

AHST 4342-001 (87272)

History of Media and New Media Art

Fall 2019

Dr. Charissa N. Terranova

University of Texas at Dallas

Arts & Humanities

T-Th 10:00-11:15

Tuesday 10/01/19

New Tendencies, Op Art, and Gestalt Psychology

Geometric
Abstraction
Mid 20th
Century

French *Groupe de Recherche
d'Art Visuel* [GRAV], Italian
Gruppo N and Gruppo T,
German Zero Group, Spanish
Equipo 57, Dutch NUL, and
the American Anonima

Op Art
Responsive Eye
New Tendencies
Neo-Constructivism

Perception
Gestalt
Kinetics/Movement
Process
Information

ART CONCRET

GRUPE ET REVUE FONDÉS EN 1930 A PARIS

PREMIÈRE ANNÉE-NUMÉRO D'INTRODUCTION-AVRIL MIL NEUF CENT TRENTE

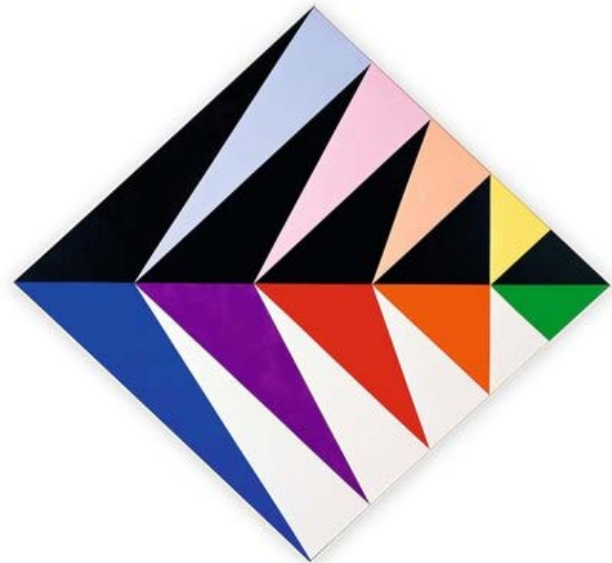
BASE DE LA PEINTURE CONCRÈTE

Nous disons :

- 1° L'art est universel.
- 2° L'œuvre d'art doit être entièrement conçue et formée par l'esprit avant son exécution. Elle ne doit rien recevoir des données formelles de la nature, ni de la sensualité, ni de la sentimentalité.
Nous voulons exclure le lyrisme, le dramatisme, le symbolisme, etc.
- 3° Le tableau doit être entièrement construit avec des éléments purement plastiques, c'est-à-dire plans et couleurs. Un élément pictural n'a pas d'autre signification que « lui-même » en conséquence le tableau n'a pas d'autre signification que « lui-même ».
- 4° La construction du tableau, aussi bien que ses éléments, doit être simple et contrôlable visuellement.
- 5° La technique doit être mécanique c'est-à-dire exacte, anti-impressionniste.
- 6° Effort pour la clarté absolue.

Carlsund, Doesbourg, Héliou, Tutundjian, Wantz.

Art Concret was a single-issue French-language art magazine published in Paris in 1930. It was the vehicle for a group of abstract artists who wished to differentiate themselves from others gathered around the magazine *Cercle et Carré*. Eventually most in both groups fused in the wider association of non-figurative artists, *Abstraction Création*. Articles in *Art Concret* championed strictly geometrical art, free of personal interpretation and based on mathematics. It also ridiculed the sloppy and imprecise vocabulary of contemporary art criticism. The concept of Concrete Art championed by the magazine was thereafter taken up by other artists and became influential internationally.



Max Bill, *Reflections from Dark and Light*, 1975

GESTALT

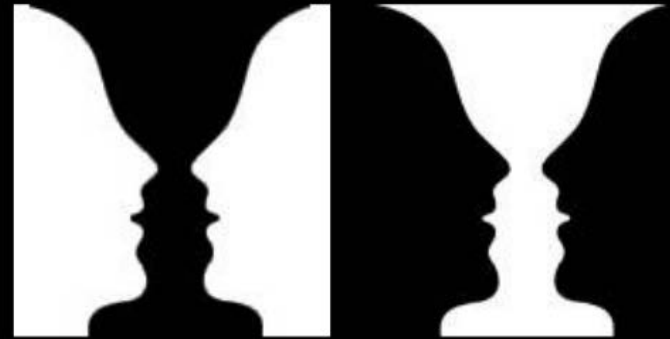
GESTALT

an organized whole that is perceived as more than the sum of its parts; 1920s: from German *Gestalt*, literally 'form, shape.'

The **principles of grouping** (or **Gestalt laws of grouping**) are a set of principles in psychology, first proposed by Gestalt psychologists to account for the observation that humans naturally perceive objects as organized patterns and objects, a principle known as *Prägnanz* (German for 'pithiness'). Gestalt psychologists argued that these principles exist because the mind has an innate disposition to perceive patterns in the stimulus based on certain rules. These principles are organized into five categories: Proximity, Similarity, Continuity, Closure, and Connectedness.

Law of Figure and Ground

Viewers will perceive an object (figure) and a surface (ground) even in shapes are grouped together.



FIGURE/GROUND RELATIONSHIPS

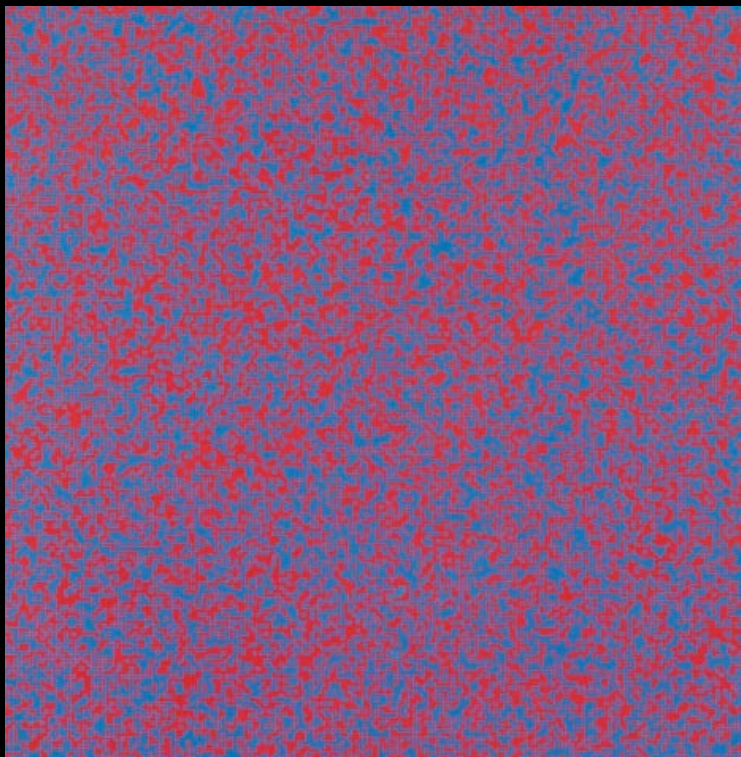
Gestalt

Perceptual Whole

Social Whole

From Brain to Machine

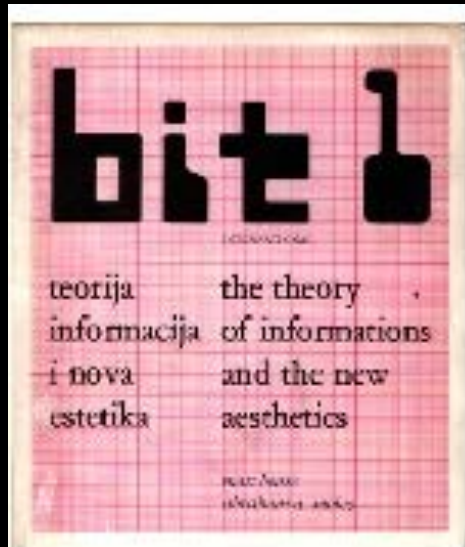
From Wet to Dry



Left:
 François Morellet,
 Random Distribution of 40,000 Squares using the Odd and Even
 Numbers of a Telephone Directory,
 1960, Oil on canvas

Below:

The *bit international* journal was published as part of the activities of the *New Tendencies* movement. The objective of the editors was: "to present information theory, exact aesthetics, design, mass media, visual communication, and related subjects, and to be an instrument of international cooperation". The title, *bit international* (or only *bit*) refers to the basic unit of information storage and communication (as introduced by Claude E. Shannon). It is short for "binary digit", a term that has been used in the field of computing and telecommunications since the late 1940s. From 1968 to 1972, the Galerije grada Zagreba [Galleries of the City of Zagreb] published nine issues of the magazine (*bit international* 5/6 and 8/9 were double issues). [<http://dada.compart-bremen.de/item/publication/326>]



Nouvelle Tendance/New Tendency: (Neo)Constructivism and Kinetic Art

Many followers of the NT [New Tendencies] have tried to give their work the habit of the machine or else they have based their procedures on the use of mechanical and electrical devices; they have all dreamt of machines – and now machines have arrived. And they have arrived from a direction which was somewhat unexpected, and accompanied by people who were neither painters nor sculptors.

-- Radoslav Putar, Art Critic, 1970

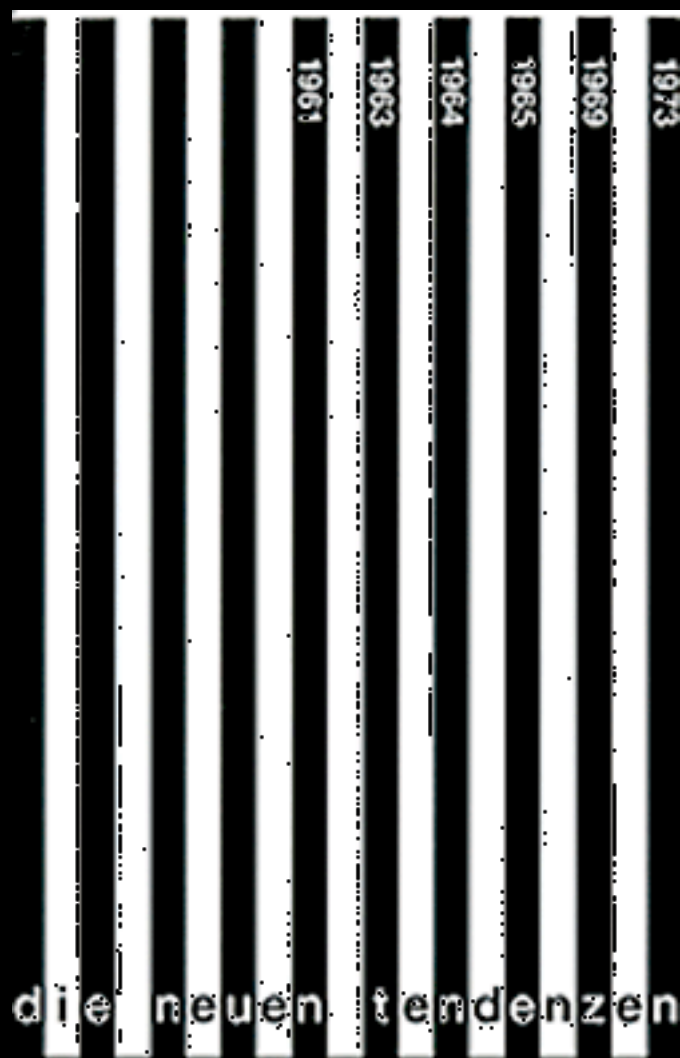
New Tendencies

Yugoslavian Art Scene

International Art Scene

1960s





New Tendencies Exhibitions:

1961

New Tendencies

1963

New Tendencies 2

1965

New Tendency 3

1968-1969

Tendencies 4 (1968-1969) Computers and Visual Research

1973

Tendencies 5 Section: Computer and Visual Research

New Tendencies Colloquia and Symposia:

1962

Meeting of the Nouvelle Tendance (New Tendency)

1965

Working Meeting of the Participants in NT3

1968-1969

New Tendencies 4 (1968-1969) Computers and Visual Research

1971

Art and Computers 71. Colloquium

1973

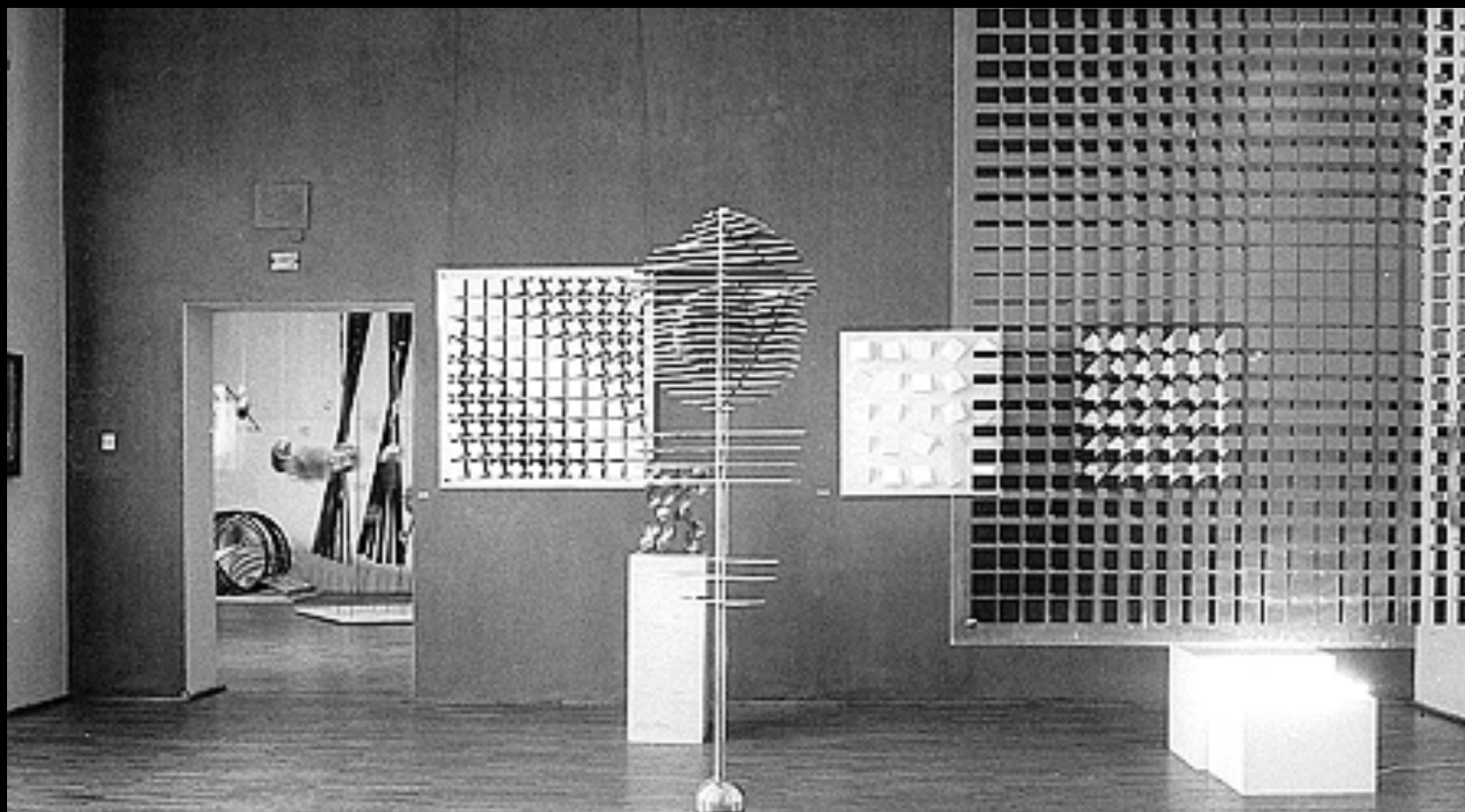
Tendencies 5 (1973), The Rational and Irrational in Visual Research Today. Symposium, Match of ideas

