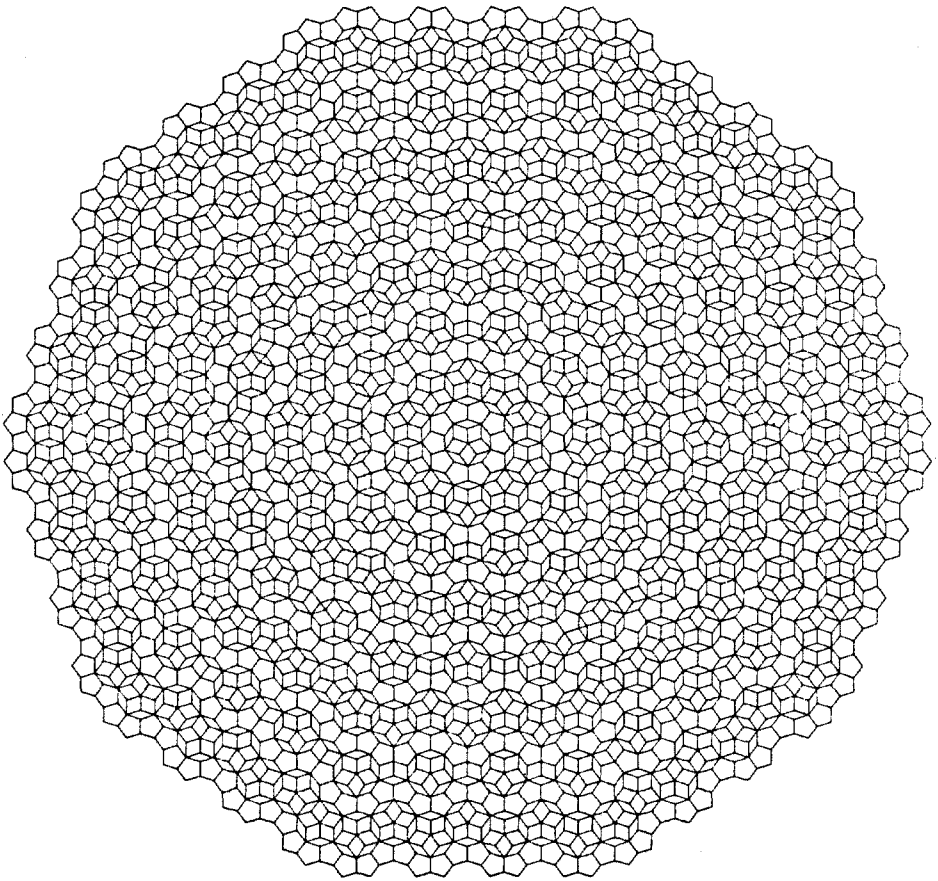
Symmetry: Culture and Science

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

Editors:
György Darvas and Dénes Nagy
Volume 7, Number 1, 1996



Symmetry: Culture and Science
Vol. 7, No. 1, 97-107, 1993

SFS: SYMMETRIC FORUM OF THE SOCIETY (BULLETIN BOARD)

ARTICLES

OF THE INTERNATIONAL SOCIETY FOR THE INTERDISCIPLINARY STUDY OF SYMMETRY (ISIS-SYMMETRY)

Adopted in Budapest, 16th August 1989, and
modified in Washington, D.C., 20th August 1995, by the General Assembly.

Article 1 Name and Address

The name of the organization is "*International Society for the Interdisciplinary Study of Symmetry*" (abbreviation: *ISIS-Symmetry*; shorter name: *Symmetry Society*). The interest of the Society covers any interdisciplinary, inter-cultural study of various aspects of symmetry and related concepts (e.g., proportion, rhythm, invariance) in science, art, and technology ('symmetrology').

The *Office* of the Society resides at the residence of the President or the Secretary General (currently in Budapest, Hungary). The Society may have additional regional offices.

Article 2 Purpose

The purpose of the Society is:
(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, and the publication of a periodical) for all those interested in symmetrology.

Article 3 Non-profit organization

The Society is a non-profit organization. Members of the Board, including the President, serve without any remuneration from the Society.

