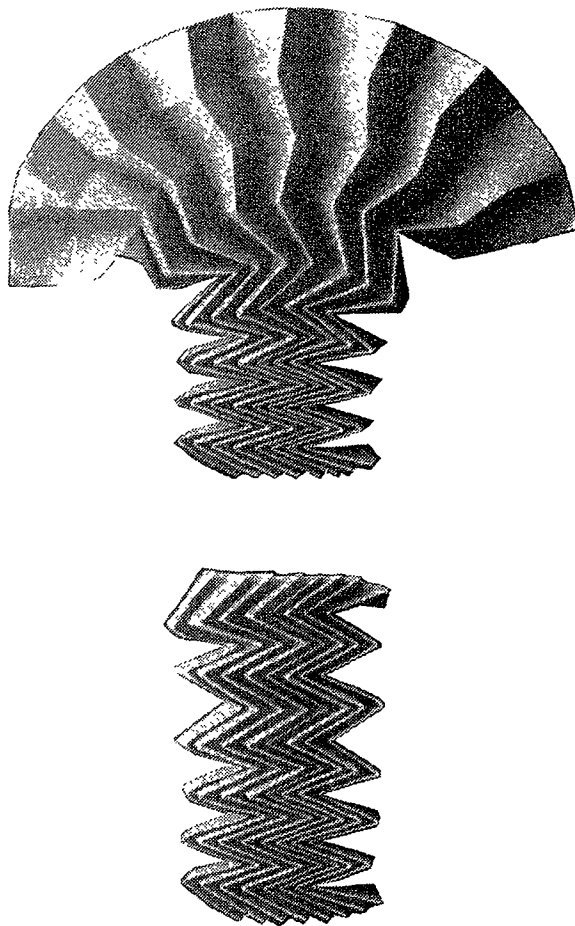
Symmetry: Culture and Science

Ars (Dis)Symmetrica

The Quarterly of the
International Society for the
Interdisciplinary Study of Symmetry
(ISIS-Symmetry)

Editors:
György Darvas and Dénes Nagy

Volume 5, Number 4, 1994



The *Miura-ori*
opened out like a fan

sees him at the same time. The most audacious distortions were used in Frigyes Kőnig's *Sixfold Selfportrait* and *Projections*. The most banal – and therefore very funny – symmetries were presented by two ready-made gobelins, *Moonrise* and *Sunset* recognised by András Lengyel. And the most characteristic question and explanation for all the participants of the exhibition, was asked in the title of the selfportrait of Pierre Székely: *Why am I Symmetrical – or Almost*.

László Beke

EXHIBITORS:

Bartnig, Horst (Berlin)
 Bérczi, Szaniszló (Budapest)
 Bortnyik, Éva and Tubák, Csaba (Vienna)
 Bunke, Zsuzsa (Budapest)
 Carmi, Eugenio (Milano)
 d'Angelo, Aldo (Firenze)
 Dewar, Robert (Altadena, CA)
 Erdély, Dániel (Budapest)
 F. Farkas, Tamás (Budapest)
 Huff, William (Buffalo, N.Y.)
 Hutira, Péter (Baia Mare, Romania)
 Kőnig, Frigyes (Budapest)
 Kovács, Attila (Cologne – Budapest)
 Kuchta, Klara (Geneva)
 Langdon, John (Philadelphia, PA)
 Lengyel, András (Budapest)
 Maurer, Dóra (Budapest)
 Molnár, Vera (Paris)
 Newman, Rochelle and Boles, Martha (Haverhill, MA)
 Pataki, Tibor (Budapest)
 Pimenta, Emanuel Dimas de Melo (Lisboa)
 Rákóczy, Gizella (Budapest)
 Rigby, John, F. (Cardiff)
 Robbin, Tony (New York)
 Sheridan, Sonia Landy (Harshaw, WI)
 Székely, Pierre (Paris)
 Szemenyei-Nagy, Tibor (Nagykanizsa, Hungary)
 Türk, Péter (Budapest)
 Waliczky, Tamás (Karlsruhe – Budapest)
 Zalavári, József (Budapest)

PHOTOS:

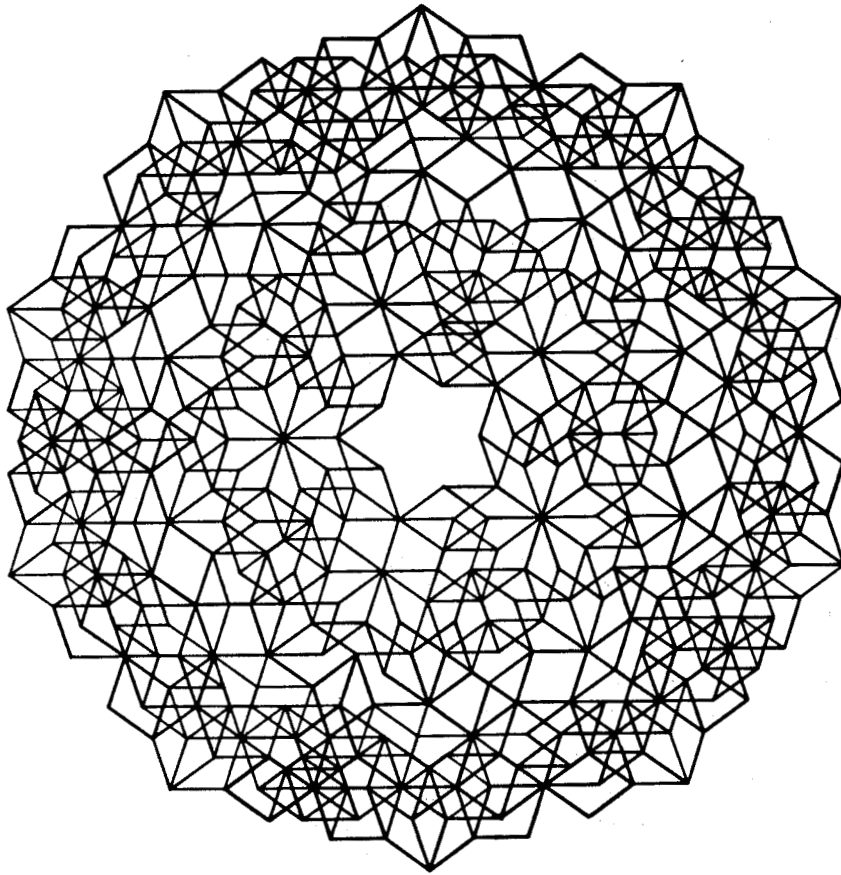
(A) Colour transparencies:

- (1) Péter Hutira (Baia Mare, Romania): *Space – Proportions – Form – Modules*, 1993, painted paper, 34 cm.
- (2) John Rigby (Cardiff, Wales, U.K.): *Patterns* made from discrete plane symmetry groups, colour copy, $29,7 \times 20,8$ cm.
- (3) Horst Bartnig (Berlin): *Breaks*, 2464 lines in seven colours, 1989, computer drawing, 48×48 cm.
- (4) Gizella Rákóczy (Budapest): *Untitled*, 1993, tempera on paper, 111×160 cm.
- (5) Rochelle Newman and Martha Boles (Haverhill, MA, USA): *Fractal Concepts*, 1992, photographic poster, $76,7 \times 71$ cm.
- (6) Tamás F. Farkas (Budapest): *Inaggo*, 1991, acrylic on canvas, $60,5 \times 60,5$ cm.
- (7) Zsuzsanna Bunke (Budapest): *Quotation*, 1983, pen drawing, $43,5 \times 30,6$ cm.
- (8) Pierre Székely (Paris): *Why am I Symmetrical – or Almost*, 1993, coffee drawing, $38,3 \times 24,3$ cm.
- (9) Sonia Landy Sheridan (Harshaw, WI, U.S.A.): *Crisis?* 1993, photo of a drawing, $21,5 \times 56$ cm.
- (10) András Lengyel (Budapest): *Ready-made Moonrise*, 1993, framed goblin, $14,5 \times 14,5$ cm; *Ready-made Sunset*, 1993, framed goblin, $14,5 \times 14,5$ cm.
- (11) Tamás Waliczky (Karlsruhe – Budapest): *The Garden*, 1992, frame from the computer animation.
- (12) Eugenio Carmi (Milano): *Imaginary Signal* I, 1992, II, 1990, watercolour, 24×21 cm, cover design for *Symmetry: Culture and Science*.

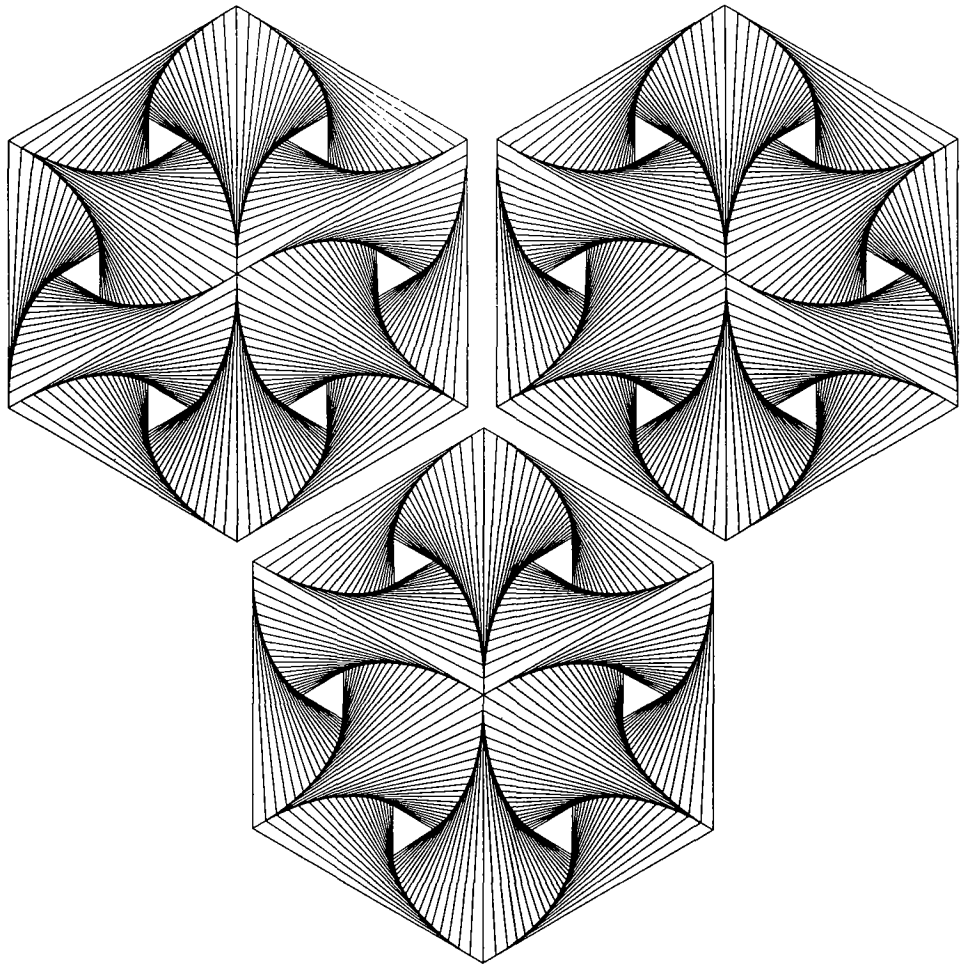
(B) Black and white

- (1) Tony Robbin (New York): *Quasicrystal Dome*, 1991, computer drawing, 87×112 cm, (detail).
- (2) William S. Huff (Buffalo, NY, U.S.A.): *Dissymmetric Kaleidoscopes* (Hommage à Pasteur), 1961/1990, computer drawing, cover design for *Symmetry: Culture and Science*.
- (3) József Zalavári (Budapest): *Homage to Malevich* 1913-1993, 1993, 8 drawings, 29×21 cm each, on a board of $71,5 \times 105$ cm.
- (4) Attila Kovács (Cologne – Budapest): *Relation system 1* – 1978 + *Meta square* $6 \times 6 \rightarrow 1 \times 1$, 19..