1978

Tendencies 6 (1978), Art and Society International Symposium

New Tendencies Publications:

bit international (Magazine)



The idea for the first New Tendencies exhibition was born in the autumn of 1960, when the Brazilian artist and designer Almir Mavignier, then living in Germany, visited Zagreb. Mavignier, who had studied under Max Bill at the renowned German design school Hochschule für Gestaltung Ulm [Design School of Ulm], was introduced to the young art historian and critic Matko Mestrovic in Zagreb. Both Mavignier and Mestrovic were gravely disappointed by the 1960 Venice Biennale and agreed on the need to organize an exhibition that presented new tendencies that were not yet legitimated by established venues such as the Biennale...

When the exhibition *Nove tendencije* opened in August 1961 at the Gallery of Contemporary Art, visitors could admire works in the tradition of concrete art...

Concrete Art

Asociacion Arte-Concreto-Invencion

Inventionist Manifesto

1946

The artistic age of representational fiction is coming to an end. Man is becoming less and less sensitive to illusory images. That is, he is becoming progressively more integrated in the world. The old phantasmagoria no longer meets the aesthetic needs of the new man, brought up in a society that demands his total, unreserved commitment...

Scientific aesthetics will replace the age-old speculative, idealistic aesthetics...

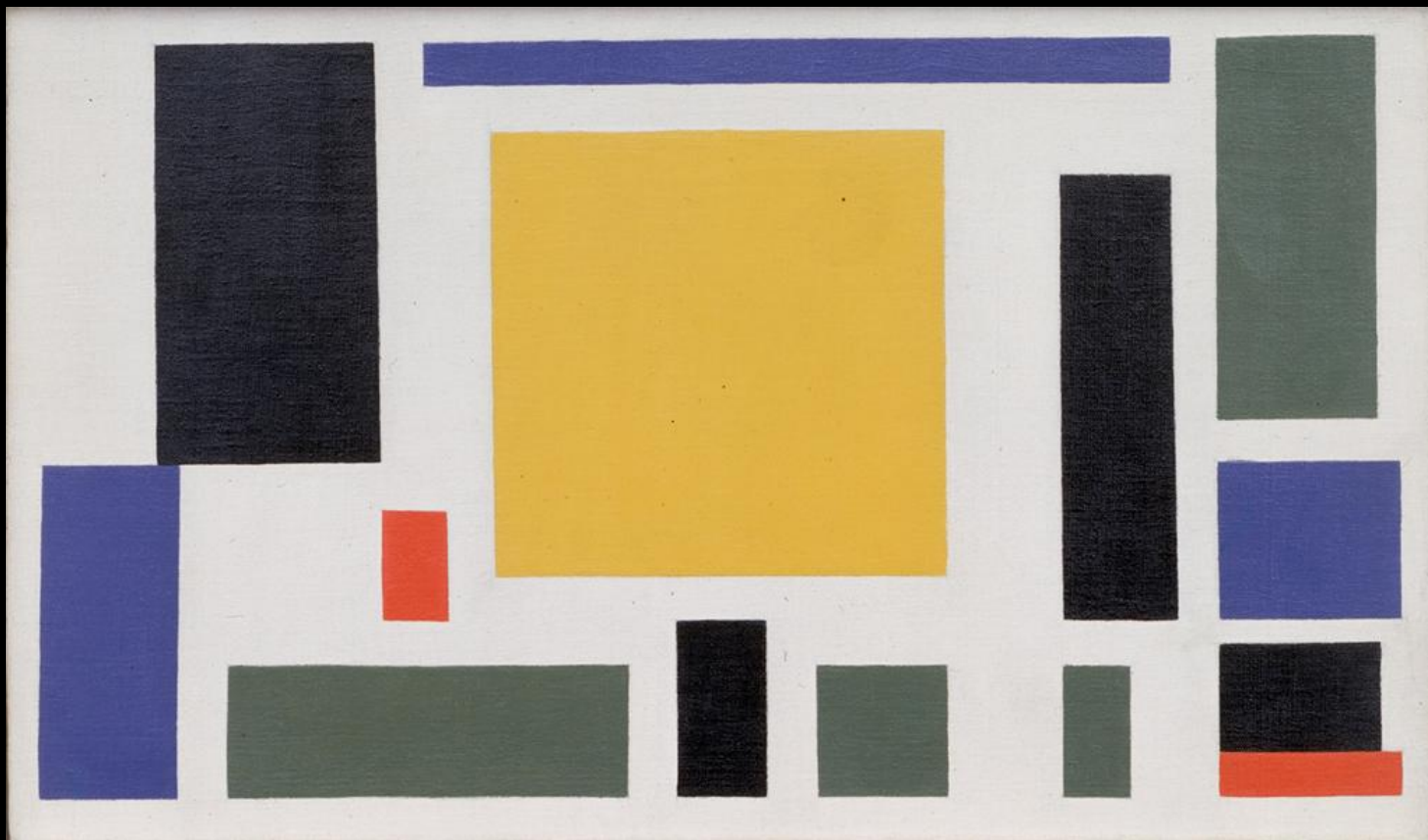
The physics of beauty are relevant now

In 1946 at the start of the concrete art movement in Argentina, the Manifesto invencionista (Inventionist Manifesto) was authored by artist Tomás Maldonado and published by the group Asociación Arte Concreto-Invención. Concrete Art is abstract art which is not based on any observed reality. Some of the artists were involved with the Argentinian movement, Perceptismo, which focused on abstract painting based on a mathematically formulated relationship between colors and geometric shapes. One of the key ingredients in their work was to place great importance on the context and environment in which the art was to be experienced visually.

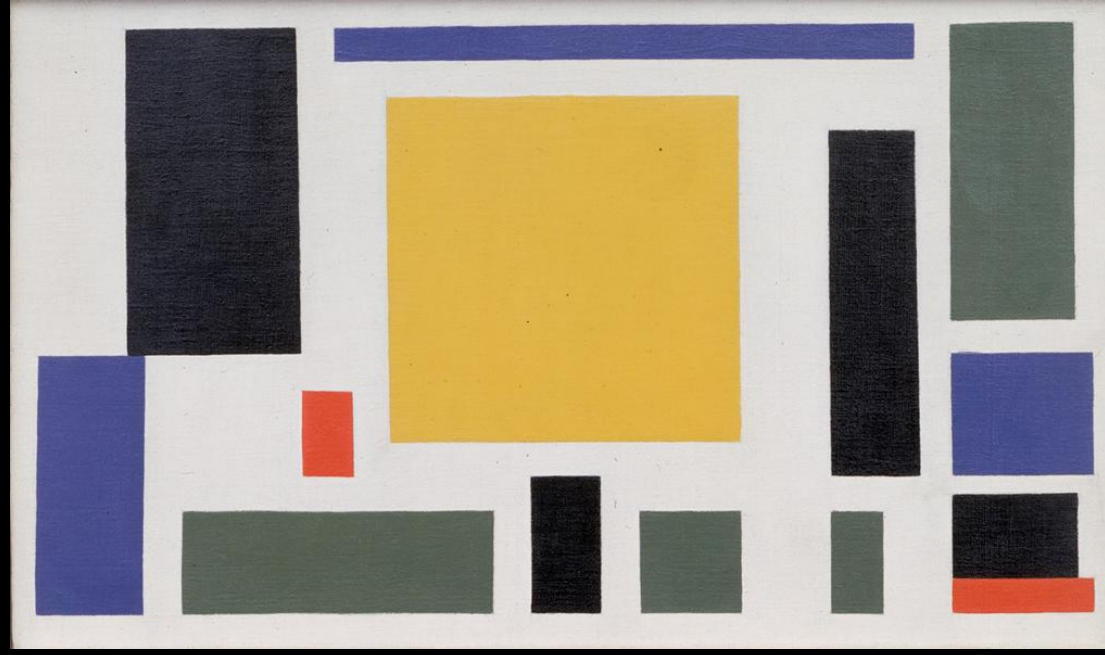
Concrete Art

Concrete Art and Design or Concretism is an abstract art movement that evolved in the 1930s out of the work of several 'isms' of the historic avant-garde, including De Stijl and Futurism. Other influences included the Russian painter Wassily Kandinsky and the Swiss painter Max Bill. The term "Concrete Art" was first introduced by Theo van Doesburg in his "Manifesto of Concrete Art" (1930). In his understanding, this form of Abstractionism must be free of any symbolical association with reality, arguing that lines and colors are concrete by themselves. Max Bill further promoted this idea, organizing the first international exhibition in 1944.

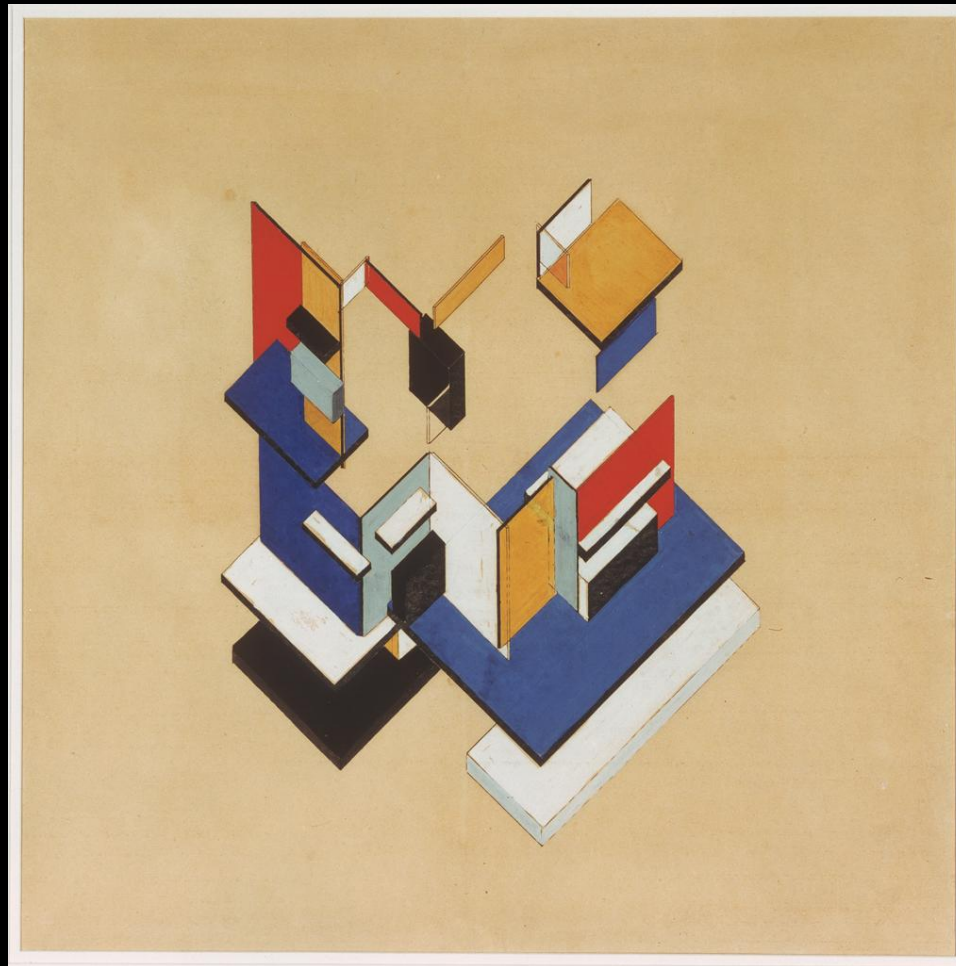
One of the ideas underpinning the development of Concrete Art was that the artwork should refer to nothing other than itself: that is, that it should not represent external reality in any way. As van Doesburg put it in his "Basis of Concrete Painting", "[a] pictorial element has no other meaning than 'itself' and thus the picture has no other meaning than 'itself'." This emphasis is related to - but distinguished from - that of abstract art in the broader sense, wherein the initial stimulus for a painting and sculpture is often an external object or scene.