Article 4 Membership

There are four types of Membership: Ordinary, Student, Institutional and Honorary.

Ordinary Members: Any scientist, artist, or educator in the world engaged in research or in application of any field of symmetrology, may apply for Ordinary Membership.
Student Members: Students at degree granting institutions may apply for Student Membership. At the end of the year of graduation this membership will be terminated and the former Student Members shall then be eligible to apply for an Ordinary Membership.
Institutional Members: Any institution with corresponding interests may apply for Institutional Membership. The Institution may nominate up to five representatives who may act as Ordinary Members.
Honorary Members are elected by the General Assembly or by the Board.

Article 5 Membership fee

Membership fees are determined by the Board. Currently Ordinary Members pay an annual fee of US$ 78.00, Student Members US$ 63.00, what includes free subscription to the Society's journal. Institutional Membership fees are determined by the Board. Decisions on waivers can also be made by the Board.

Article 6 Board and Advisory Board

The highest decision-making body of the Society is the *General Assembly*. The *Board* is elected by the General Assembly and acts on behalf of it until its next meeting. The Officers are elected by open voting for the period between two *Interdisciplinary Symmetry Congresses* (usually for three years). All Members have the right to nominate candidates. The Board consists of the *President*, the *Chairperson of the Advisory Board*, the *Secretary General*, *Secretaries*, and further *Members of the Board*.
The Board elects the members of the *Advisory Board*.
The Board may invite *Honorary Presidents*, *Chairpersons of Projects*, *Liaison persons* to related societies or journals, etc. The Board may also appoint *ad hoc* Committees for specific purposes, e.g., Advisory Committee of meetings/exhibitions, Editorial Board of publications.

Article 7 Officers

The *President* shall be the chief executive officer of the Society; shall be responsible for executing the general policies of the Society and the concrete decisions made by the Board or the Members; shall act as a spokesman; and shall represent the Society in general at other scientific/artistic fora.
The *Chairperson of the Advisory Board* shall represent the Society and express the opinion shared by the Advisory Board in scientific/artistic affairs.
The *Secretary General* shall be responsible for conducting the affairs of the Society under the supervision of the President, may substitute for the President in any function at the decision of the Board or at the request of the President, and performs the functions of a treasurer.
The *Secretaries* of the Society shall help the work of the Secretary General in executing the general policies of the Society.

SYMMETRIC NEWS

ISIS-Symmetry held its 3rd triennial Congress *Symmetry: Natural and Artificial* and the related *Ars Scientifica* Exhibitions in Washington, D.C., August 14-20, 1995. Over two-hundred participants attended the programs, where 21 lectures were given in the morning *plenary meetings*, and over 150 scientific papers were presented in the afternoon *workshops* and at the *evening shows*. Special sessions were devoted to the centenary of the birth of *L. Moholy-Nagy*, with the active participation of his family members and students, and to the tenth anniversary of the first publication of the experimental discovery of quasicrystals, involving some of the discoverers and those who contributed to pave the way. *Artistic works* and *models* of over fifty exhibitors were displayed in the main exhibition rooms of the conference venue (*Old Colony Inn* in Alexandria, VA) and in the *atrium of the AAAS headquarters* in the downtown of Washington, D.C., where a reception was given for the Congress participants by *A. H. Teich*, Program Director of AAAS. The art program included also the visit of the *P. Mondrian Retrospective Exhibition* at the National Gallery, guided by *A. Loeb*. The *Congress program* included the following *workshops* and *shows* (listed in alphabetical order): Ars (Dis)Symmetrica, Art and visual mathematics, Biosymmetries, bionics, and biomechanics, Cerebral asymmetries and education, Chaos and symmetry breaking, Chess and arts, Ethnomathematics, From the classical crystals to quasicrystals, Harmony and golden section, Japanese tea ceremony, Kaleidoscope festival and workshop, Lecture recital followed by a concert, Manual workshops, Movies animations, Nature, mathematics and art, Patterns, tessellations, basic design, Representation principles, Rigid and flexible surfaces, Round table discussions, Space structures, architecture and basic design, Symmetry and information, Symmetry in a cultural context, Symmetry in dance (performances), Symmetry in humanities and education, Symmetry in music, dance, drama, and poetry, Symmetry in the Islamic art, Symmetry principles in the mathematical-physical sciences, Tape-recital-lecture, The L. Moholy-Nagy centenary, Video and multimedia performances, *Wasan* - old Japanese mathematics.