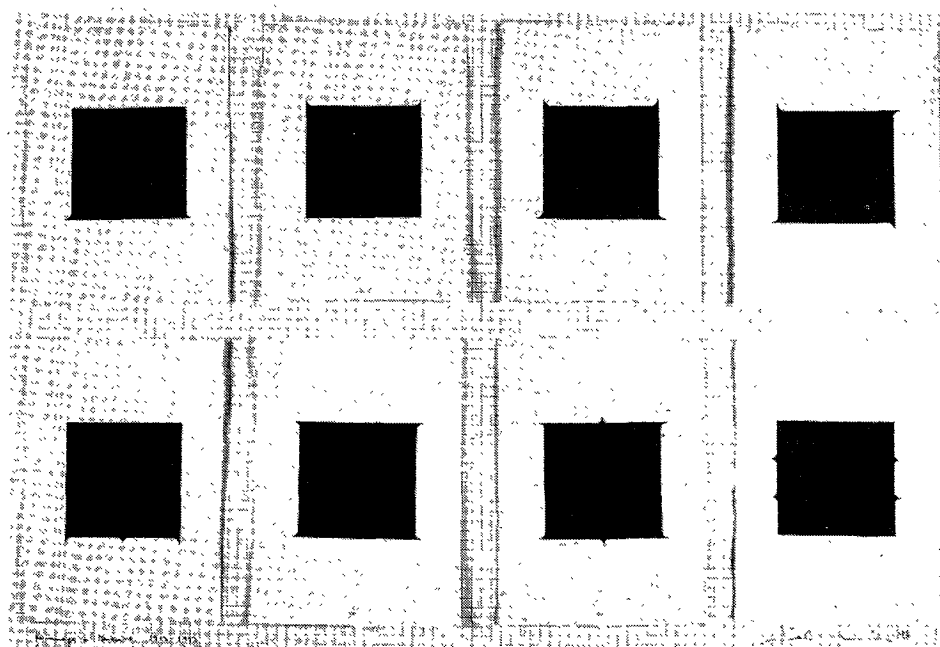
- (5) Vera Molnar (Paris): *Cycle Symmetry-breaking*, 1-6, 1976, computer drawings, 30 × 40 cm each.
- (6) Robert E. Dewar (Altadena, CA, U.S.A.): *Molecule*, painted cardboard, 32 × 49 cm.
- (7) Eugenio Carmi (Milano): *Imaginary Signal III*, 1990, watercolour, 24 × 21 cm, cover design for *Symmetry: Culture and Science*.
- (8) John Langdon (Philadelphia): *Philosophy*, Dissymmetrical ambigram, 21 × 29,7 cm; *Symmetry*, Dissymmetrical ambigram, 29,7 × 21 cm, from the book John Langdon (1992) *Wordplay. Ambigrams and Reflections on Ambigrams*, New York: Harcourt Brace Jovanovich Publ., 172 pp.
- (9) Zsuzsanna Bunke (Budapest): *Ideogramma*, 1990(?), colour pen drawing, 43,5 × 30,6 cm.
- (10) Zsuzsanna Bunke (Budapest): *Ideogramma*, 1987(?), colour pen drawing, 43,5 × 30,6 cm.
- (11) Klara Kuchta (Geneva): *Interconnection*, 1987, photo 41,3 × 31,3 cm.
- (12) Dóra Maurer (Budapest): *Photogram*, from the series Hidden Structures.
- (13) Péter Türk (Budapest): *Direction – Shape – Form*, 1983, photos taken from ink drawings, 3 × 16 pieces, 21 × 16 cm each.
- (14) Emanuel Dimas de Melo Pimenta (Lisbon): *Mantra*, computer drawing, 21 × 29,8 cm.
- (15) Aldo d'Angelo (Florence): *Younger Marilyn*, symmetrical image of the young actress, computer generated colour photo, 22 × 17,5 cm.
- (16) Aldo d'Angelo (Florence): *Older, symmetrical hypothesis of middle-aged Marilyn*, computer generated colour photo, 23,5 × 19,5 cm.
- (17) Tibor Pataki (Budapest): *Portrait*, 1993, photo collage, 40 × 60 cm.
- (18) Éva Bortnyik – Csaba Tubák (Vienna): *Tower*, 1993, X-Ray photos in wooden boxes, 30 × 30 × 30 cm each.
- (19) Tibor Szemenyey-Nagy (Nagykanizsa, Hungary): *Ellipsoid and its X-Ray photographs*, plaster of Paris, 6 × 26 cm, photo 193 × 16,5 cm.
- (20) Frigyes König (Budapest): *Sixfolded Selfportrait*, 1984, lithography, 32 × 35 cm.
- (21) Frigyes König (Budapest): *Projection*, 1984, lithography, 62,5 × 45 cm.



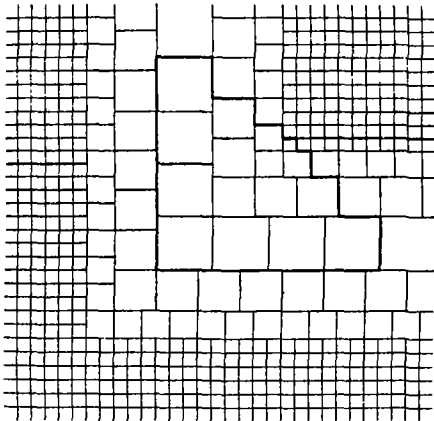
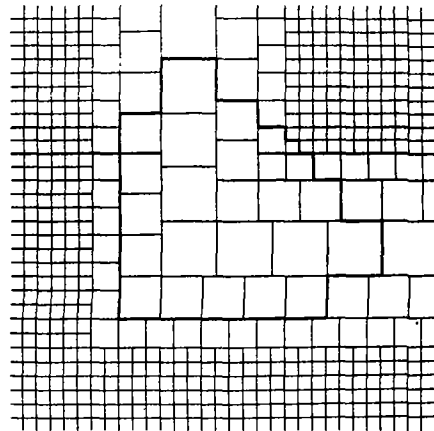
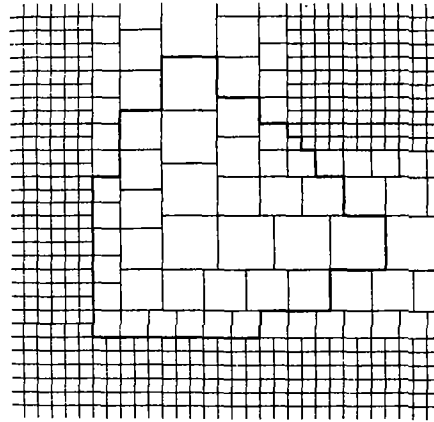
Quasicrystal Dome, 1991, computer drawing, 87 × 112 cm, (detail).



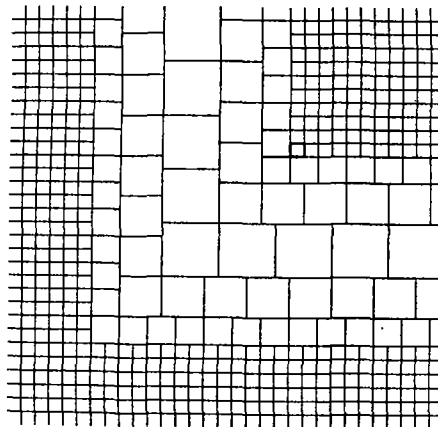
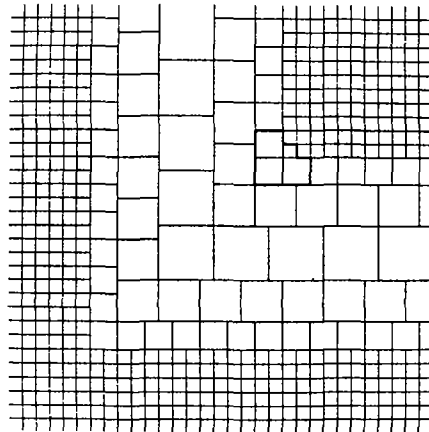
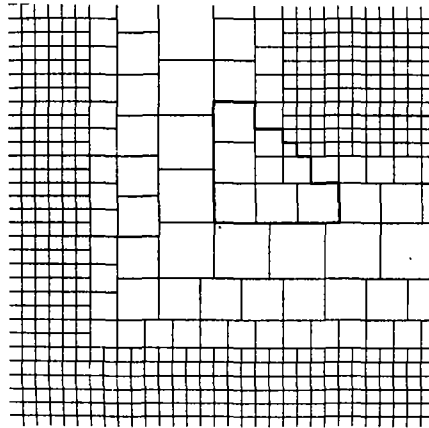
Dissymmetric Kaleidoscopes (Hommage à Pasteur), Variations on a classic design, 1961/1990, computer drawing, cover design for *Symmetry: Culture and Science*.



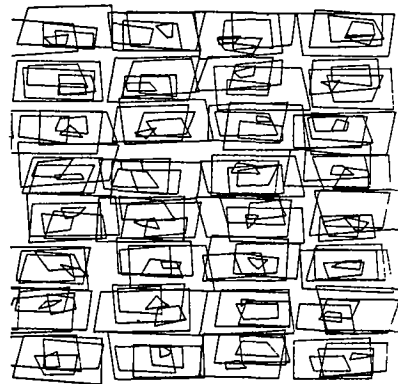
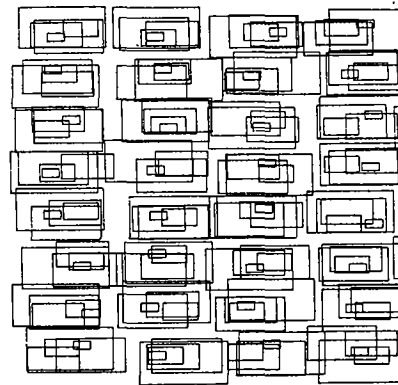
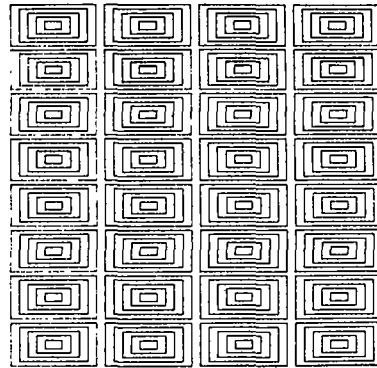
Homage to Malevich 1913-1993, 1993, 8 drawings, 29 × 21 cm each, on a board of 71,5 × 105 cm.



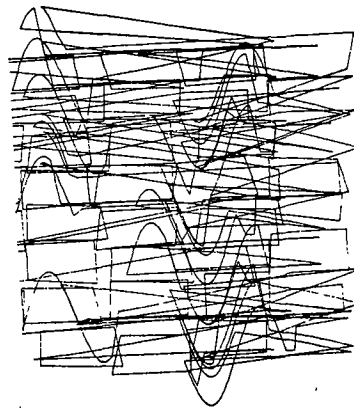
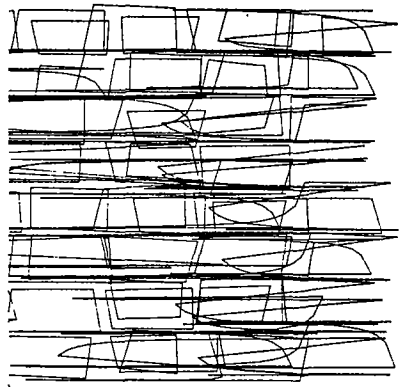
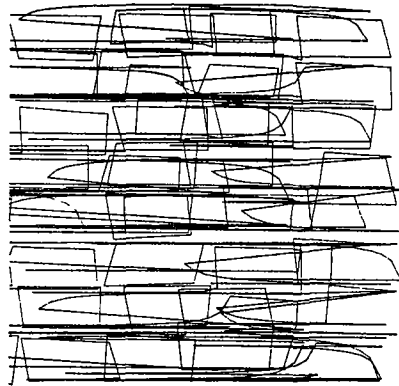
Relation system 1 - 1978 + Meta square, $6 \times 6 \rightarrow 1 \times 1$, 19..