Theo Van Doesburg, Composition VIII (The Cow), 1918



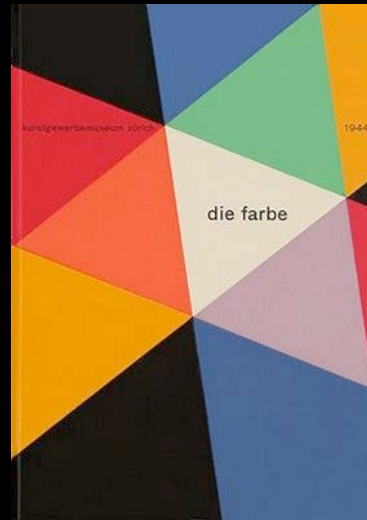
Theo Van Doesburg, Composition VIII (The Cow), 1918



Theo Van Doesburg, Contra-Construction Project
Axonometric, 1923



Max Bill, Graphics, 1944/1960



Max Bill, Continuity (Colossus of Frankfurt), 1986 – Made from 66 tons of granite, based on two parallel Möbius strips

Max Bill (1908-1994)



ausweis

gültig für die auf der rückseite gestempelten Semester



bauhaus dessau

Max Bill

sommerhalbjahr

1924

n. a. Schupkopf

DAS BAUHAUS IN DESSAU.

winterhalbjahr

1924/28

DAS BAUHAUS IN DESSAU

in Lindemann

sommerhalbjahr

1928

DAS BAUHAUS IN DESSAU

in Lindemann

winterhalbjahr

sommerhalbjahr

winterhalbjahr



Walter Gropius, Bauhaus School, Dessau, 1926



Poster for Junkers Flugzeug- und Motorenwerke AG, a major German aircraft and aircraft engine manufacturer. It produced some of the world's most innovative and best-known airplanes over the course of its fifty-plus year history in Dessau, Germany. It was founded there in 1895 by Hugo Junkers. The Stuka was a dive bomber.

The Mathematical Approach in Contemporary Art

Max Bill, 1949

It must not be supposed that an art based upon the principles of mathematics, such as I have just adumbrated, is in any sense the same thing as a plastic or pictorial interpretation of the latter. Indeed, it employs virtually none of the resources implicit in the term "Pure Mathematics". The art in question can, perhaps, best be defined as the building up of significant patterns from the ever-changing relations, rhythms and proportions of abstract forms, each one of which, having its own causality, is tantamount to a law in itself. As such, it presents some analogy to mathematics itself where every fresh advance had its immaculate conception in the brain of one or other of the great pioneers. This Euclidian geometry no longer possesses more than a limited validity in modern science, and it has an equally restricted utility in modern art. The concept of a Finite Infinity offers yet another parallel. For this essential guide to the speculations of contemporary physicists has likewise become an essential factor in the thinking of contemporary artists. These, then, are the general lines on which art is daily creating new symbols: symbols that may have their source in antiquity but which meet the aesthetic-emotional needs of our time in a way hardly any other form of expression can hope to realize.

Umberto Eco, *Opera aperta* (translated into English as "The Open Work"), 1962
Eco's notion of "The Open Work" is an attempt to understand modern artworks which can be rendered open by their author, and further completed by the performer, viewer, reader or audience.

Nowadays, to say that a poetics of the "informal" is characteristic of contemporary painting involves a generalization. No longer limited to a critical category, the term "informal" has come to designate a general tendency of our culture and to encompass, along with painters such as Wols and Bryen, the *tachistes*, the masters of *action painting*, *art brut*, *art autre*, and so on, at which point we might as well inscribe it under the broader rubric of *the poetics of the open work*.

"Informal art" is open in that it proposes a wider range of interpretive possibilities, a configuration of stimuli whose substantial indeterminacy allows for a number of possible readings, a "constellation" of elements that lend themselves to all sorts of reciprocal relationships. As such, "informal painting" is closely related to the open musical structures characteristic of post-Webem music and to a form of poetry which in Italy goes by the name of *novissima*, whose representatives have already agreed to define it as "informal."



<https://www.youtube.com/watch?v=5y6yNNLwJAQ>

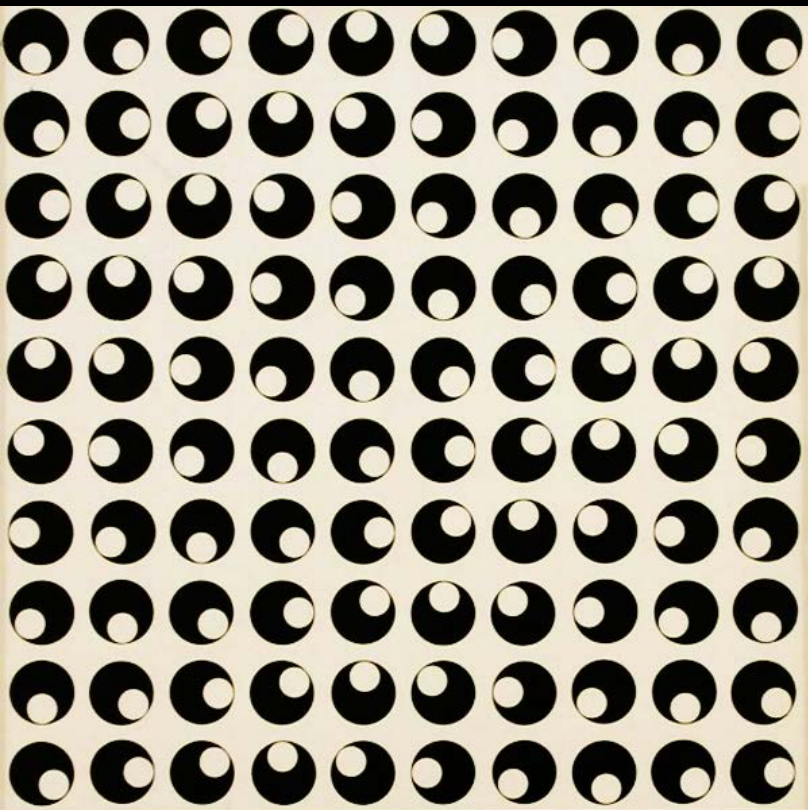
George Rickey [1907-2002] was an American artist whose Kinetic Art sculptures poeticized the medium of steel in a transformative manner. Born on June 6, 1907 in South Bend, IN, he grew up outside of Glasgow, where his father worked as an executive for the Singer Sewing Machine Company. Studying history at Bailliol College in Oxford, he received his formal art training under Fernand Léger and Amédée Ozenfant at the Académie Lhote and the Académie Moderne in Paris. Despite beginning as a painter, while serving in World War II for the United States, Rickey worked as mechanic for gunnery and aircraft. His time working with machinery, revived his childhood interest in mechanical systems, and he began producing simple moving sculptures after the war.



George Rickey, *Crucifera*, 1965

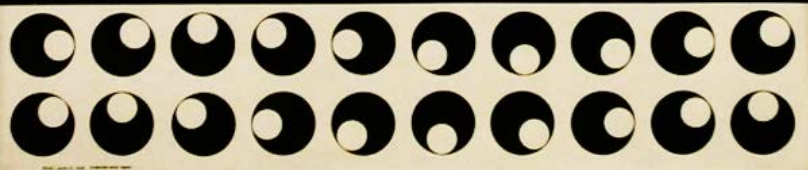
Rickey, "The New Tendency (Nouvelle Tendance – Recherche Continuelle)," 1964

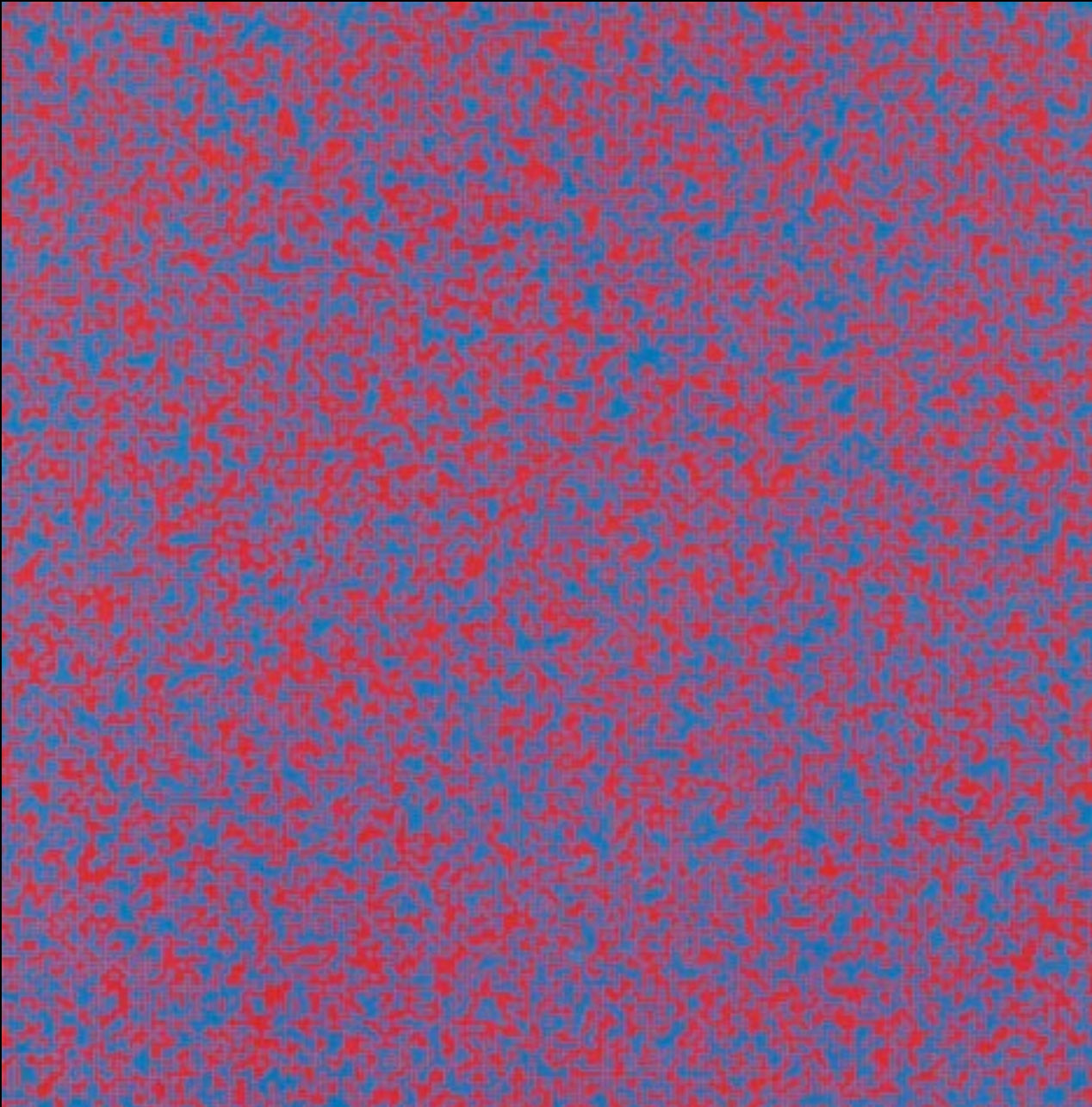
- a. New ideas of space – as a continuum
- b. Use of micro-elements, too numerous to count, too small to be seen as separate forms, too large to be merely texture
- c. Non-Euclidean geometry of curves, tangents, overlays, and interlockings which are computed but not mathematically
- d. Light itself as expressive means
- e. Movement itself
- f. Optical phenomena – artist using reaction to stimuli of the eye itself
- g. Objectification/Constructivist: mathematical relationships, chance/randomness, interactive
- h. Bypassing traditional materials



novе tendencije 2

galerija suvremene umjetnosti, zagreb, katarinin trg 2 1. august - 15. septembar 1963