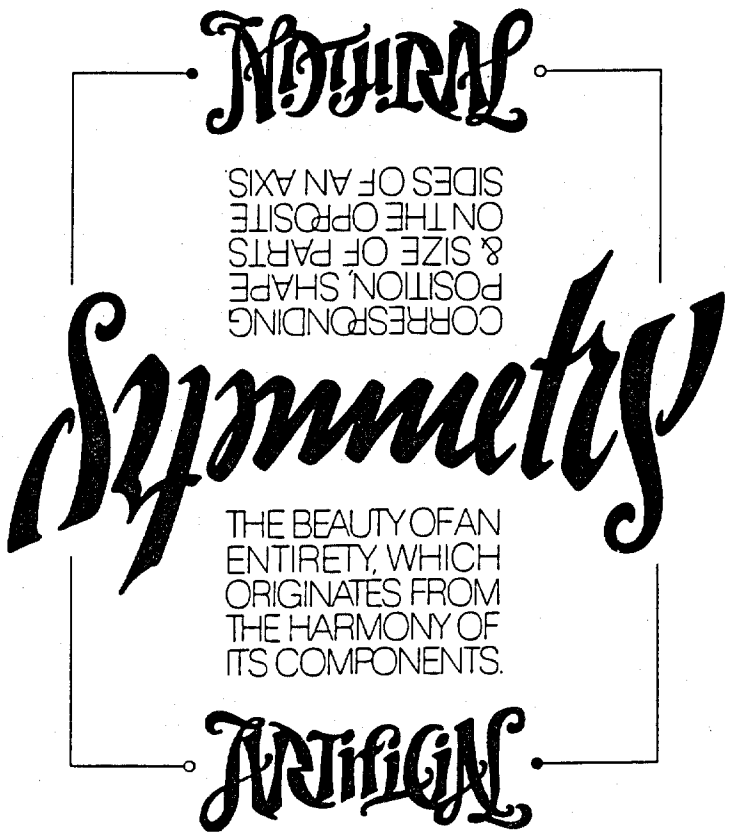
ISIS-Symmetry held its *General Assembly* on August 20. This session modified the *Articles* of the Society (concerning the changing structural composition of the Board) and elected the new officials, board members and the members of the new Advisory Board for the next three years. You find the new Articles on the previous pages, the list of the officials and members of the Board on the inside front cover, and the list of the members of the Advisory Board on the inside back cover.

The General Assembly decided to hold the 4th Congress of ISIS-Symmetry at the Technion in Haifa (Israel) in 1998.

The participants commemorated the passed away Honorary Members of the Society: *Cyril Smith* (U.S.A.), *Ilarion I. Shafranovskii* (Russia), *Victor A. Frank-Kamenetsky* (Russia), *Eugene P. Wigner* (U.S.A.).
Then *Harold S. M. Coxeter* (Canada) has been elected as a new Honorary Member.
At present ISIS-Symmetry has two *Honorary Presidents*: Konstantin V. Frolov (Russia) and Yuval Ne'eman (Israel); and five *Honorary Members*: Johann Jakob Burckhardt (Switzerland), H. S. M. Coxeter (Canada), István Hargittai (Hungary), Heinrich Heesch (Germany), and Kodi Husimi (Japan).