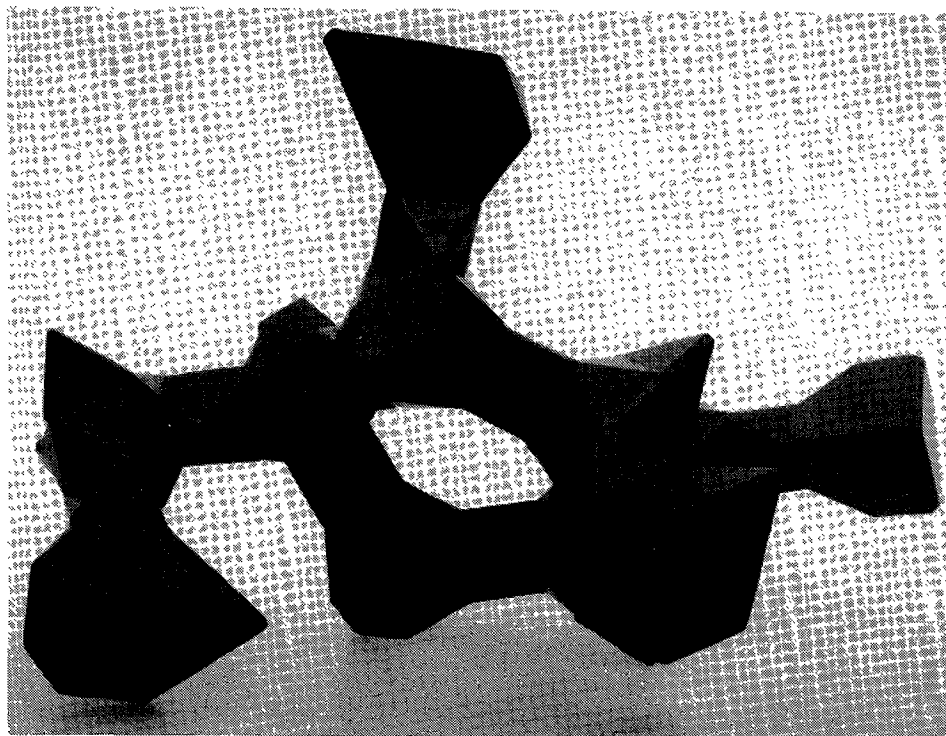
Relation system 1 – 1978 + Meta square, $6 \times 6 \rightarrow 1 \times 1$, 19..



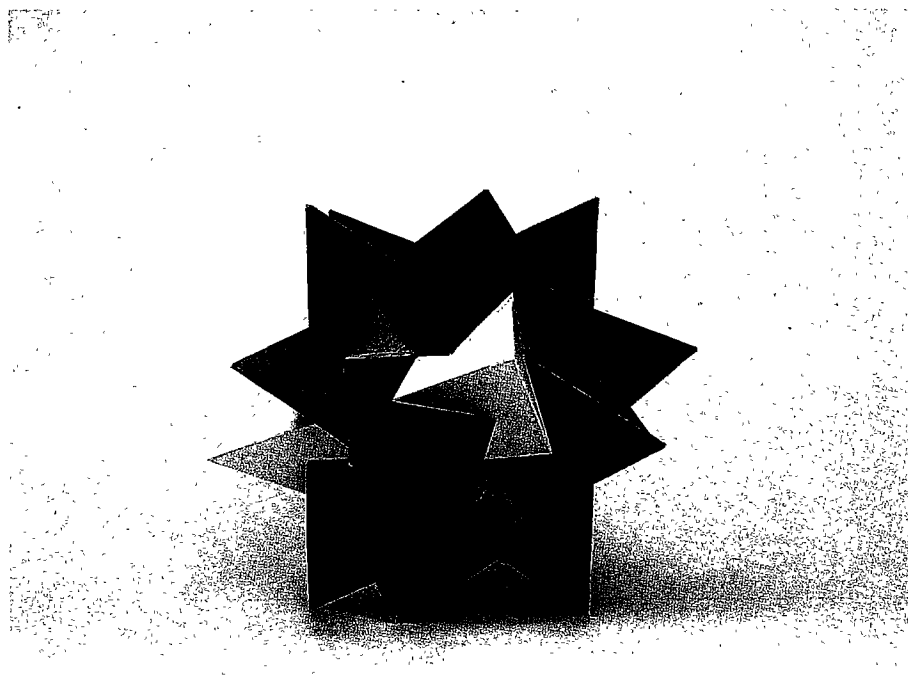
Cycle Symmetry-breaking, 1-6, 1976, computer drawings, 30 × 40 cm each.



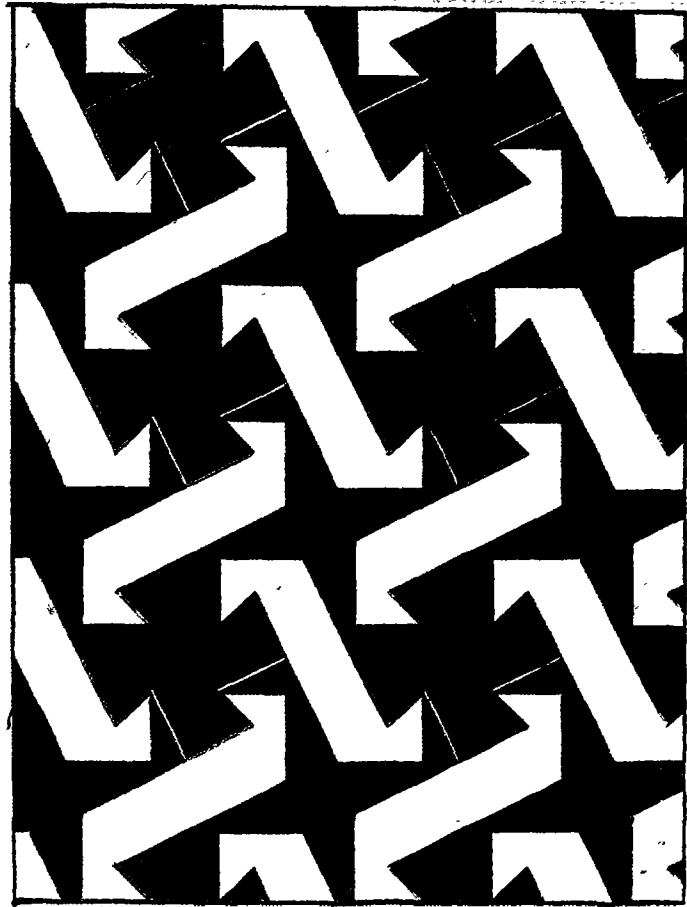
Cycle Symmetry-breaking, 1-6, 1976, computer drawings, 30 × 40 cm each.



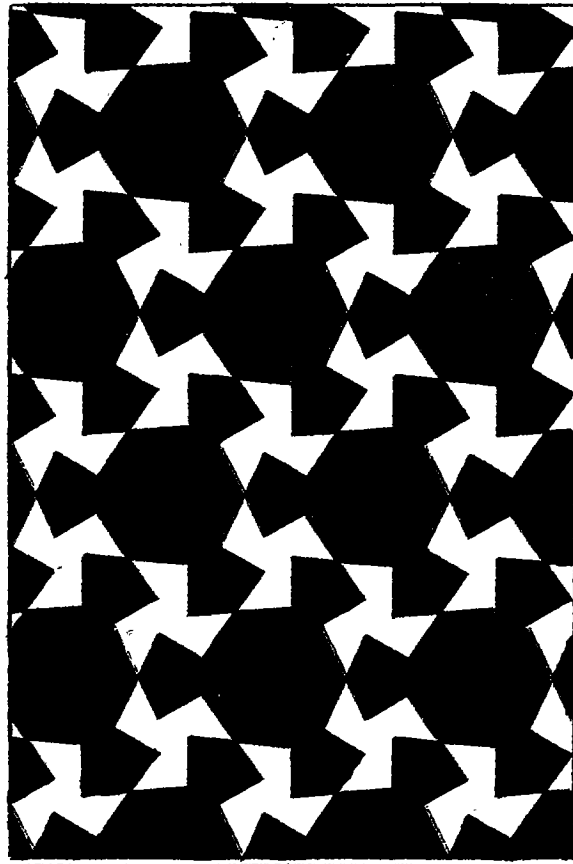
Molecule, painted cardboard, 32 × 49 cm.



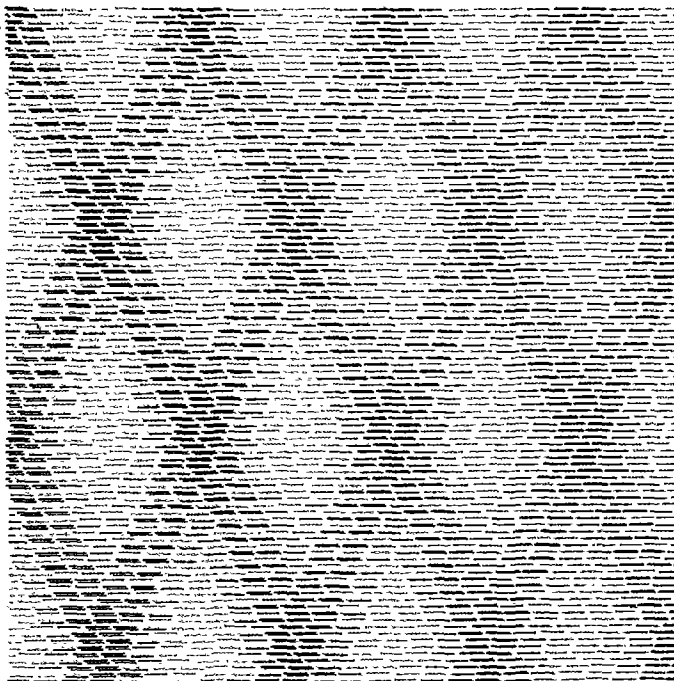
Space – Proportions – Form – Modules, 1993, painted paper, 34 cm.



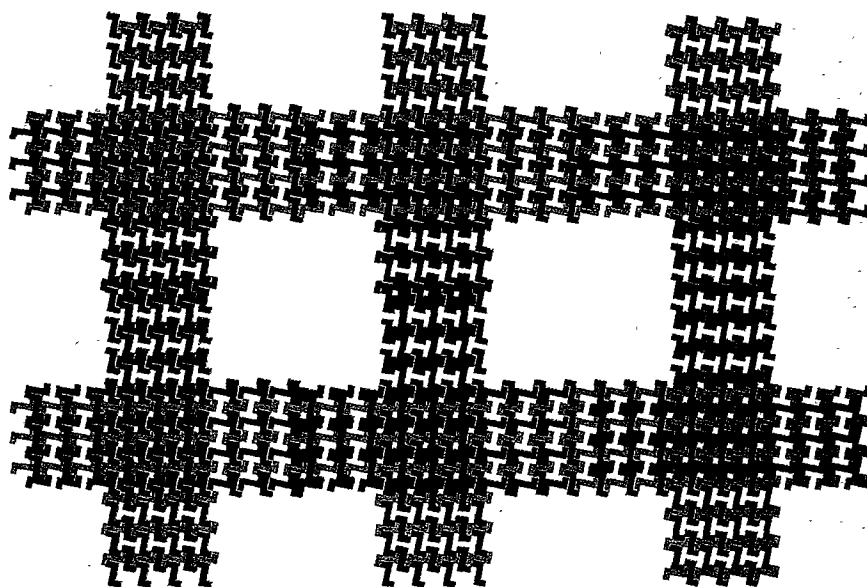
Patterns made from discrete plane symmetry groups, colour copy, 29,7 × 20,8 cm.



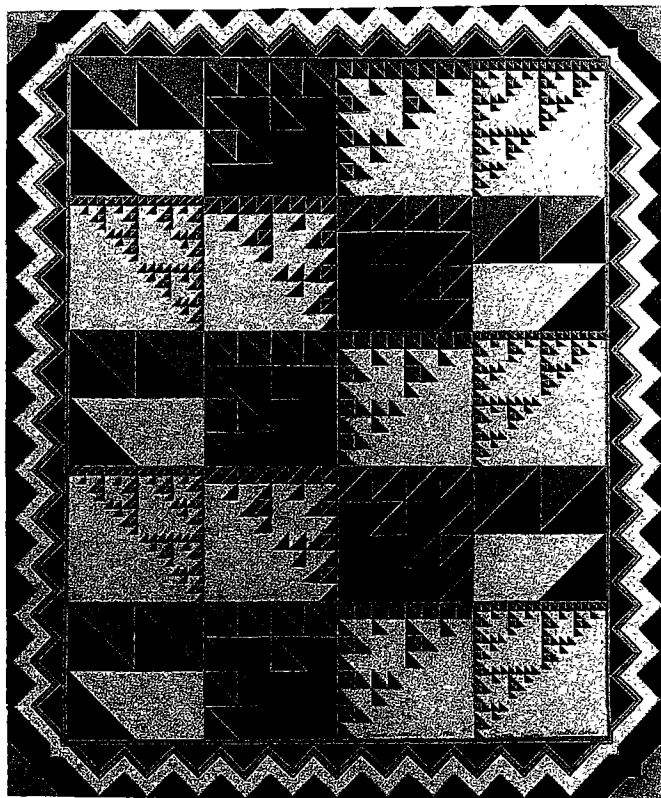
Patterns made from discrete plane symmetry groups, colour copy, 29,7 × 20,8 cm.