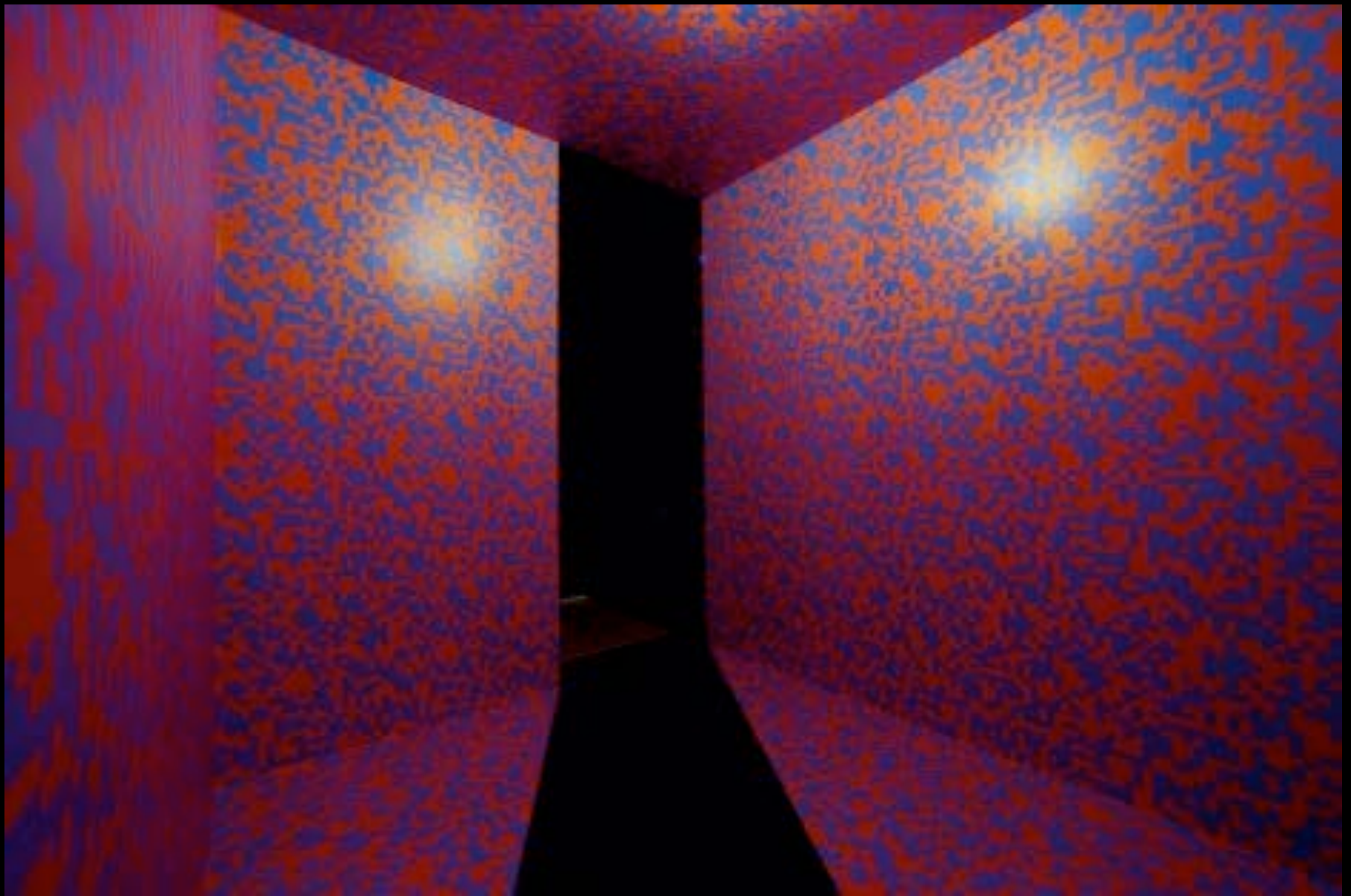




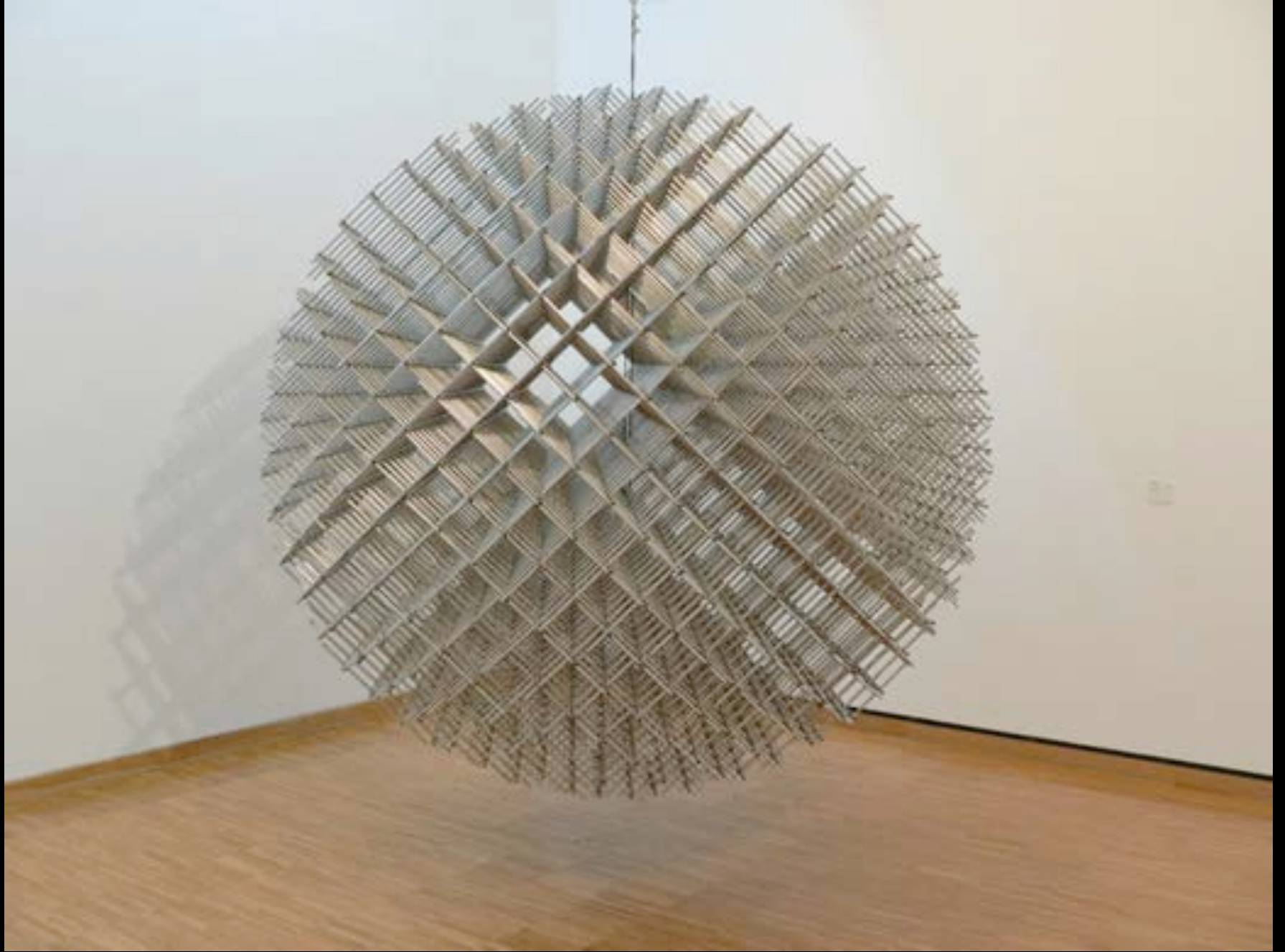
François Morellet [1926-2016],
Random Distribution of
40,000 Squares using the
Odd and Even Numbers of
a Telephone Directory,
1960

Oil on canvas

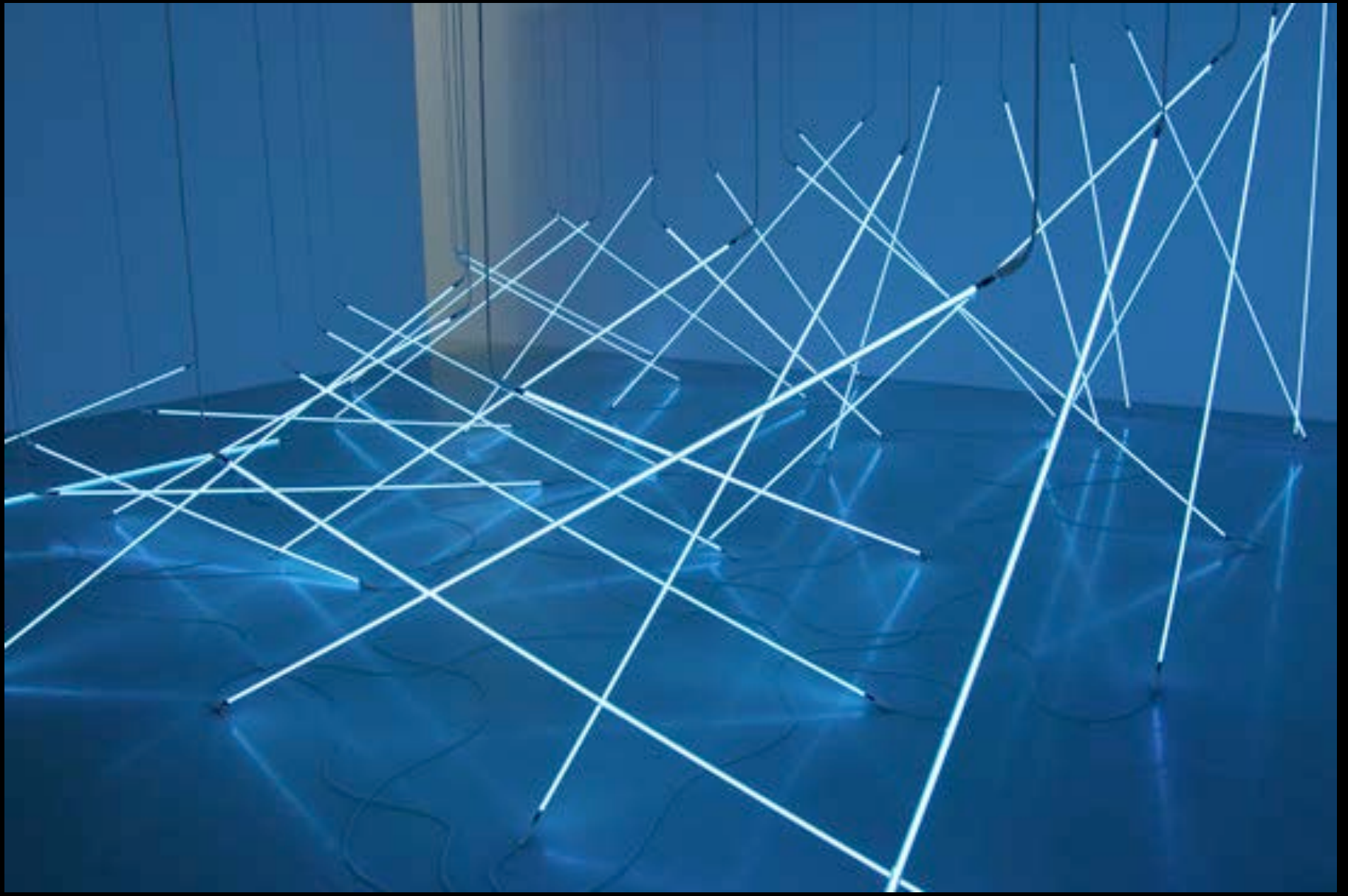
Like other contemporary artists who use constraints and chance (or the aleatory) in their works (John Cage in music, the Oulipo group in literature), Morellet uses rules and constraints established in advance to guide the creation of his works, and he also allows chance to play a role in some of his compositions.



François Morellet, *Random Distribution of 40,000 Squares using the Odd and Even Numbers of a Telephone Directory*, Installation view at Kunsthaus, Zürich 2006
Wallpaper, carpet, light bulb



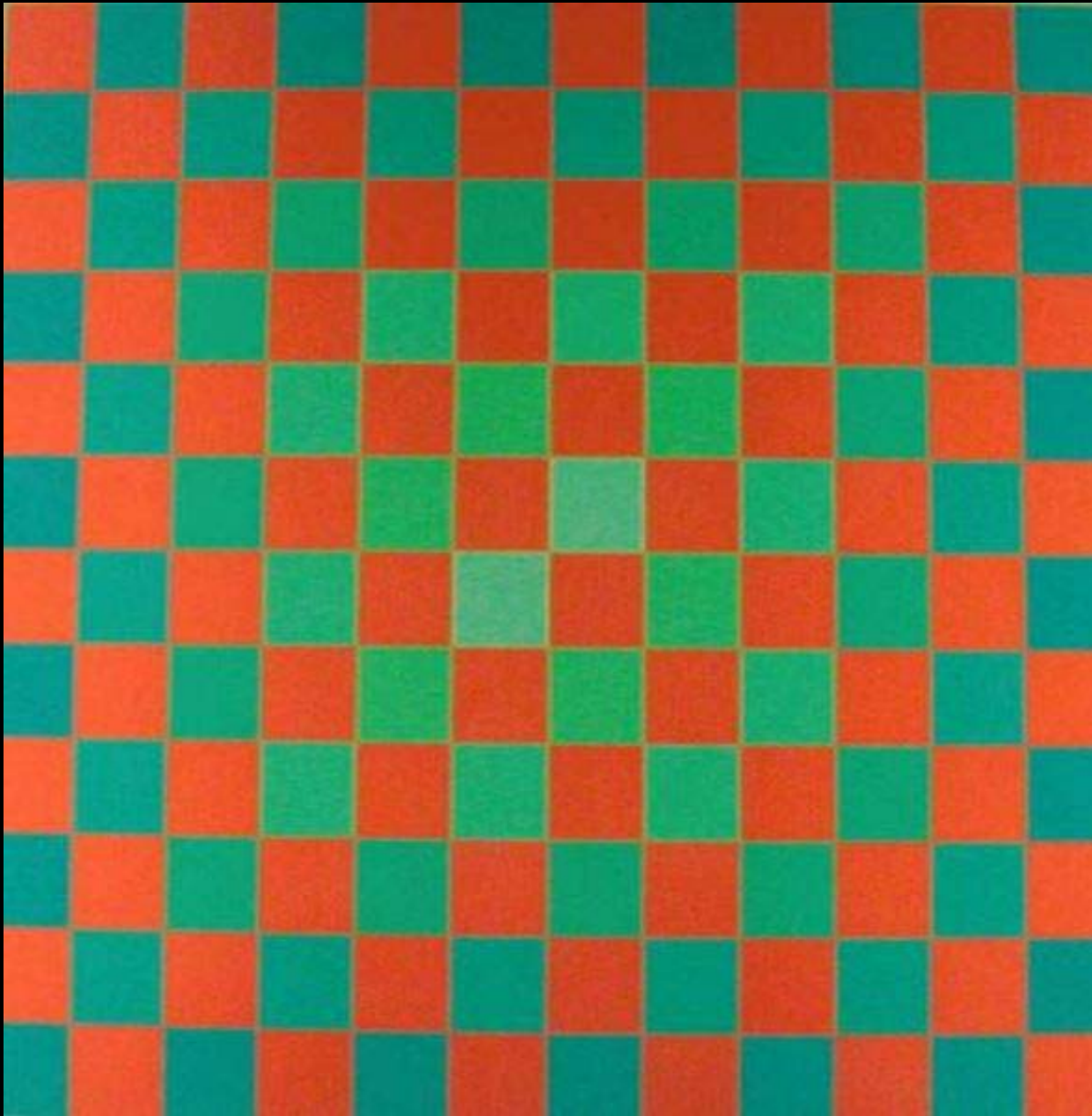
François Morellet, Sphère-trame, 1972



Francois Morellet, Untitled Re-Installation of Light-Room Piece, c. 1965/2011, Centre Pompidou



Francois Morellet, Lamentable, 2006



Hugo Demarco (1932–1995) was an Argentine-born French painter. Born in Buenos Aires, he relocated to Paris, where he joined a community of expatriate South American painters including Julio Le Parc and Jesus-Rafael Soto. Demarco's work is concerned largely with color and movement. He traveled widely and gave many personal exhibitions of his work, especially between the years 1961 and 1989.

Hugo Rodolfo Demarco, Untitled, c. 1965



Hugo Rodolfo Demarco,
Déplacement continue, 1962,
Paris

Electrical system, black neon light
with reflector, aluminium and
painted metal on wooden box



Jesús Rafael Soto (Venezuelan 1923-2005)
Spirales, 1955

In 1955 Jesús Rafael Soto participated in *Le mouvement (The Movement)* at Galerie Denise René, the exhibition that effectively launched Kinetic art. Around this time, and for many years subsequently, Soto's art oscillated between geometric and organic forms.