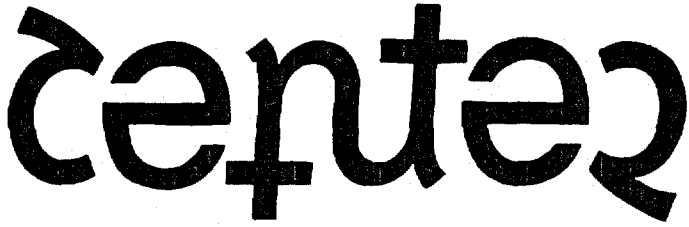
The Third Congress — John Langdon's Ambigrammatic Response

ISIS - Symmetry's Third Interdisciplinary Congress was undoubtedly inspiring for all attendees, each in their own way. For me, naturally (but not artificially) the inspiration took form as a number of new ambigrams. The very name of the Congress inspired me to rise to the self-imposed challenge of creating an ambigrammatic, and hence symmetrical, design of the words Natural and Artificial.



"Symmetry" has rotational symmetry, but "Natural" and "Artificial" are (or should it be "is"?) unlike most ambigrams in that the word itself is not graphically symmetrical. The symmetry becomes apparent only when the two words are placed in opposition to each other, as shown. Interdependent as they are, therefore, for each other's existence, I refer to this particular subset of ambigrams as "symbiotograms."

In the opening moments of the first day, György Darvas set the tone for the Congress, opening his talk focusing on the word "center." ISIS-Symmetry is the center of the network that brings us together; Alexandria, once the center of the intellectual world in Egypt, last August was the focal point for symmetrical thought of the highest level in Virginia, USA.



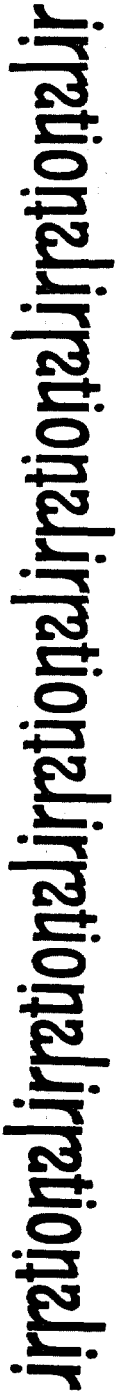
This was, of course, completely appropriate, as the center, or axis, is the defining point of any symmetrical relationship. György concluded by pointing out that the Congress represented an axis, where art and science meet. Why I had never designed this simple rotational ambigram before is a mystery to me, but such is the capricious magic of inspiration.

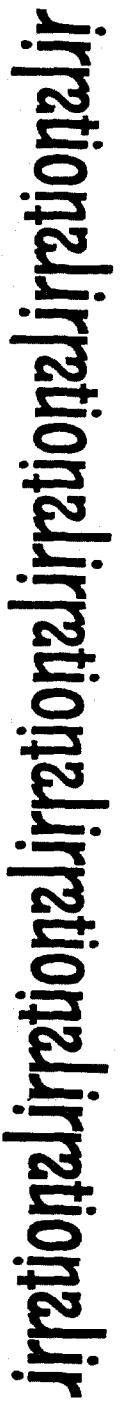
During the week there did arise a number of differences between scientists and artists, of course. The clearest point of differentiation was this: when a scientist hears the word "projector" he or she pictures on overhead projector; an artist naturally envisions a Kodak Carousel.

Nevertheless, as this "symbiotogram" demonstrates, one uniting theme was ever-present. Artists and scientists are never more than a few seconds or millimeters away from the spirit that underlies their works: the philosophies that underpin their every effort.

Arthur Loeb gave us a Fuller understanding of rational numbers, which Buckminster believed in, and irrational numbers, which he did not. It seems to follow appropriately that the word "rational" can be seen as a simple rotational ambigram, but

"Irrational," on the other hand, cannot exist on its own. In order to achieve rotational symmetry, it must be linked to a subsequent image of itself. Such "chain ambigrams" certainly have a graphic rationale, but linguistically are surely irrational.





Messrs. Shechtman, Cahn, Ogawa, et al, covered the subject of

Quasicrystals

Appropriately, I might once have considered Q/S symmetry,
like five-fold symmetry, impossible.