Breaks, 2464 lines in seven colours, 1989, computer drawing, 48 × 48 cm.

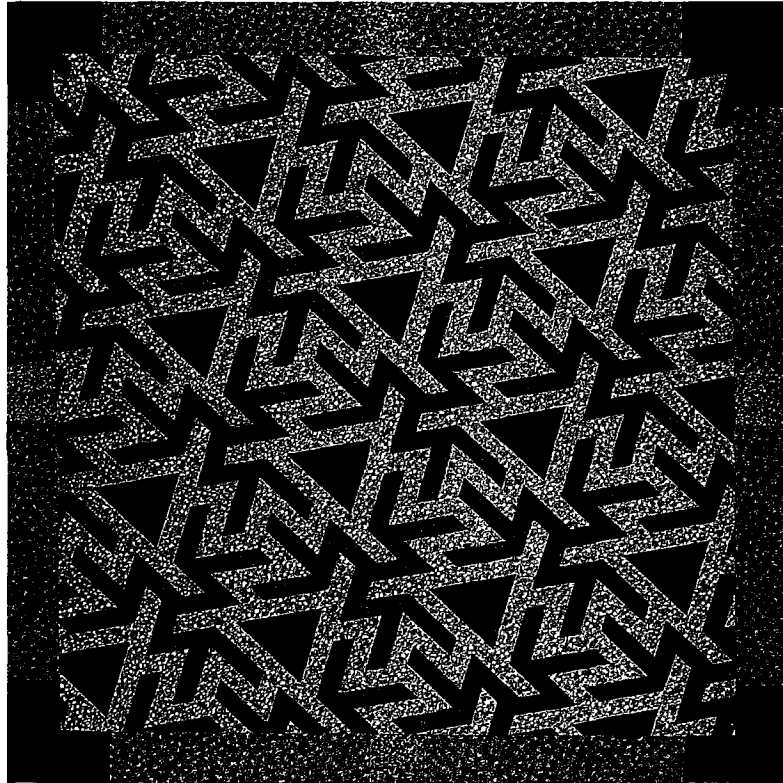


Untitled, 1993, tempera on paper, 111 × 160 cm.



FRACTAL CONCEPTS
Seminole Fractal © Rochelle Newman & Martha Boles
From the PLANAR DIMENSION Series

Fractal Concepts, 1992, photographic poster, 76,7 × 71 cm.



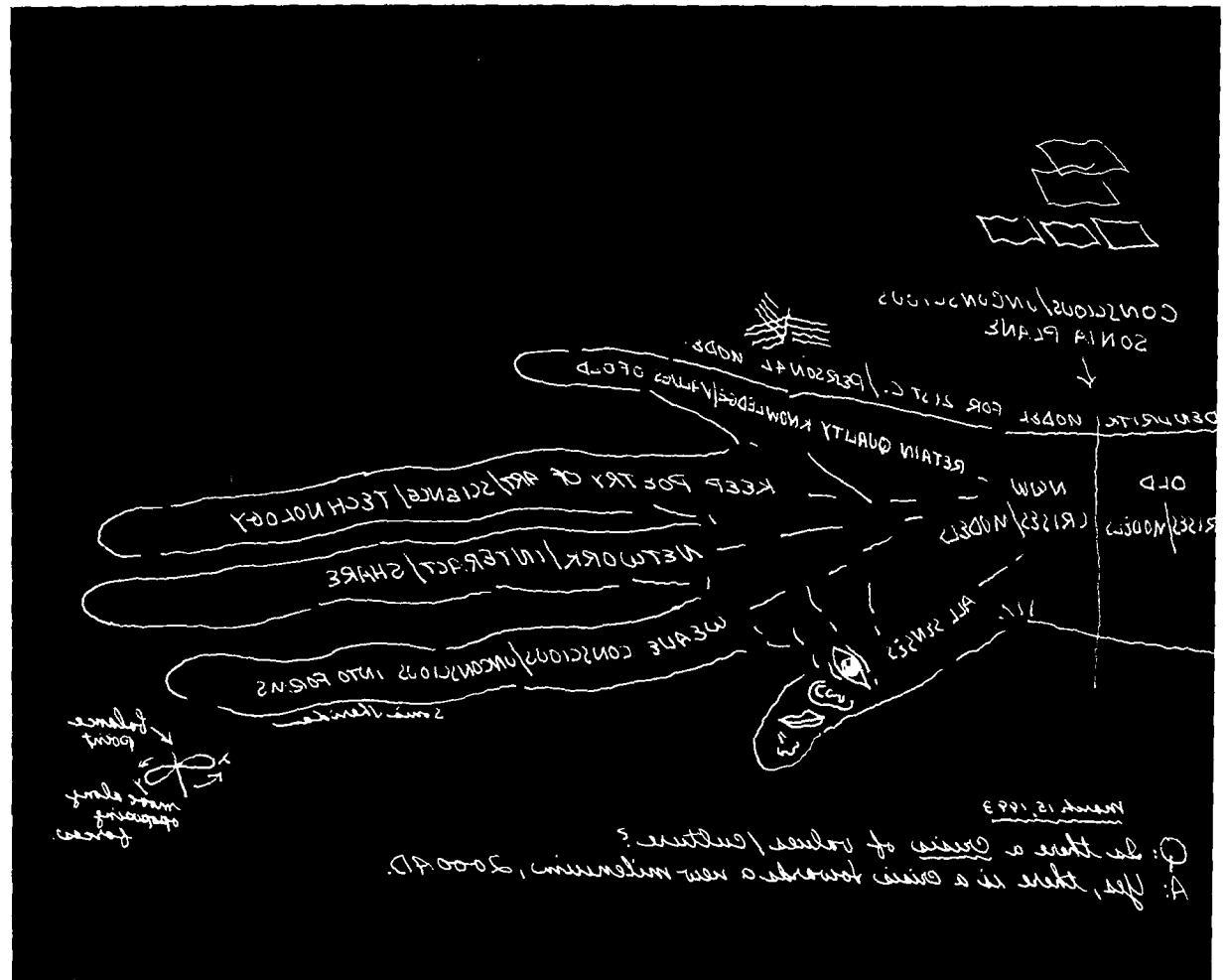
Inaggo, 1991, acrylic on canvas, 60,5 × 60,5 cm.



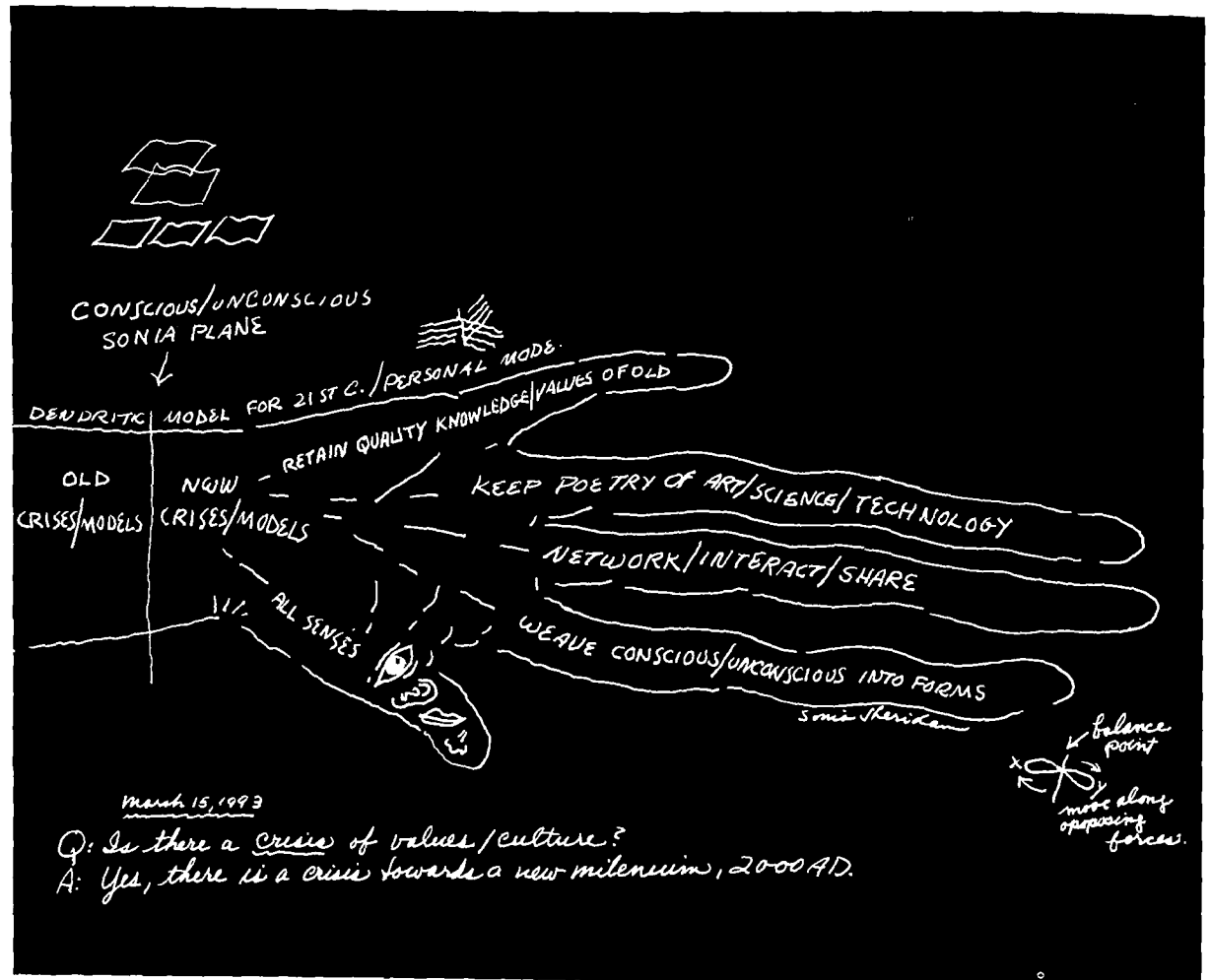
Quotation, 1983, pen drawing, 43,5 × 30,6 cm.



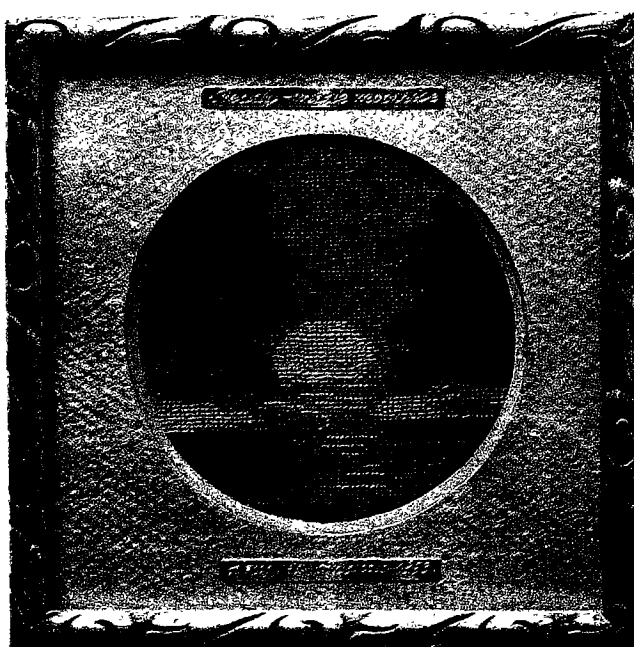
Why am I Symmetrical – or Almost, 1993, coffee drawing, 38,3 × 24,3 cm.



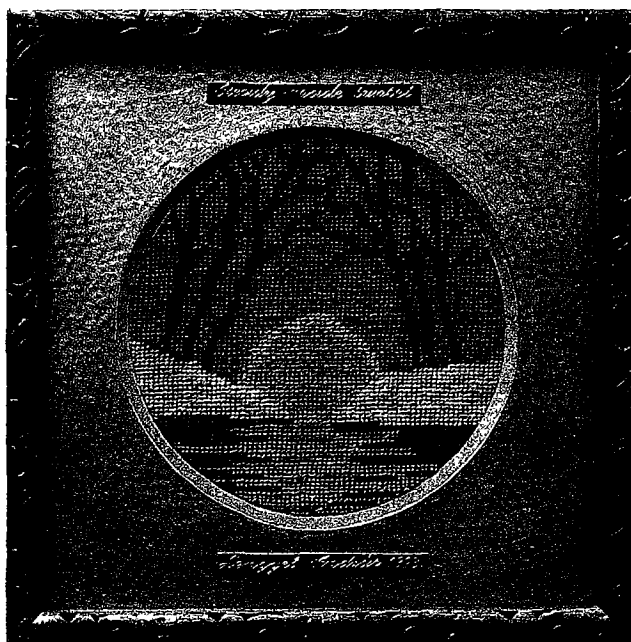
Crisis? 1993, photo of a drawing, 21,5 × 56 cm.