NOTES POUR UN MANIFESTE

Voici les faits déterminants du passé que nous relient entre eux et qui nous intéressent parmi tant d'autres : la « plastique » triomphe sur l'anecdote (Manet) - première géométrisation du monde extérieur (Cézanne) - conquête de la couleur pure (Matisse) - éclatement de la figuration (Picasso) - la vision extérieure change en vision intérieure (Kandinsky) - une lignée de la peinture se dissout dans l'architecture, qui devient polychrome (Mondrian) - départ des grandes synthèses plastiques (Le Corbusier) - nouveaux alphabets plastiques (Ara, Teuber, Magnelli, Herbin) - abandon du volume pour l'ESPACE (Calder)... Le désir d'une connaissance nouvelle s'est affirmé dans le passé tout proche par l'invention de la **COMPOSITION PURE** et par le choix de l'**UNITÉ**, dont nous parlons plus loin. Parallèlement au déclin de la technique ancestrale de la peinture, se poursuit l'expérimentation des **matériaux neufs** (applications chimiques) et l'adoption de **nouveaux outils** (découverte de la physique)... **A présent, nous allons vers l'abandon total de la routine, vers l'intégration de la sculpture et la conquête des DIMENSIONS SUPÉRIEURES au plan.**

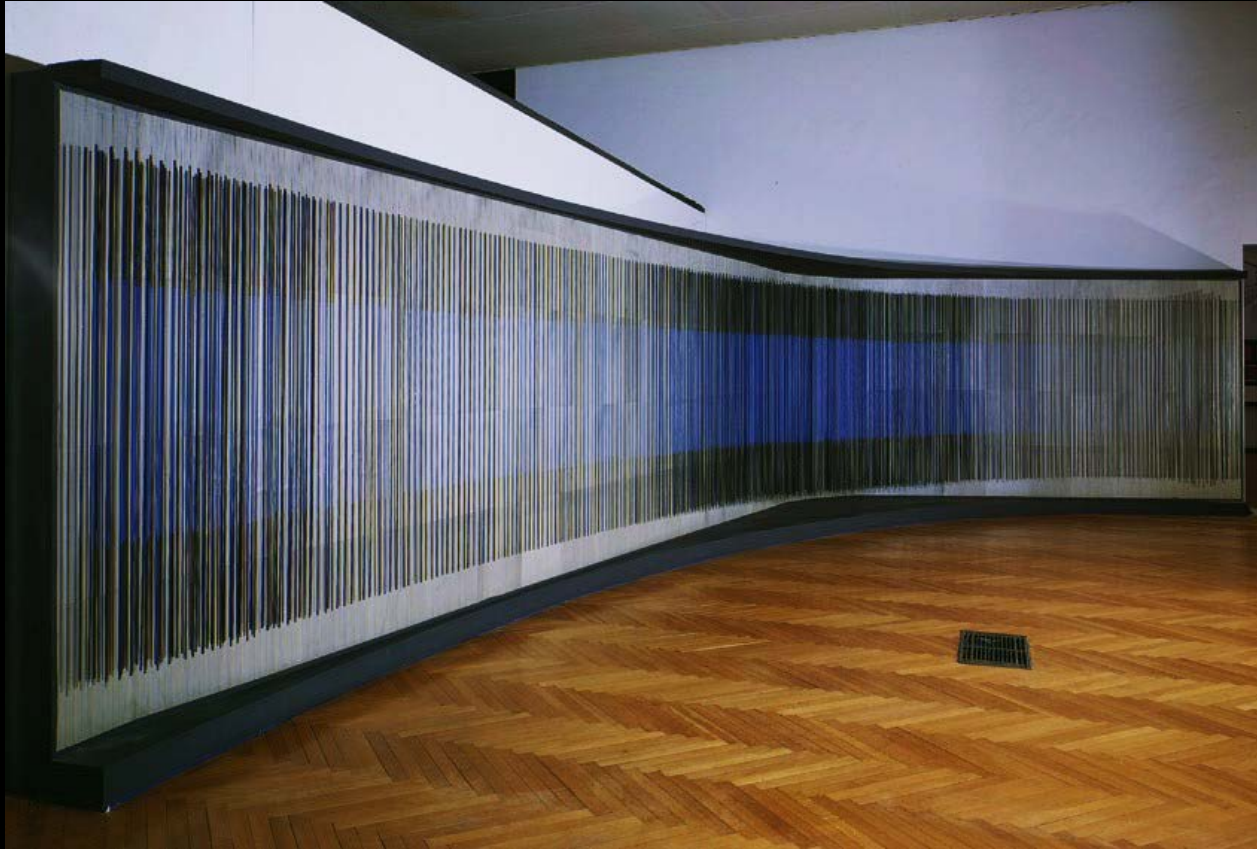
Dès le début, l'abstraction dépouille et agrandit ses éléments de composition. Bientôt, la **forme-couleur** envahit toute la surface bidimensionnelle, le tableau-objet s'offre à cette métamorphose qui le conduit, par les voies de l'architecture, à l'univers spatial de la polychromie. ● Cependant, nous est déjà proposée une solution extra-architecturale et nous rompons délibérément avec la loi néo-plasticienne. ● **LA COMPOSITION PURE** est encore une plastique plane où de rigoureux éléments abstraits, peu nombreux et exprimés en peu de couleurs (mâtes ou brillantes à plat) possèdent, sur toute la surface la même qualité plastique complète : **POSITIVE-NÉGATIVE**. Mais, par l'effet de perspectives opposées, ces éléments font naître et s'évanouir tour à tour un « sentiment spatial » et donc, l'illusion du **mouvement** et de la **durée**. ● **FORME ET COULEUR NE FONT QU'UN**. La forme ne peut exister qu'une fois signalée par une qualité colorée. La couleur n'est qualité qu'une fois délimitée en forme. Le trait (dessin, contour) est une fiction qui n'appartient pas à une, mais à deux formes-couleurs à la fois. Il n'engendre pas les formes-couleurs, il résulte de leur rencontre. ● **Deux formes-couleurs nécessairement contrastées, constituent l'UNITÉ PLASTIQUE, donc l'UNITÉ de la création : éternelle dualité de toutes choses, reconnues enfin pour inséparables.** C'est l'accouplement de l'affirmation et de la négation. Mesurable et non mesurable, l'unité est à la fois physique et métaphysique. C'est la compréhension de la structure matérielle, mathématique, de l'Univers, tout comme de sa superstructure spirituelle. L'unité, c'est l'essence abstraite du **BEAU**, la première forme de la sensibilité. Conçue avec art, elle constitue l'œuvre, équivalent poétique du Monde qu'elle signifie. L'exemple le plus simple de l'unité plastique est le carré (ou rectangle) avec son complément « **contraste** » ou le **plan bidimensionnel avec son complément « espace environnant »**.

Après ces quelques explications succinctes, nous proposons la définition suivante : **sur la ligne droite - horizontale et verticale - repose toute spéculation créatrice.** Deux parallèles, forment le cadre délimitent le plan, ou découpent une partie de l'espace. **CADRER C'EST CRÉER DU NEUF ET RECRÉER TOUT ART DU PASSÉ.** ● Dans la technique du plasticien, désormais considérablement élargie, le plan demeure le lieu de la première conception. Le **petit format** en composition pure constitue le départ d'une recréation des multiples fonctions bidimensionnelles (grand format, fresque, tapisserie, album de planches). Mais déjà nous découvrons l'orientation nouvelle. ● **La DIAPOSITIVE** sera à la peinture ce que le disque est à la musique : maniable, fidèle, complexe, autrement dit un document, un outil de travail, une œuvre. Elle constituera une nouvelle fonction transitoire entre l'image fixe et la future image mouvante. ● **L'ÉCRAN EST PLAN MAIS, PERMETTANT LE MOUVEMENT, IL EST AUSSI ESPACE.** Il n'a donc pas deux, mais quatre dimensions. Le « mouvement-temps » illusoire de la composition pure, dans la nouvelle dimension offerte par l'écran, et grâce à l'unité, devient **mouvement réel.** Le **Losange** autre expression de « l'unité carré-plan », égale carré + espace + mouvement + durée. **L'ellipse**, autre expression de « l'unité cercle-plan » égale cercle + espace + mouvement + durée. ● D'innombrables autres unités multifformes et multicolores donnent la gamme infinie de l'expression formelle. La « profondeur » nous procure l'échelle relative. Le « lointain » condense, le « près » dilate, réagissant ainsi sur la qualité **COULEUR-LUMIÈRE.** **Nous possédons donc, et l'outil et la technique, et enfin la science pour tenter l'aventure plastique - cinétique.** La géométrie (carré, cercle, triangle, etc.) la chimie (cadmium, chrome, cobalt, etc.) et la physique (coordonnées, spectre, colorimétrie, etc.) représentent des **constants.** Nous les considérons en tant que quantités, notre mesure, notre sensibilité, notre art, en feront des qualités. (Il ne s'agit ici ni de « l'Euclidienne » ni de « l'Einsteinienne », mais de la propre géométrie de l'artiste qui fonctionne à merveille sans connaissances exactes.) ● L'animation de la Plastique se développe de nos jours de trois manières distinctes : 1) **Mouvement dans une synthèse architecturale, où une œuvre plastique spatiale et monumentale est conçue de telle sorte que des métamorphoses s'y opèrent par suite du déplacement du point de vue du spectateur.** - 2) **Objets plastiques automatiques qui - tout en possédant une qualité intrinsèque - servent surtout comme moyen d'animation au moment du filmage.** - Enfin, 3) **L'investissement méthodique du DOMAINE CINÉMATOGRAPHIQUE par la discipline abstraite.** **Nous sommes à l'aube d'une haute époque. L'ÈRE DES PROJECTIONS PLASTIQUES SUR ÉCRANS PLANS ET PROFONDS, DANS LE JOUR OU L'OBSCURITÉ, COMMENCE.**

Le produit d'art s'étend de « l'agréable objet utilitaire » à « l'Art pour l'Art », du « bon goût » au « transcendant ». L'ensemble des activités plastiques s'inscrit donc dans une vaste perspective en dégradé : arts décoratifs - mode - publicité et propagande par l'image - décors des grandes manifestations de l'industrie, des Fêtes, des Sports - décors des spectacles - usines modèles polychromes - signalisations et urbanisme - film d'art documentaire - musée créateur - édition d'art - synthèse des Arts plastiques - enfin, recherche de l'avant-garde authentique. Dans ces diverses disciplines, l'accent personnel ne signifie pas forcément authenticité. Et puis, nous ne sommes pas qualifiés pour décider, dans notre temps, du caractère majeur ou mineur de ces différentes manifestations des arts plastiques. Il existe des talents d'arrière-garde, tout comme des insuffisances dans l'avant-garde. Mais ni l'œuvre de valeur - si elle est immuable ou rétrograde - ni l'œuvre avancée - si elle est médiocre - ne comptent pour la postérité. ● **L'effet du produit d'art sur nous va (avec des différences d'intensité et de qualité) du menu plaisir au choc du Beau. Ces diverses sensations se produisent en premier dans notre être émotif en y engendrant le sentiment du bien-être ou celui du drame. Par cela, le but de l'Art est à peu près atteint.** L'analyse, la compréhension d'un message dépendent de nos connaissances et de notre degré de culture. Puisque seules les entités de l'art du passé sont intelligibles, puisqu'il n'est pas permis à tout le monde d'étudier profondément l'Art contemporain, à la place de sa « compréhension » nous précisons sa « présence ». La sensibilité étant une faculté propre à l'humain, nos messages atteindront certainement le commun des mortels par la voie naturelle de sa réceptivité émotive. En effet, nous ne pouvons laisser indéfiniment la jouissance de l'œuvre d'art à la seule élite des connaisseurs. L'art présent s'achemine vers des formes généreuses, à souhait créables ; l'art de demain sera trésor commun ou ne sera pas. ● Les traditions dégèrent, les formes usuelles de la peinture déprissent sur des voies condamnées. Le temps juge et élimine, le renouveau part d'une rupture et la manifestation de l'authentique est discontinu et inattendue. Il est douloureux, mais indispensable, d'abandonner d'anciennes valeurs pour s'assurer la possession de nouvelles. Notre condition a changé, notre éthique, notre esthétique doivent changer à leur tour. Si l'idée de l'œuvre plastique résidait jusqu'ici dans une démarche artisanale et dans le mythe de la pièce unique, elle se retrouve aujourd'hui dans la **conception d'une possibilité de RECREATION, de MULTIPLICATION et d'EXPANSION.** L'immense diffusion de l'œuvre littéraire ou musicale s'exerce-t-elle au détriment de son unicité et de sa qualité ? ● La chaîne majestueuse de l'image fixe sur deux dimensions se déroule de Lascaux aux abstraits... l'avenir nous réserve le bonheur en la nouvelle beauté plastique mouvante et émouvante.

(Les idées ici exprimées n'engagent que leur auteur)