John Conway's Game of Life inspired

Notation Notation Notation

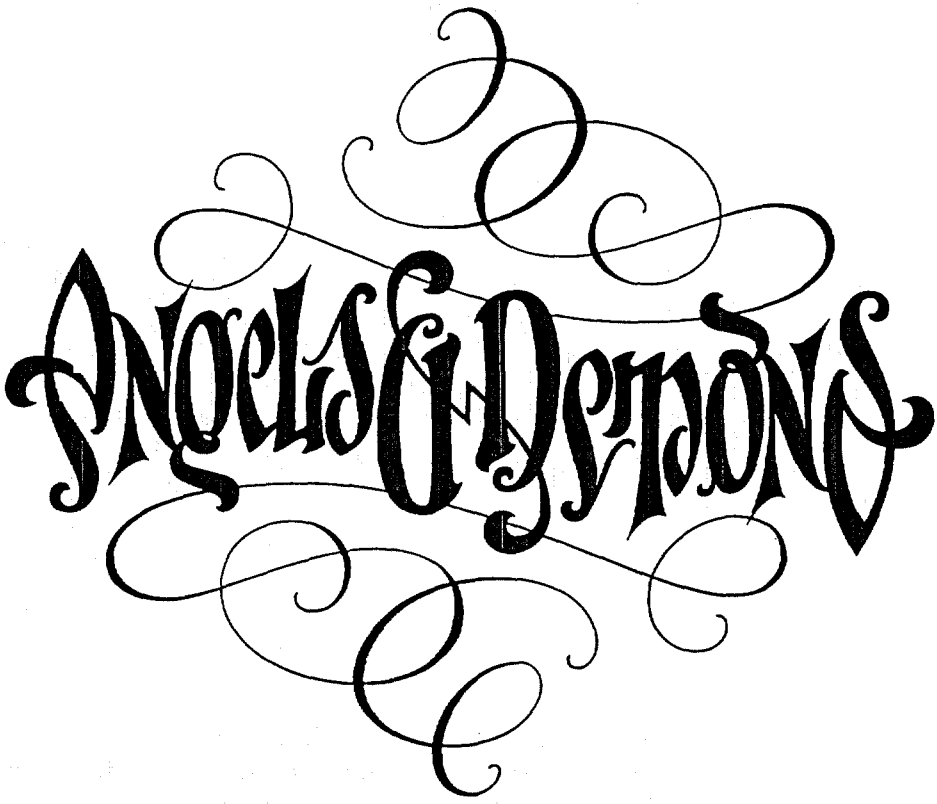
this self-replicating chain ambigram.

Klaus Landwehr's interesting vantage point equated perception

Conjured Perception

with congruence. Does this ambigram do the same?

It was unfortunate that Mssrs. Domingo and Sánchez-Mayendia were unable to attend and make their presentation on



But those in attendance were able to see this rotational ambigram. Created as a commissioned design, it was nonetheless inspired by Escher's work of the same name.

Ambiguity is the quality of an idea being understood from more than one point of view, much like an idea interpreted by several people, translated into different languages, or an event that is observed by viewers from a number of different vantage points. Each viewer has a different visual experience and remembers a different image, the way the several blind men experienced the elephant. None of the individual witnesses experiences "The Truth." The only "truth" is a composite of their several experiences that lies at a center point of their observations. Symmetry is what remains the same when a change is made. Truth is what remains the same when something is seen from a different point of view. Thus we must expand on the old adage, "Beauty is Truth; Truth is Beauty:"

Symmetry is Beauty; Symmetry is Truth.

Ambiguity

I was particularly interested in Vladimir Koptsik's presentation regarding semiotic systems in science and art. I was introduced for the first time to the concept of "Lotman's flower" wherein an original work and its subsequent translations and interpretations are represented as the petals of the flower. The center point, where the petals intersect represents the kernel, the essence, or truth of the idea. This symmetry is "transnational," both liguistically and graphically, and it reminded me of the spirit and theory behind my ambiguity ambigram.

Finally after a week whose plane had been fully tiled with stimulating and interlocking ideas, it was time to wave

with this bilateral, or mirror-image, ambigram.

langdojw@dunx1.ocs.drexel.edu

JohnLangdon

Graphic Design Department
Drexel University
32nd & Market Streets
Philadelphia, PA 19104 USA