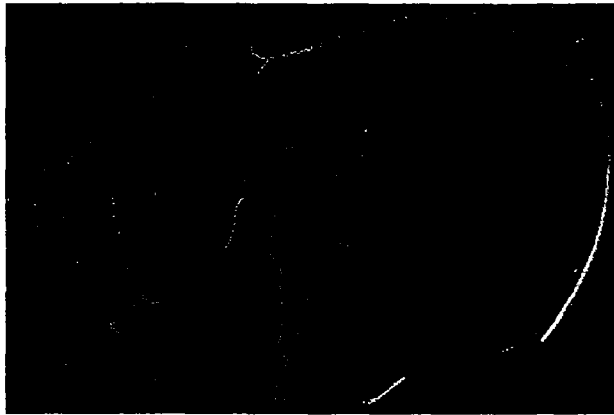
Crisis? 1993, photo of a drawing, 21,5 × 56 cm.



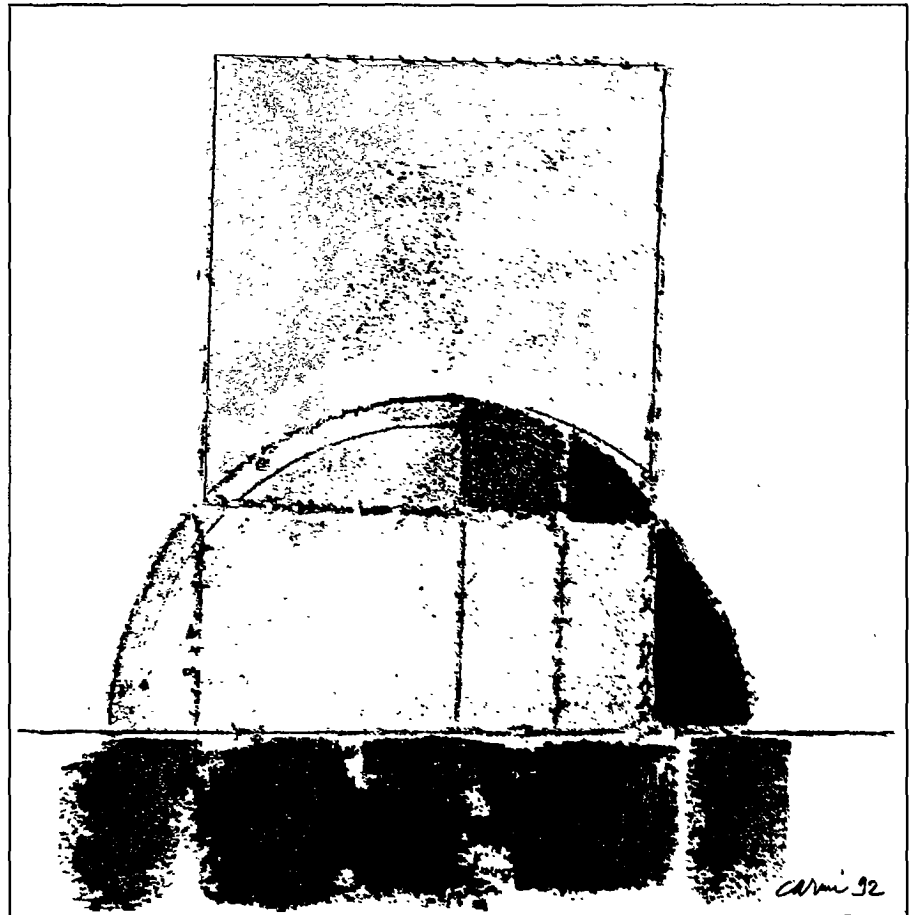
Ready-made Moonrise, 1993, framed goblin, 14,5 × 14,5 cm.



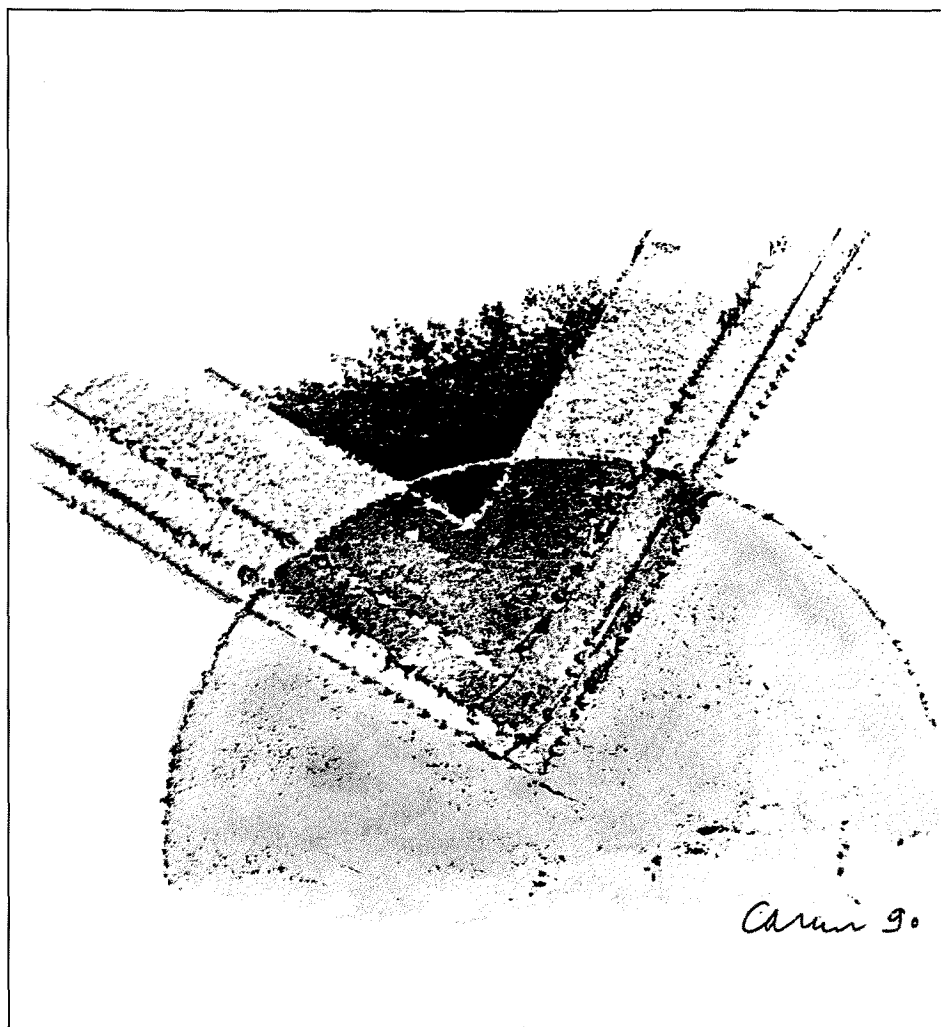
Ready-made Sunset, 1993, framed goblin, 14,5 × 14,5 cm.



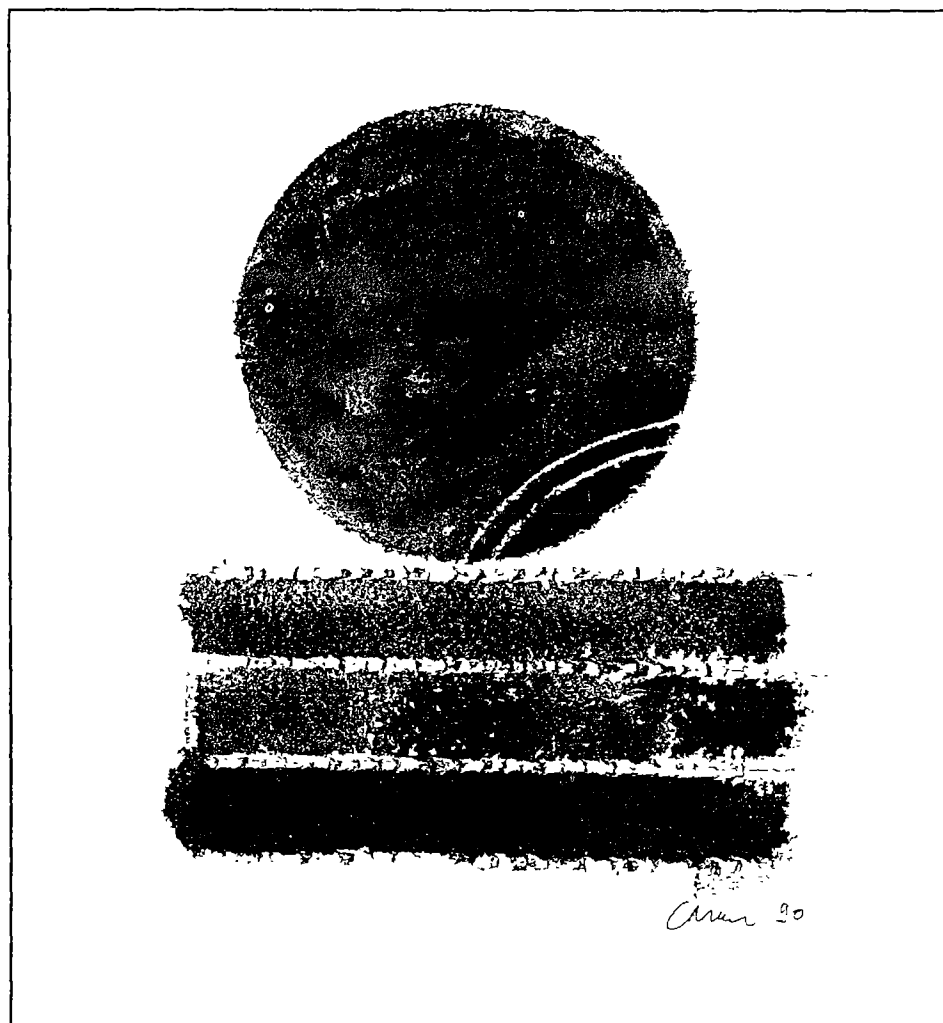
The Garden, 1992, frame from the computer animation.



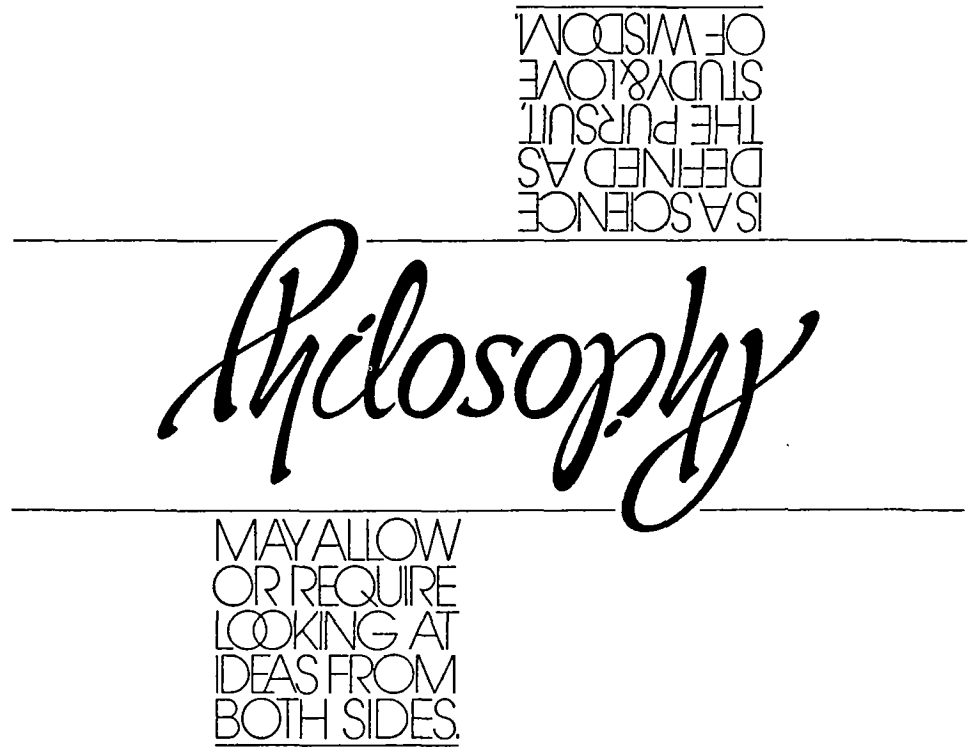
Imaginary Signal I, 1992, watercolour, 24 × 21 cm, cover design for *Symmetry: Culture and Science*.