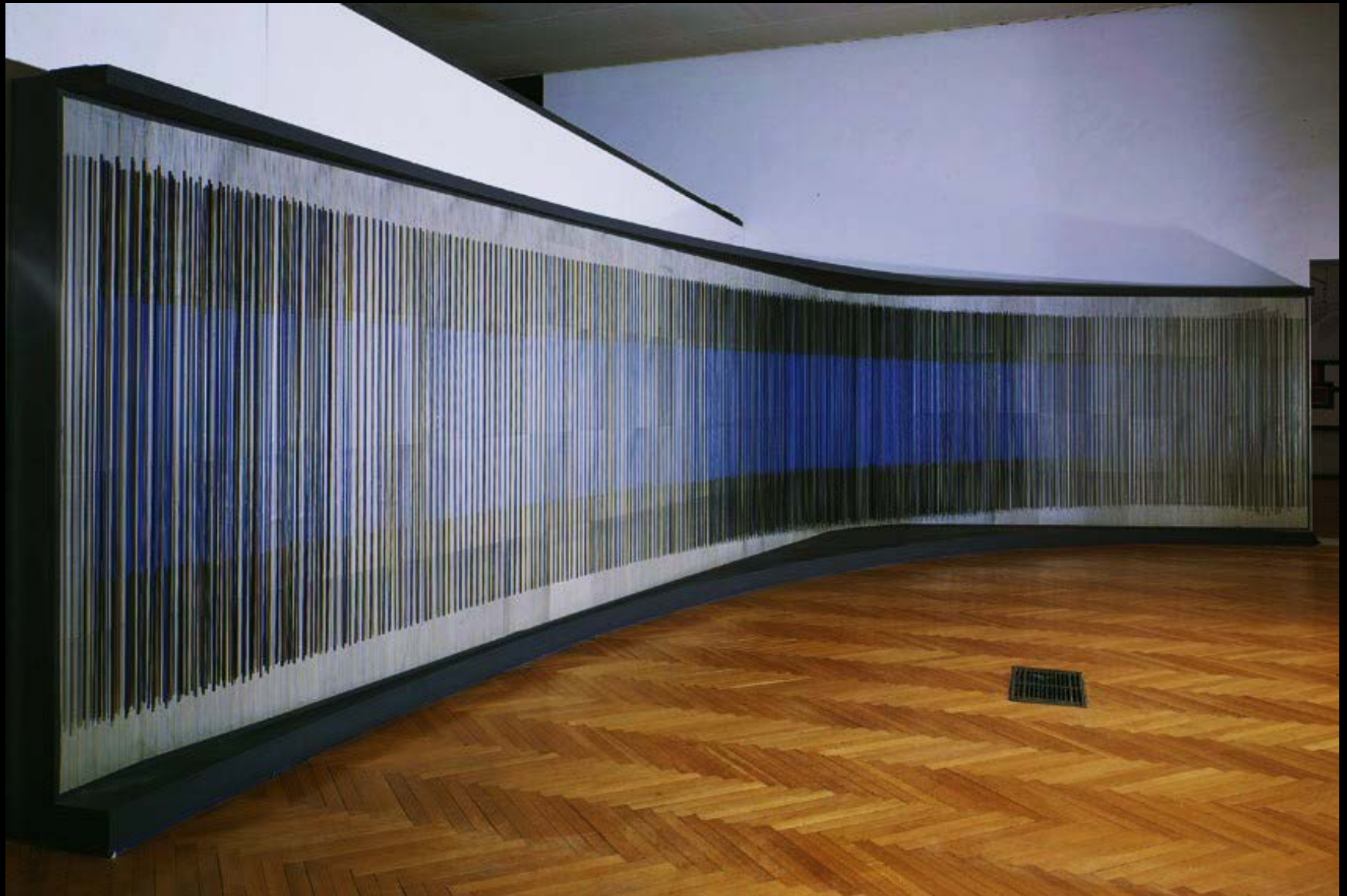
VASARELY



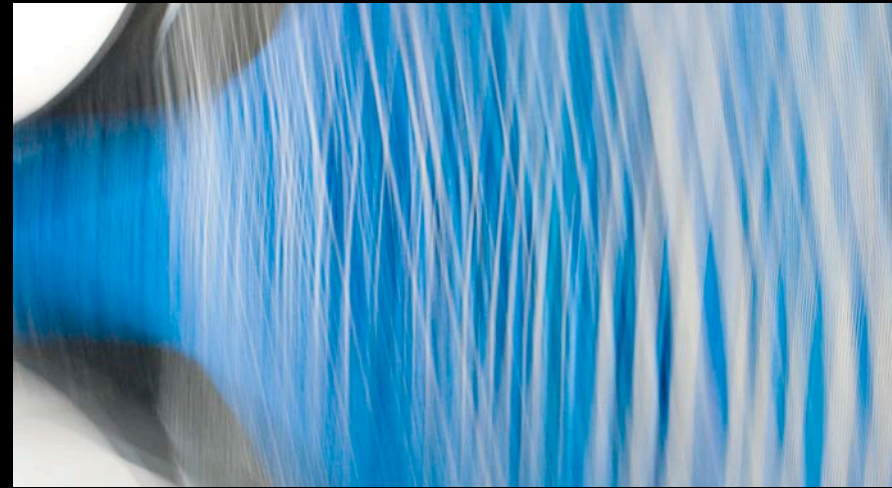
Jésus Rafael Soto, Great Panoramic Vibrant Wall, 1965

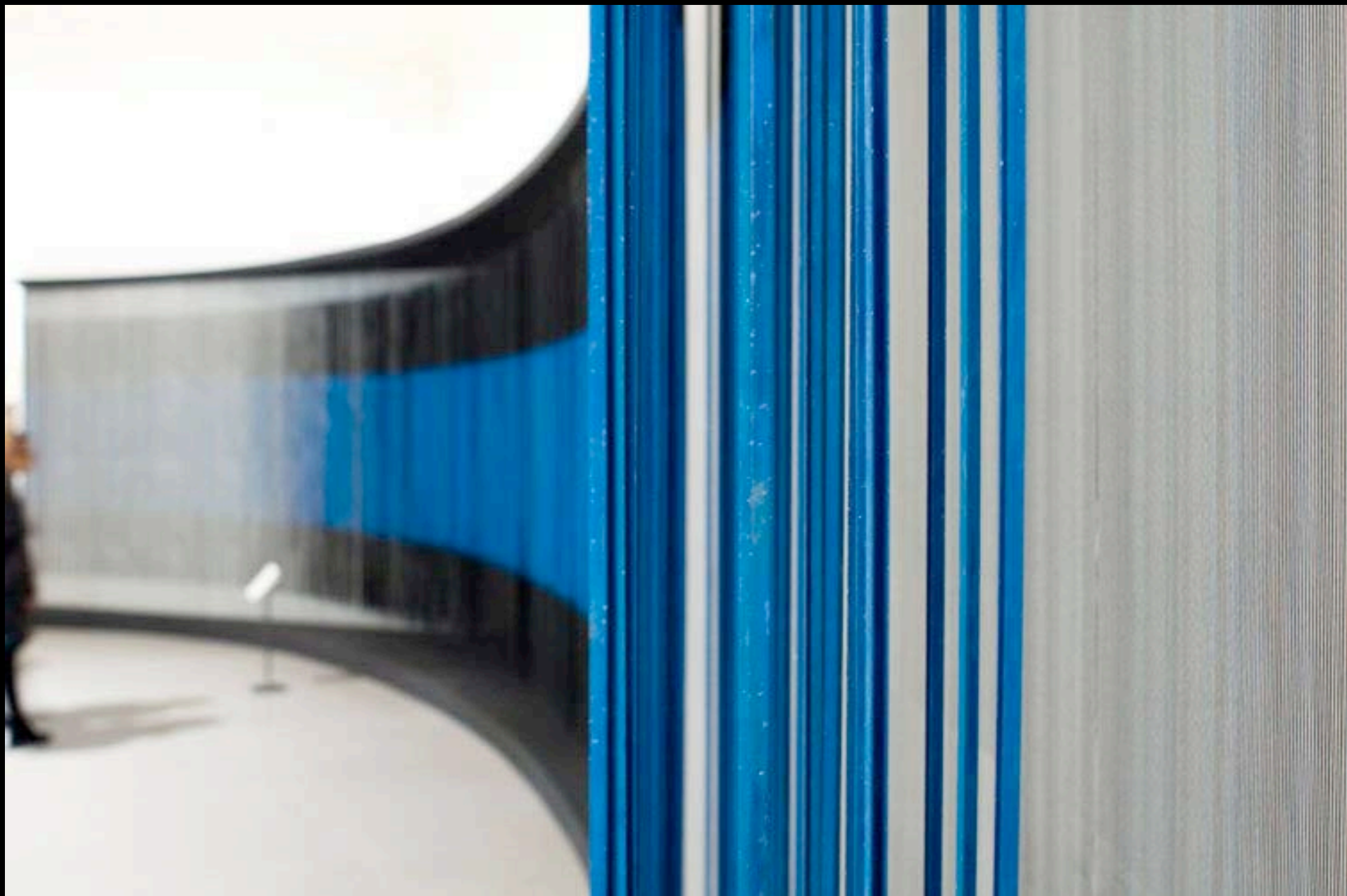
Jesús Rafael Soto (June 5, 1923 – January 14, 2005) was a Venezuelan op and kinetic artist sculptor and a painter. After Soto had graduated from Escuela de Artes Pláticas y Artes Aplicadas, receiving a teaching degree, he was then hired to be the director of the *Escuela de Bellas Artes de Maracaibo* from 1947 to 1950. When he was teaching there, he received a government grant to travel to France, and settled in Paris.

When Soto arrived in Europe in 1951, Geometric Abstraction was not very popular. He proposed a new sort of movement that would add to three dimensional art. By 1954, he began associating with Yaacov Agam, Jean Tinguely, Victor Vasarely and other artists connected with the *Salon des Réalités Nouvelles* and the *Galerie Denise René*. Soto also worked on his *Penetrables* which were metal and plastic works that the spectator could interact with by walking through them.



Jésus Rafael Soto, Great Panoramic Vibrant Wall, 1965









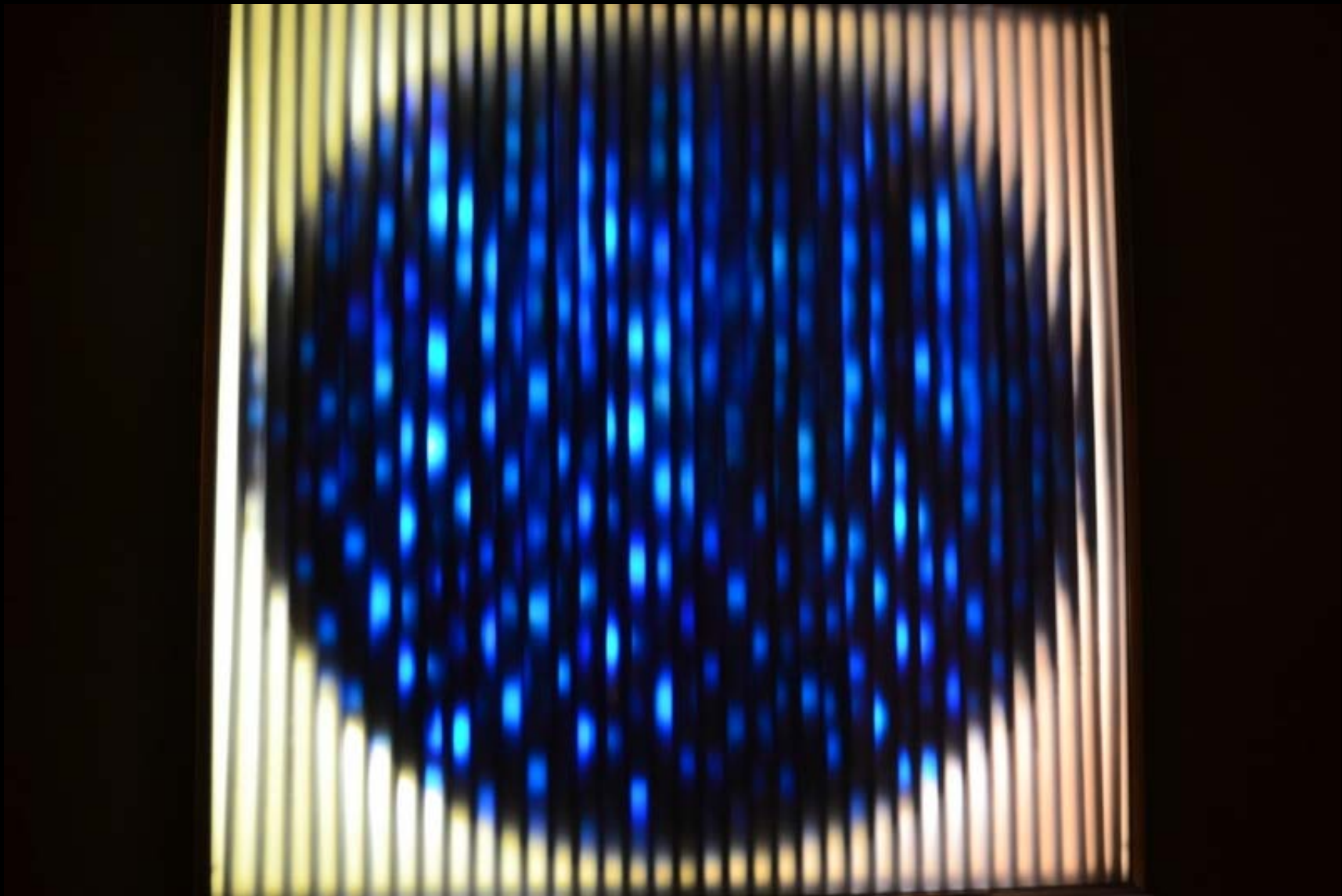
Jésus Rafael Soto, Houston Penetrable, 2014



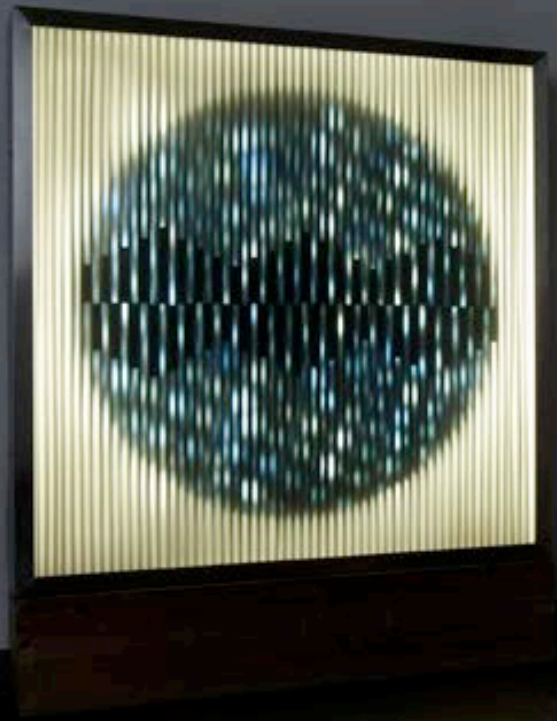
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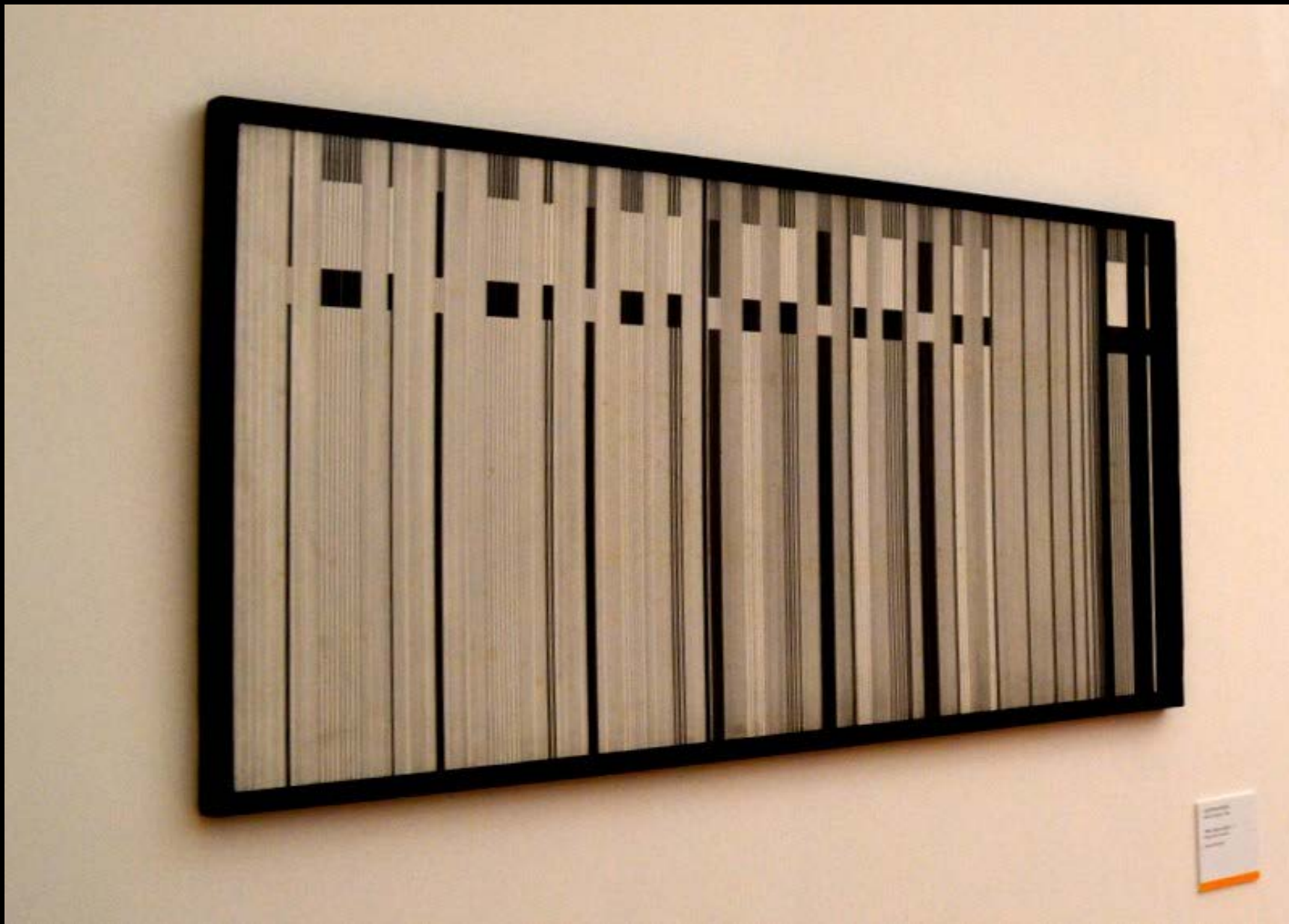
Umberto Eco, *Opera aperta* (translated into English as "The Open Work"), 1962
Eco's notion of "The Open Work" is an attempt to understand modern artworks which can be rendered open by their author, and further completed by the performer, viewer, reader or audience.

http://www.lee-web.net/classes/wp-content/uploads/2012/09/04_openwork.pdf



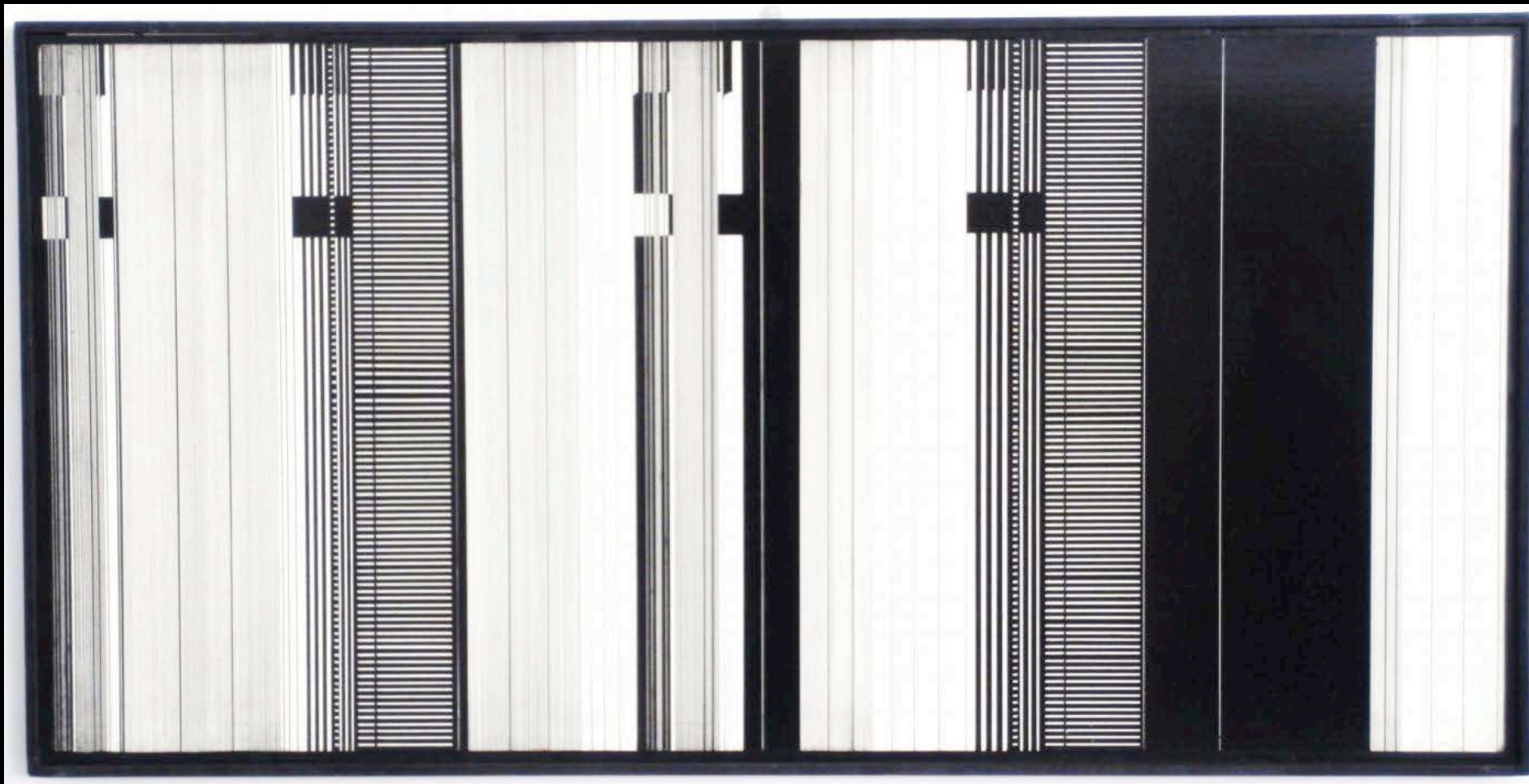
Nino Calos, Luminoso Mobile 135B, 1966; Aluminum, plexiglass, electric motor, neon tubes; https://www.youtube.com/watch?v=Ks9Qtnjm_gw

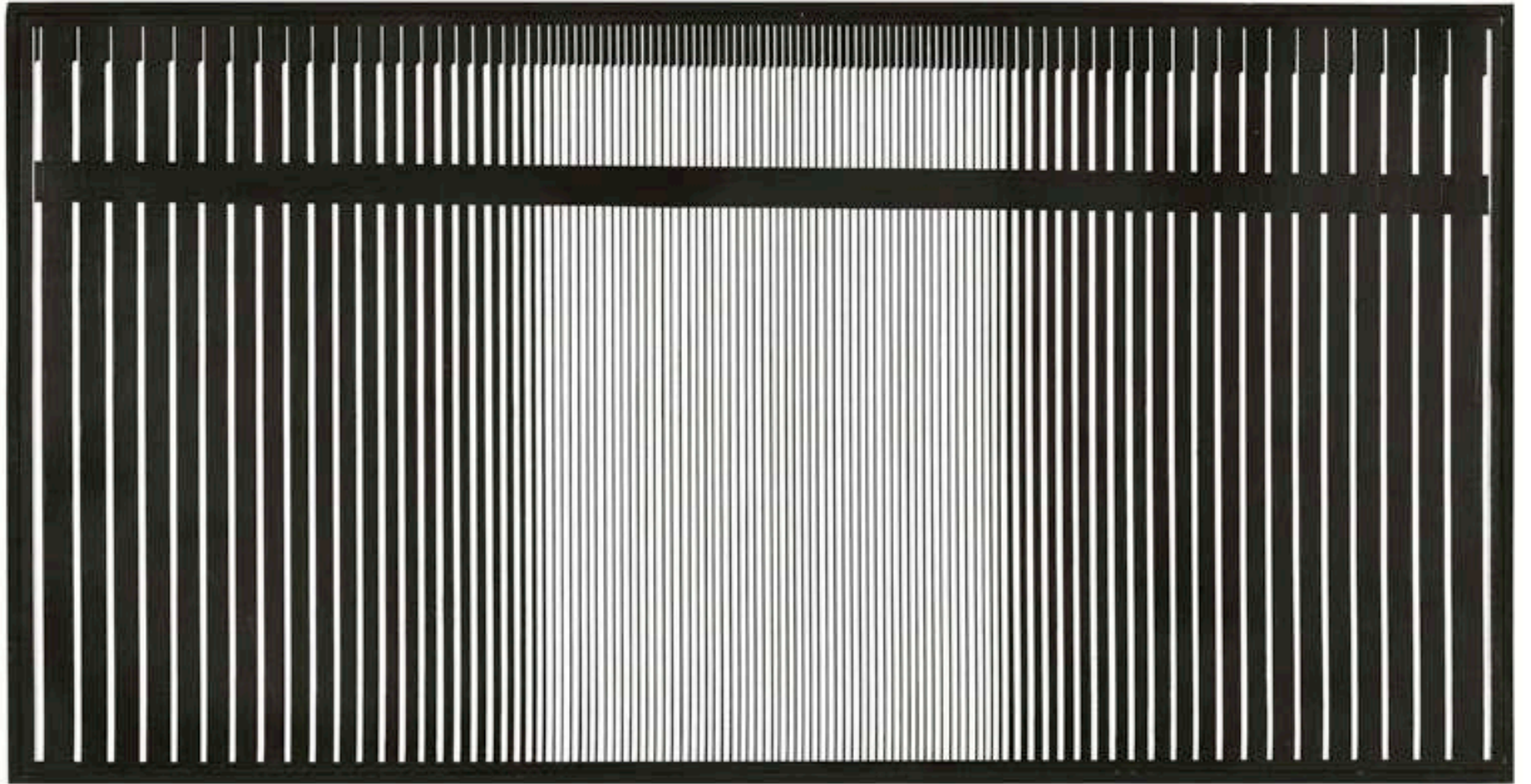




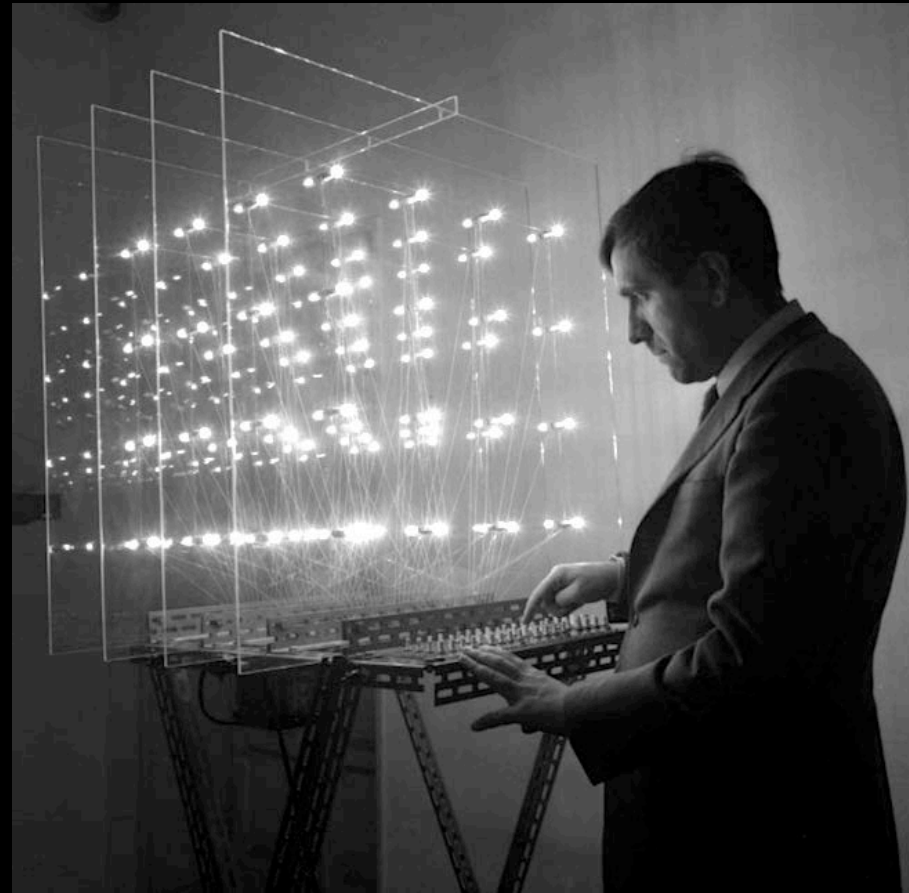
Giovanni Pizzo/Gruppo 63- - Gestalt Sign n.4 – 1962-1963 paint on masonite

From Giovanni Pizzo's Gestalt Sign series...