Imaginary Signal II, 1990, watercolour, 24 × 21 cm, cover design for *Symmetry: Culture and Science*.



Imaginary Signal III, 1990, watercolour, 24 × 21 cm, cover design for *Symmetry: Culture and Science*.



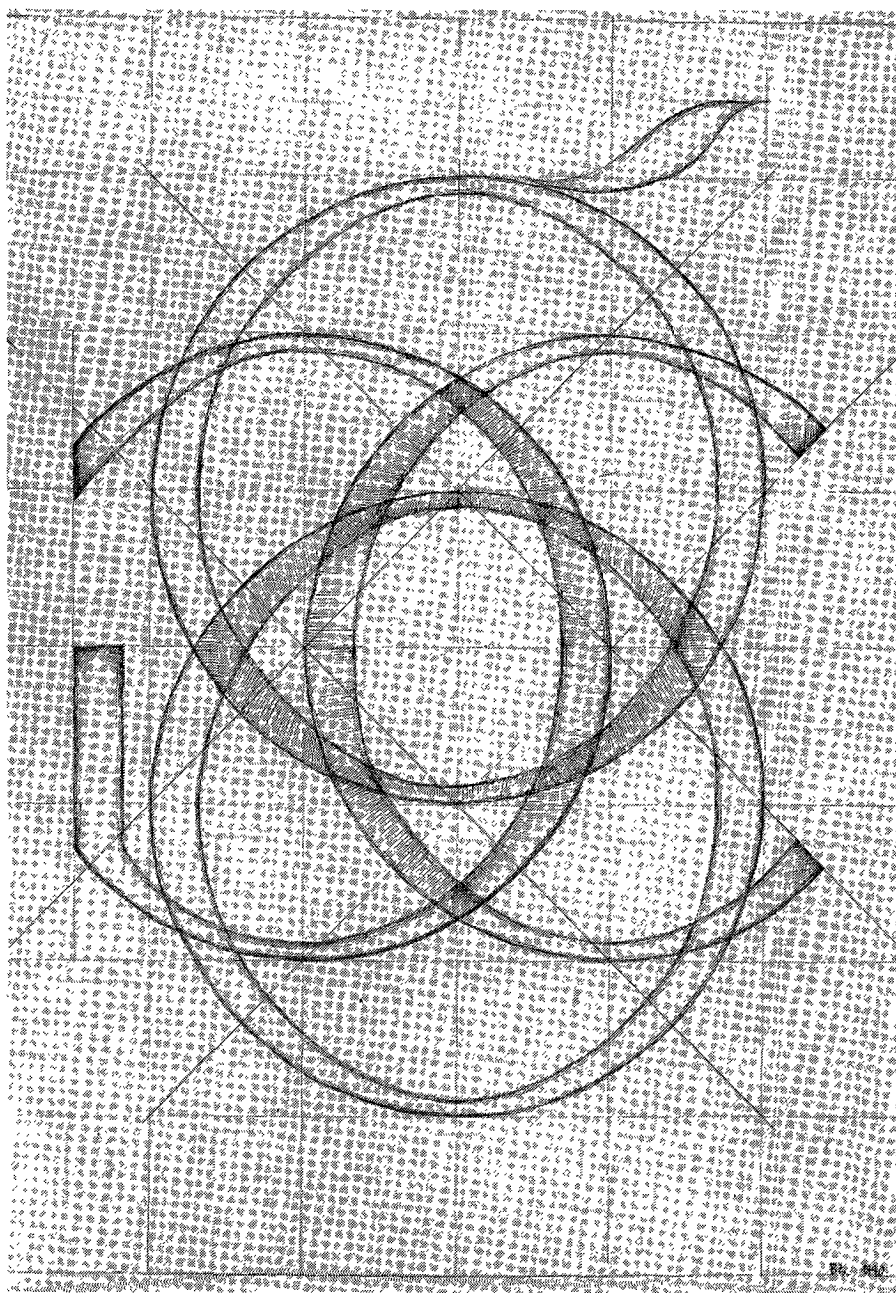
Philosophy, Dissymmetrical ambigram, 21 × 29.7 cm.

THE BEAUTY OF AN
ENTIRETY, WHICH
ORIGINATES FROM
THE HARMONY OF
ITS COMPONENTS.

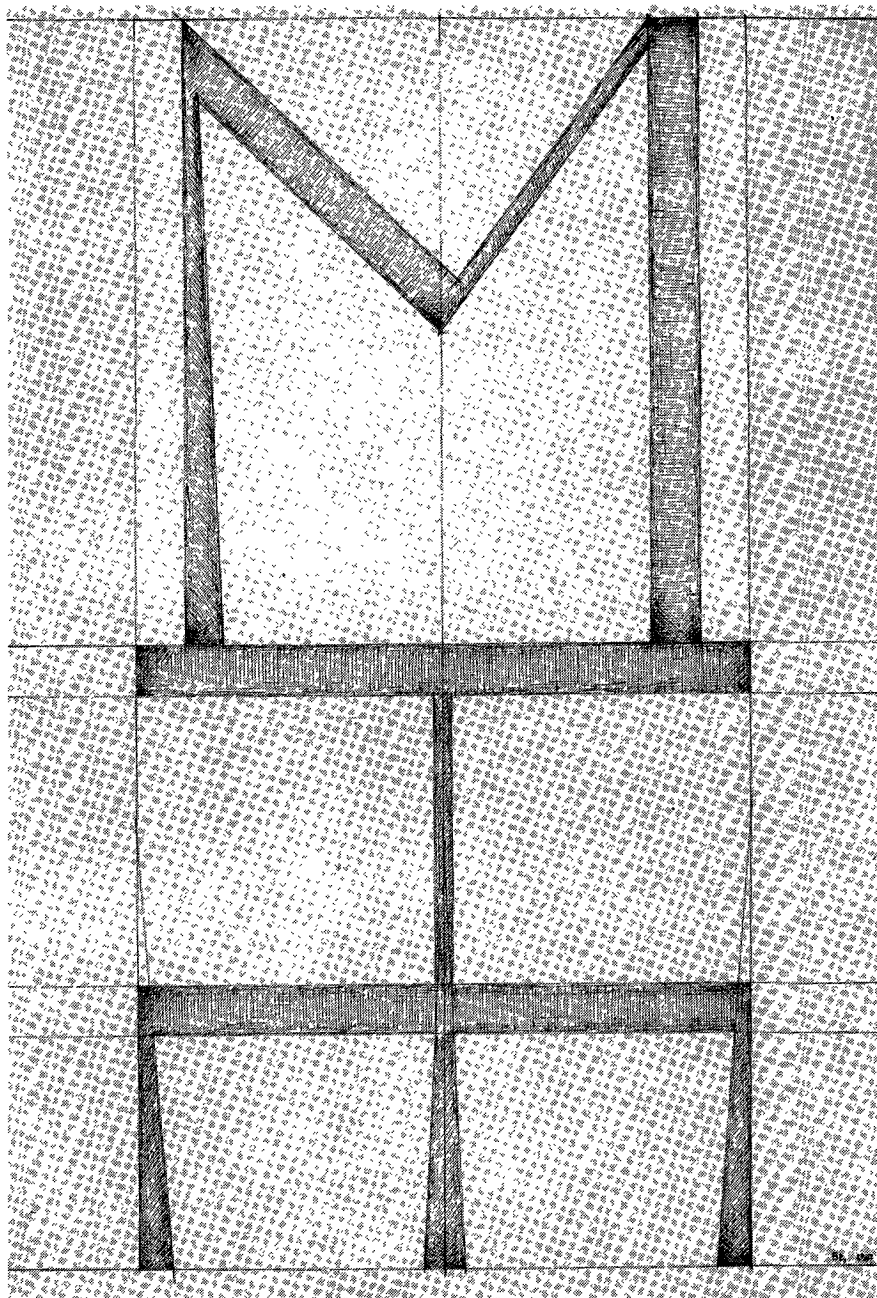
Symmetry

CORRESPONDING
POSITION, SHAPE
& SIZE OF PARTS
ON THE OPPOSITE
SIDES OF AN AXIS.

Symmetry, Dissymmetrical ambigram, 29.7 × 21 cm.



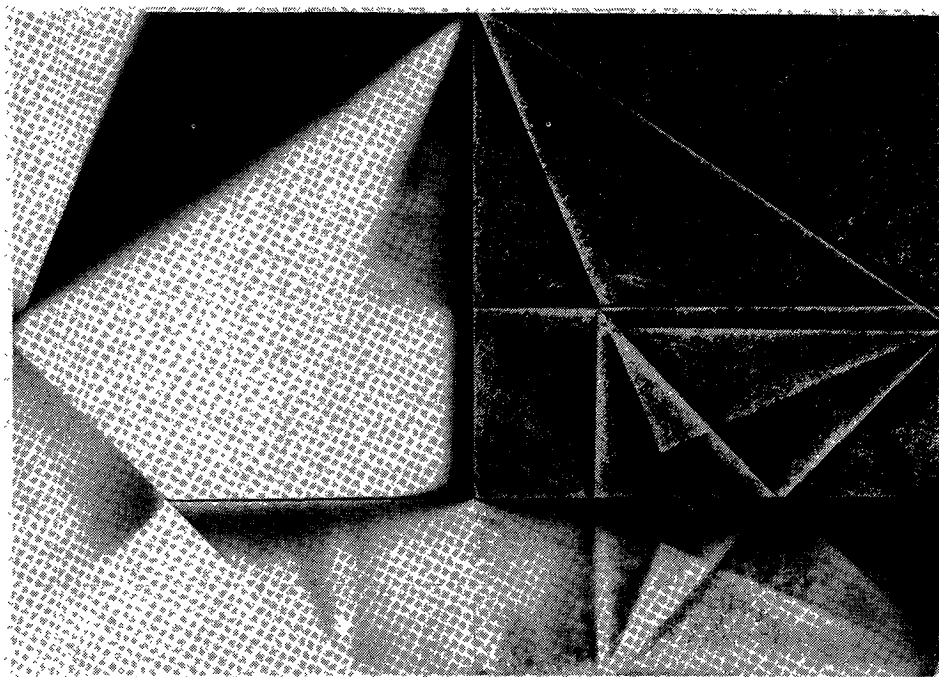
Ideogramma, 1990(?), colour pen drawing, 43,5 × 30,6 cm.



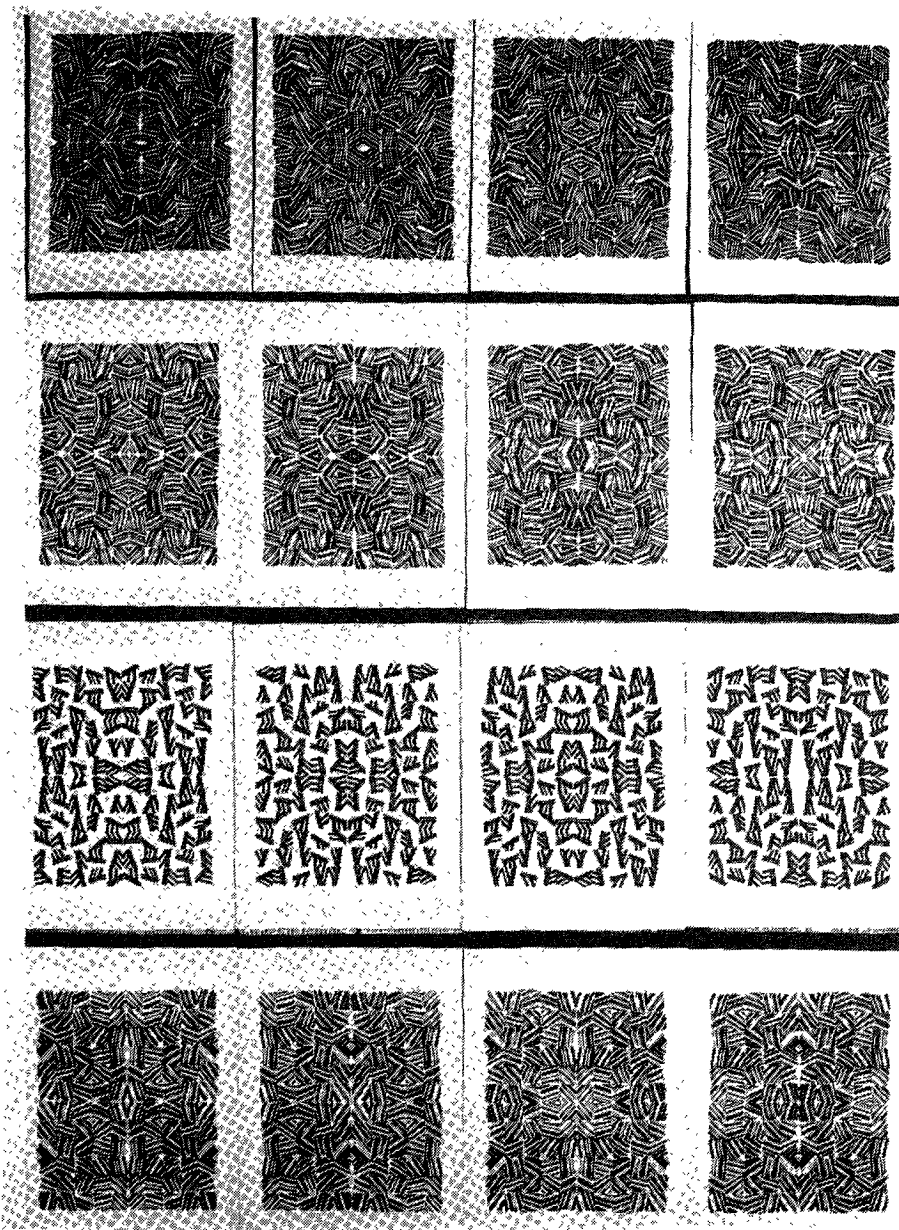
Ideogramma, 1987(?), colour pen drawing, 43,5 × 30,6 cm.



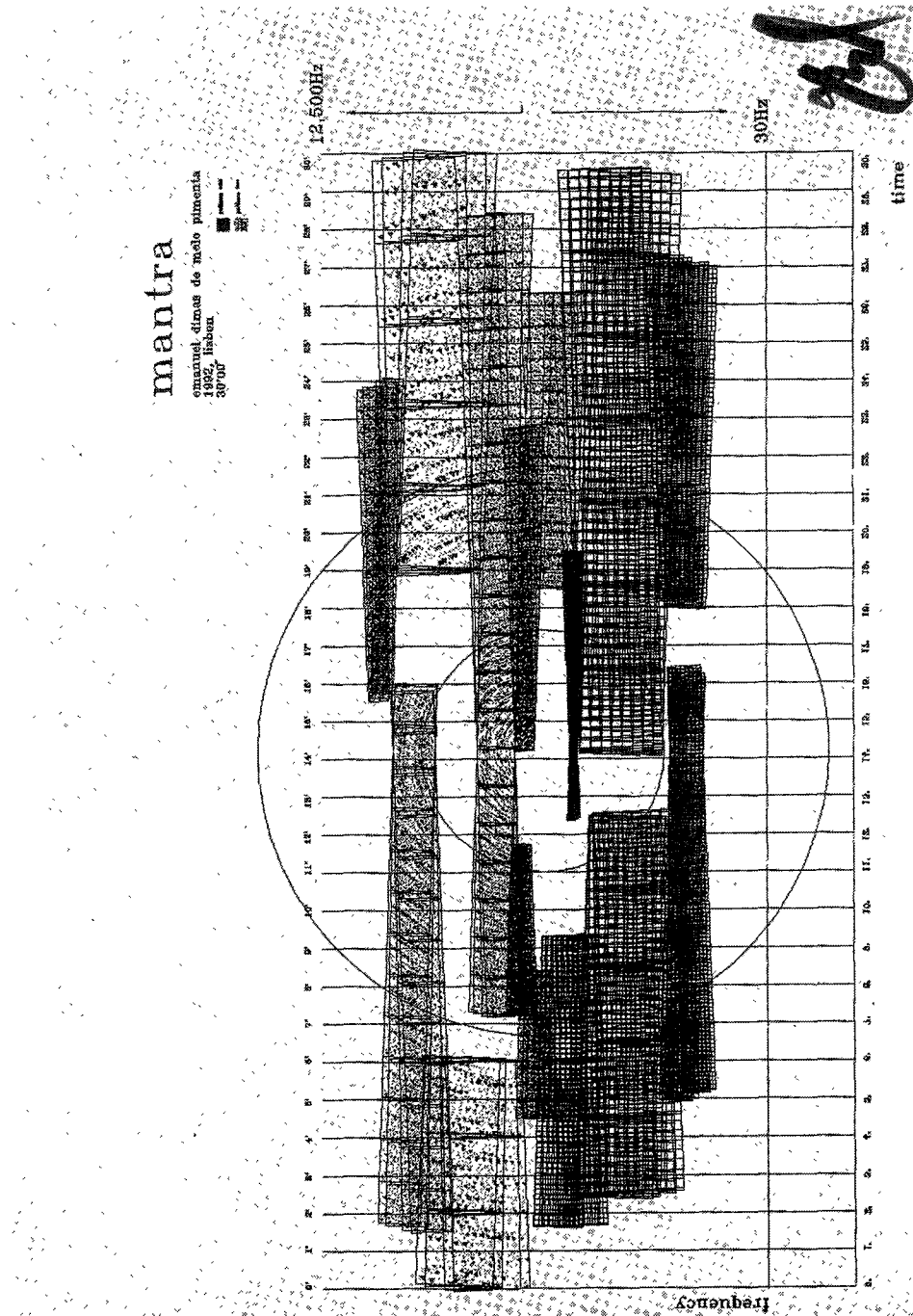
Interconnection, 1987, photo 41,3 × 31,3 cm.



Photogram, from the series *Hidden Structures*.



Direction - Shape - Form, 1983, photos taken from ink drawings, 3 × 16 pieces,
21 × 16 cm each.



Mantra, computer drawing, 21 × 29,8 cm.

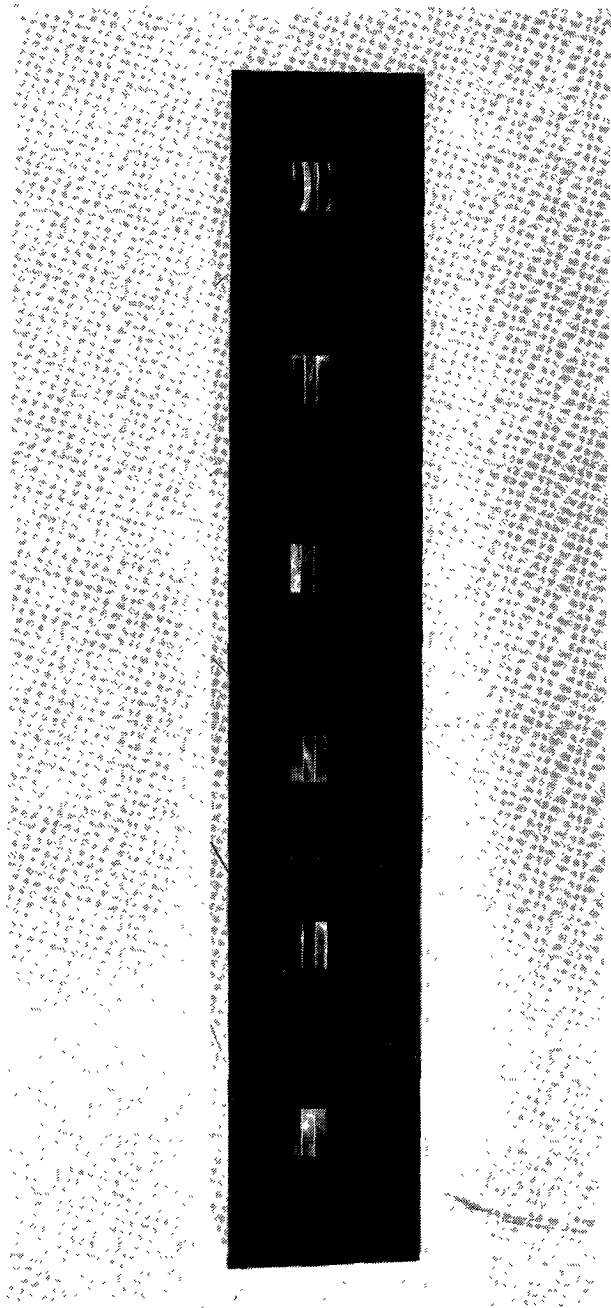


Younger Marilyn, symmetrical image of the young actress, computer generated colour photo, 22 × 17,5 cm;

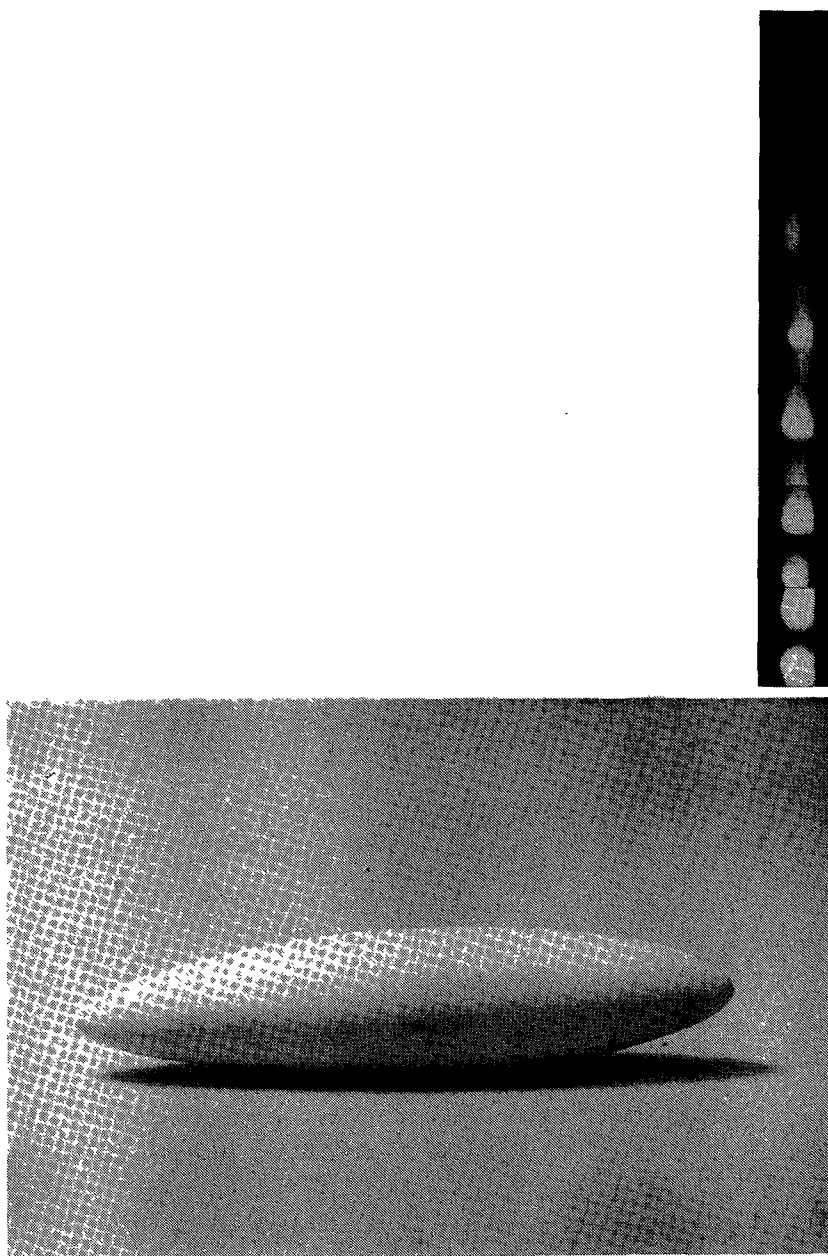
Older, symmetrical hypothesis of middle-aged Marilyn, computer generated colour photo, 23,5 × 19,5 cm.



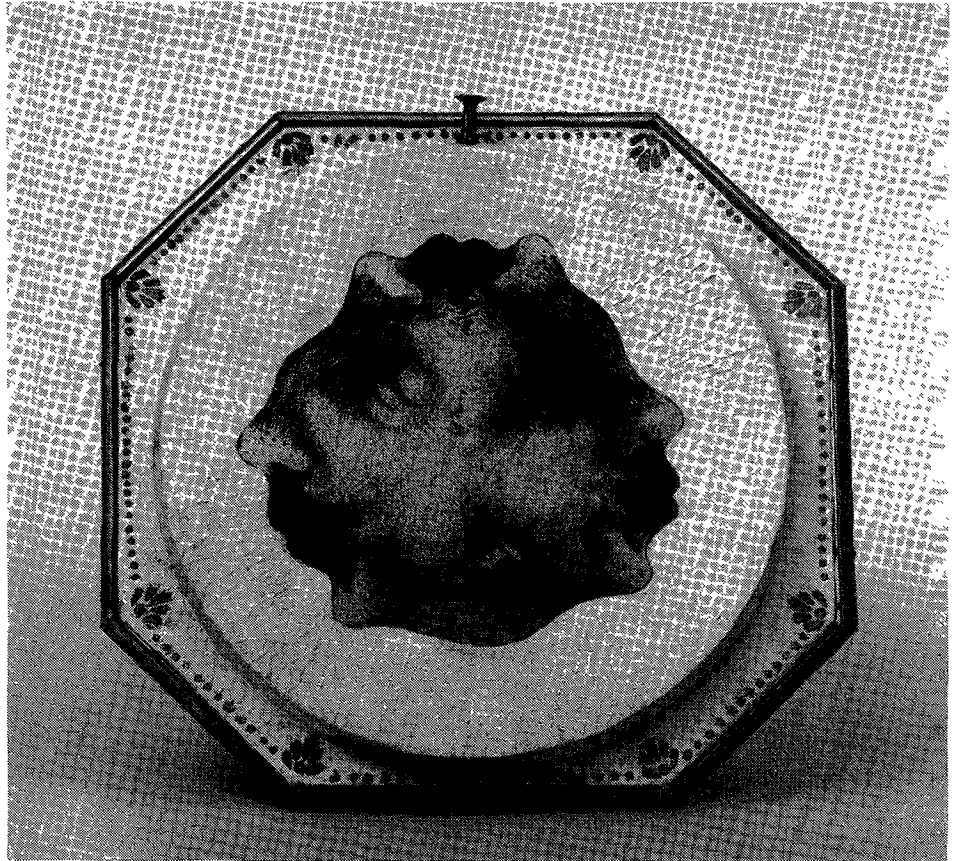
Portrait, 1993, photo collage, 40 × 60 cm.



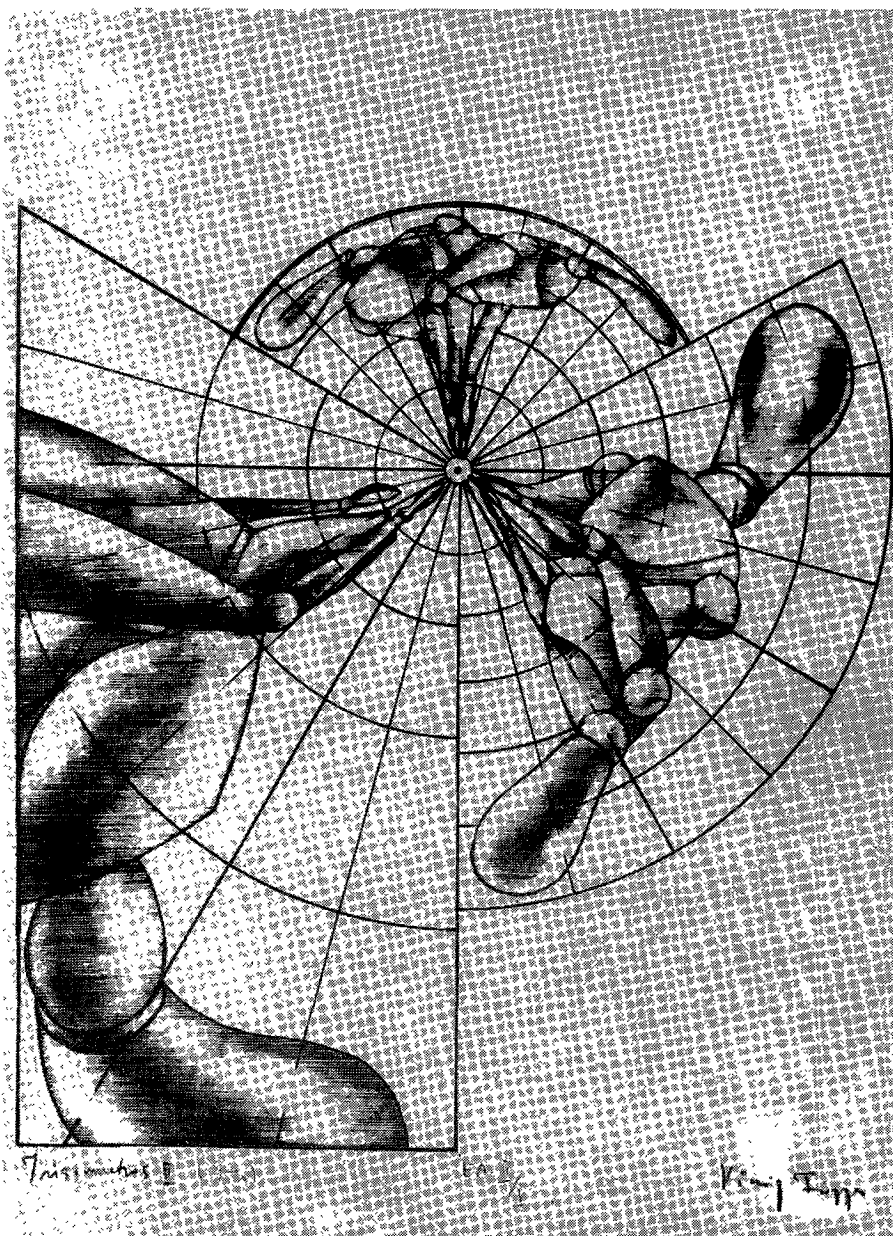
Tower, 1993, X-Ray photos in wooden boxes, 30 × 30 × 30 cm each.



*Ellipsoid and its X-Ray photographs, plaster of Paris, 6 × 26 cm,
photo 193 × 16,5 cm.*



Sixfolded Selfportrait, 1984, lithography, 32 × 35 cm.



Projection, 1984, lithography, 62,5 × 45 cm.

There are many disciplinary periodicals and symposia in various fields of art, science, and technology, but broad interdisciplinary forums for the connections between distant fields are very rare. Consequently, the interdisciplinary papers are dispersed in very different journals and proceedings. This fact makes the cooperation of the authors difficult, and even affects the ability to locate their papers.

In our 'split culture', there is an obvious need for interdisciplinary journals that have the basic goal of building bridges ('symmetries') between various fields of the arts and sciences. Because of the variety of topics available, the concrete, but general, concept of symmetry was selected as the focus of the journal, since it has roots in both science and art.

SYMMETRY: CULTURE AND SCIENCE is the quarterly of the *INTERNATIONAL SOCIETY FOR THE INTERDISCIPLINARY STUDY OF SYMMETRY* (abbreviation: *ISIS-Symmetry*, shorter name: *Symmetry Society*). *ISIS-Symmetry* was founded during the symposium *Symmetry of Structure (First Interdisciplinary Symmetry Symposium and Exhibition)*, Budapest, August 13-19, 1989. The focus of *ISIS-Symmetry* is not only on the concept of symmetry, but also its associates (asymmetry, dissymmetry, antisymmetry, etc.) and related concepts (proportion, rhythm, invariance, etc.) in an interdisciplinary and intercultural context. We may refer to this broad approach to the concept as *symmetrology*. The suffix *-logy* can be associated not only with knowledge of concrete fields (cf., biology, geology, philology, psychology, sociology, etc.) and discourse or treatise (cf., methodology, chronology, etc.), but also with the Greek terminology of proportion (cf., *logos*, *analogia*, and their Latin translations *ratio*, *proportio*).

The basic goals of the *Society* are

- (1) to bring together artists and scientists, educators and students devoted to, or interested in, the research and understanding of the concept and application of symmetry (asymmetry, dissymmetry);
- (2) to provide regular information to the general public about events in symmetrology;
- (3) to ensure a regular forum (including the organization of symposia, congresses, and the publication of a periodical) for all those interested in symmetrology.

The *Society* organizes the triennial *Interdisciplinary Symmetry Congress and Exhibition* (starting with the symposium of 1989) and other workshops, meetings, and exhibitions. The forums of the *Society* are *informal* ones, which do not substitute for the disciplinary conferences, only supplement them with a broader perspective.

The Quarterly - a non-commercial scholarly journal, as well as the forum of *ISIS-Symmetry* - publishes original papers on symmetry and related questions which present new results or new connections between known results. The papers are addressed to a broad non-specialist public, without becoming too general, and have an interdisciplinary character in one of the following senses:

- (1) they describe concrete interdisciplinary 'bridges' between different fields of art, science, and technology using the concept of symmetry;
- (2) they survey the importance of symmetry in a concrete field with an emphasis on possible 'bridges' to other fields.

The Quarterly also has a special interest in historic and educational questions, as well as in symmetry-related recreations, games, and computer programs.

The regular sections of the Quarterly:

- **Symmetry: Culture & Science** (papers classified as humanities, but also connected with scientific questions)
- **Symmetry: Science & Culture** (papers classified as science, but also connected with the humanities)
- **Symmetry in Education** (articles on the theory and practice of education, reports on interdisciplinary projects)
- **SFS: Symmetric Forum of the Society** (calendar of events, announcements of *ISIS-Symmetry*, news from members, announcements of projects and publications)
- **Symmetro-graphy** (biblio/disco/software/ludo/historio-graphies, reviews of books and papers, notes on anniversaries)

Additional non-regular sections:

- **Symmetrospective: A Historic View** (survey articles, recollections, reprints or English translations of basic papers)
- **Symmetry: A Special Focus on ...** (round table discussions or survey articles with comments on topics of special interest)
- **Symmetric Gallery** (works of art)
- **Mosaic of Symmetry** (short papers within a discipline, but appealing to broader interest)
- **Research Problems on Symmetry** (brief descriptions of open problems)
- **Recreational Symmetry** (problems, puzzles, games, computer programs, descriptions of scientific toys; for example, tilings, polyhedra, and origami)
- **Reflections: Letters to the Editors** (comments on papers, letters of general interest)

Both the lack of seasonal references and the centrosymmetric spine design emphasize the international character of the *Society*; to accept one or another convention would be a 'symmetry violation'. In the first part of the abbreviation *ISIS-Symmetry* all the letters are capitalized, while the centrosymmetric image *iSiS!* on the spine is flanked by 'Symmetry' from both directions. This convention emphasizes that *ISIS-Symmetry* and its quarterly have no direct connection with other organizations or journals which also use the word *Isis* or *ISIS*. There are more than twenty identical acronyms and more than ten such periodicals, many of which have already ceased to exist, representing various fields, including the history of science, mythology, natural philosophy, and oriental studies. *ISIS-Symmetry* has, however, some interest in the symmetry-related questions of many of these fields.

continued from inside front cover

Germany: F.R. Andreas Dress, Fakultät für Mathematik,
Universität Bielefeld,
D-33615 Bielefeld 1, Postfach 8640, F.R. Germany
[Geometry, Mathematization of Science]

Theo Hahn, Institut für Kristallographie,
Rheinisch-Westfälische Technische Hochschule,
D-W-5110 Aachen, F.R. Germany
[Mineralogy, Crystallography]

Hungary: Mihály Szoboszlai, Építész-mérnök: Kar,
Budapesti Műszaki Egyetem
(Faculty of Architecture, Technical University of Budapest),
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[Architecture, Geometry, Computer Aided Architectural Design]

Italy: Giuseppe Caglioti, Istituto di Ingegneria Nucleare -
CESNEF, Politecnico di Milano, Via Ponzio 34/3,
I-20133 Milano, Italy
[Nuclear Physics, Visual Psychology]

Poland: Janusz Rebielak, Wydział Architektury,
Politechnika Wrocławska
(Department of Architecture, Technical University of Wrocław),
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[Architecture, Morphology of Space Structures]

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