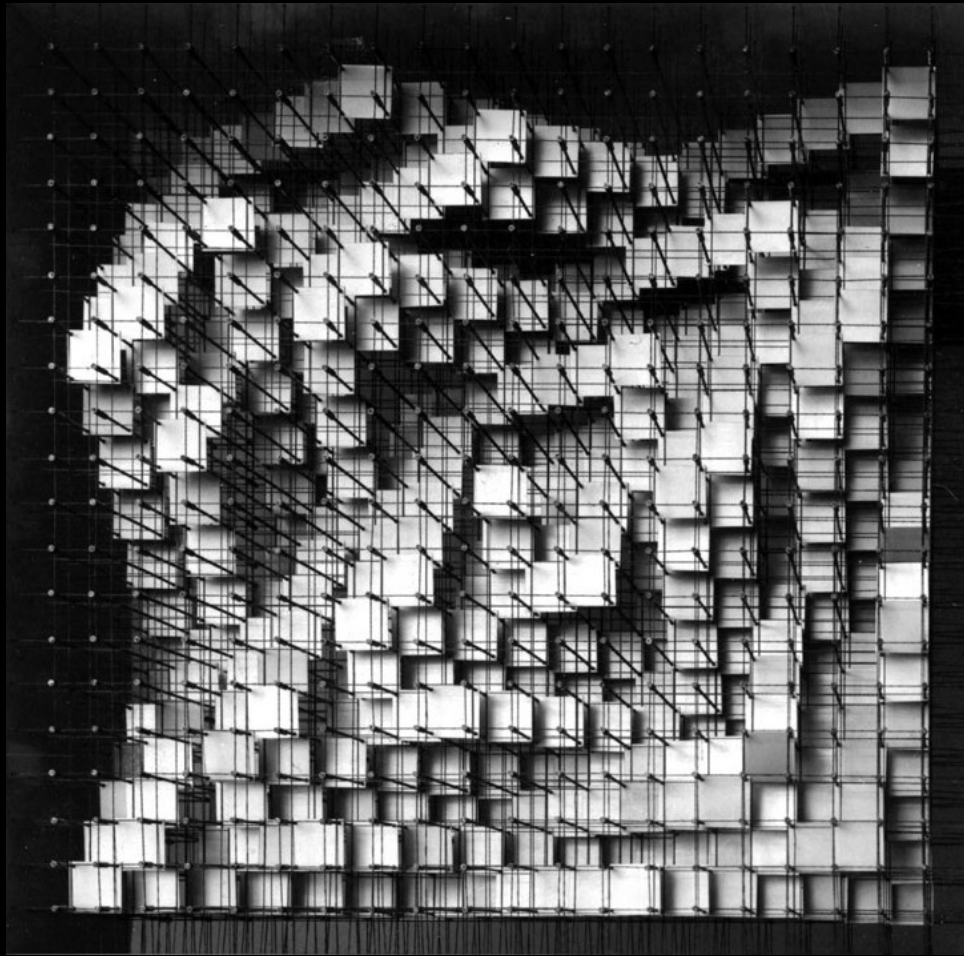




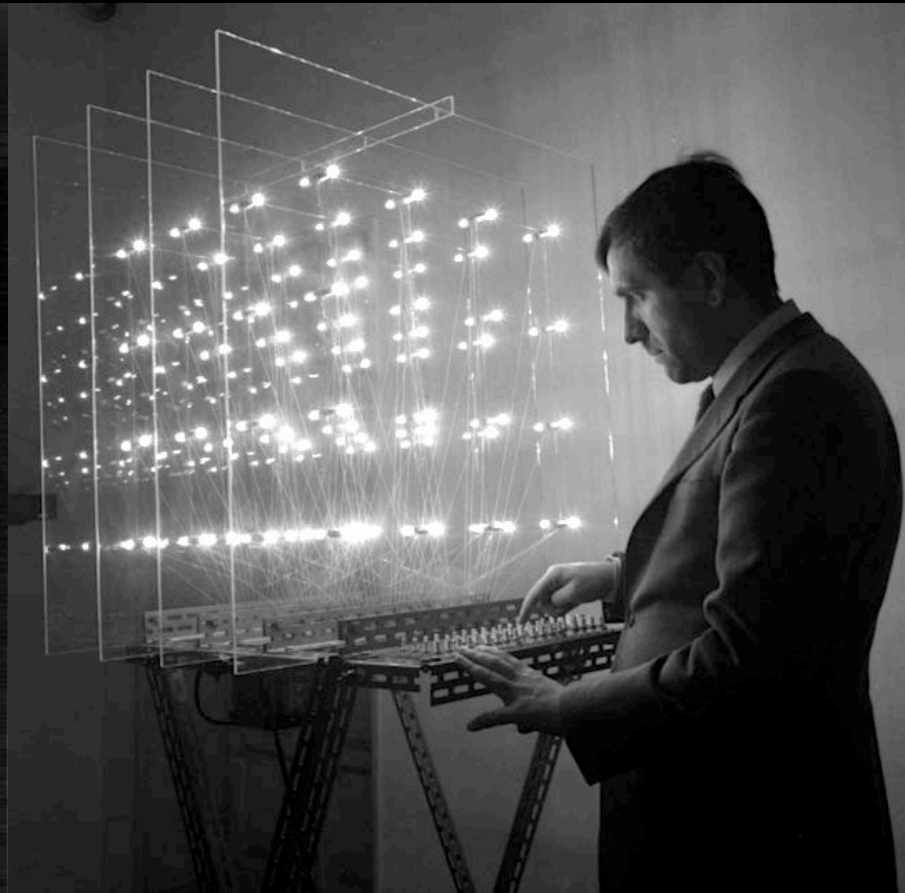
Mari was born in Novara, Italy and he studied at the Brera Academy in Milan, Italy from 1952-1956 In the 1960s, published a series of books, including "The Apple and the Butterfly," a wordless book of paintings depicting the story of a caterpillar and an apple. In the 1970s, he founded the Nuova Tendenza art movement as a professor at Società Umanitaria, also in Milan.



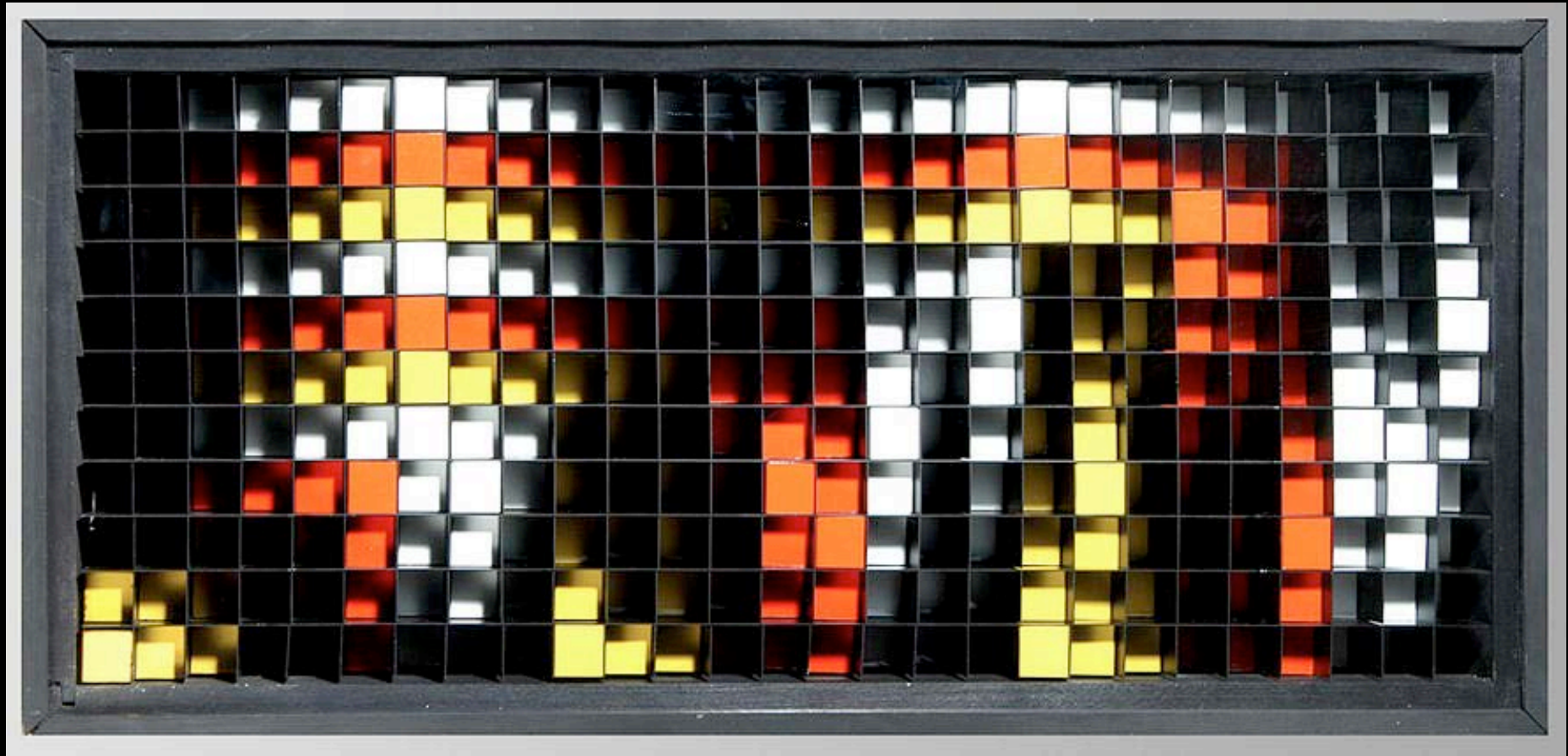
Enzo Mari, *Struttura 895, Omaggio a Fadat* — shown at Milan's Galleria dell'Ariete Luce e movimento [Light and movement] exhibition, 1967



Enzo Mari, Struttura 744, 1964. Anodized aluminium, brass and steel



Enzo Mari, Struttura 895, Omaggio a Fadat — shown at Milan's Galleria dell'Ariete Luce e movimento [Light and movement] exhibition, 1967

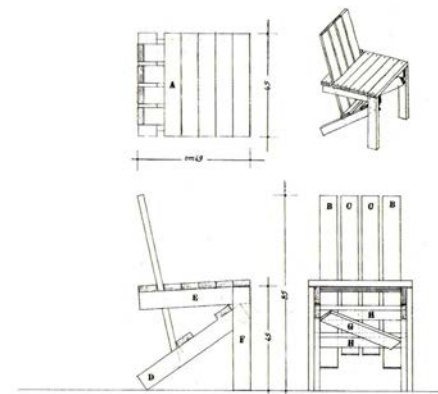


Enzo Mari, Structure 864, 1967, Anodized aluminum cubes, laminated lithograph



Enzo Mari, The Box Chair, 1971

Also in the 1970s, he designed the Sof Sof chair and the "Box" chair. In 1974, Enzo Mari made the book *Autoprogettazione*, which deals around the DIY construction of furniture.



BIOLLETTE OCCIDENTE

| Letter | Dimension | Quantity | Letter | Dimension | Quantity |
|--------|-----------|----------|--------|-----------|----------|
| A | 1340 | 2 | F | 1340 | 2 |
| B | 36 | 2 | G | 42 | 2 |
| C | 30 | 2 | H | 40 | 2 |
| D | 25 | 2 | | | |
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SECONDA

OGNI VOTO - PIRELLA GÖTTSCHE LOWE - ROMA - ITALY



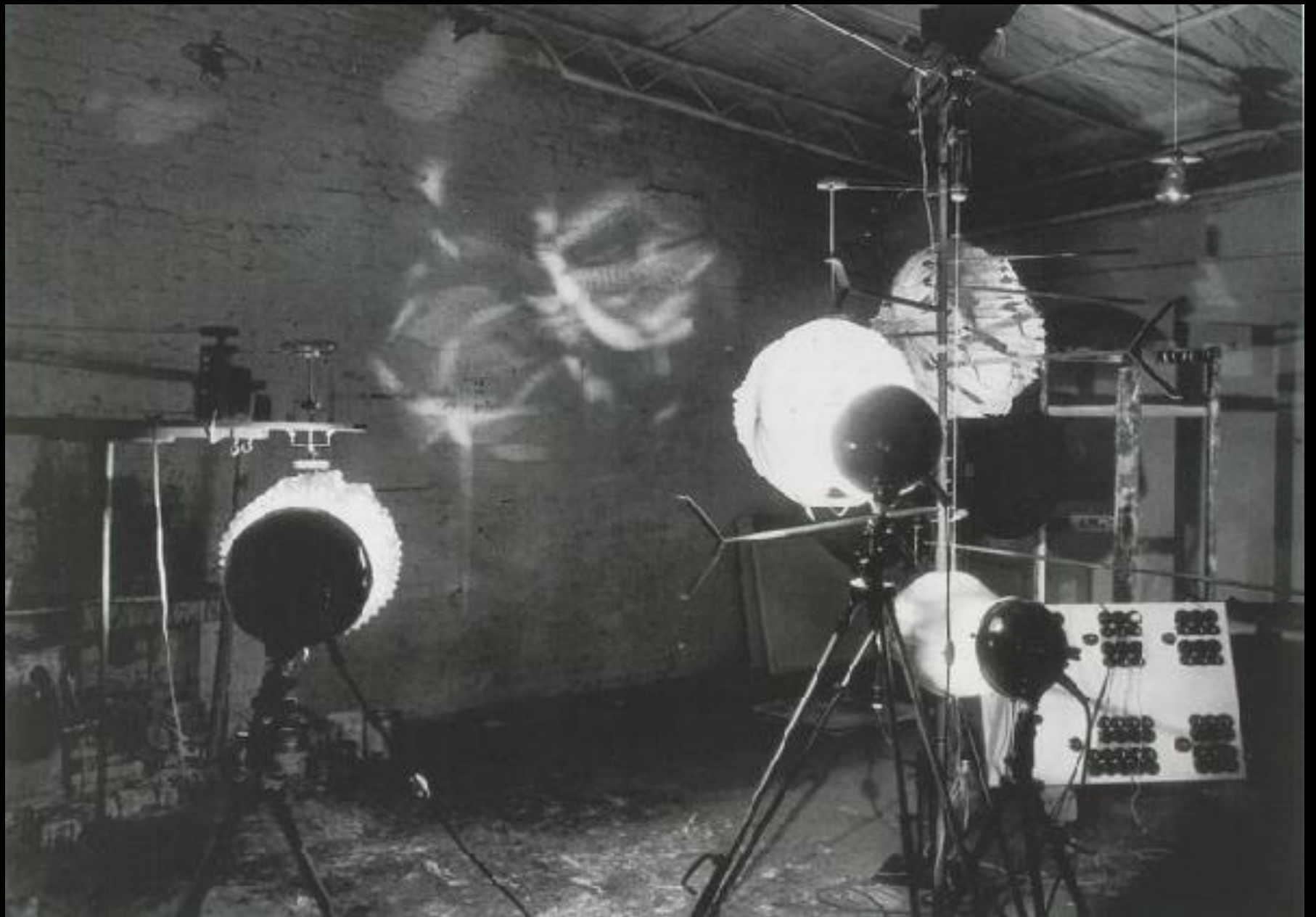


Born in Padua in 1937, Alberto Biasi is today considered a pioneer in the broader field of Kinetic Art. A founder of the groundbreaking Gruppo N during the 1960s, Biasi was one of the first artists to experiment on kinetic art with the illusory possibilities that can be created through the mix of traditional and non-traditional art materials in works that border between two-dimensionality and three-dimensionality. Biasi's work explores optical effects through the use of pedestrian materials like PVC strips and painted designs.

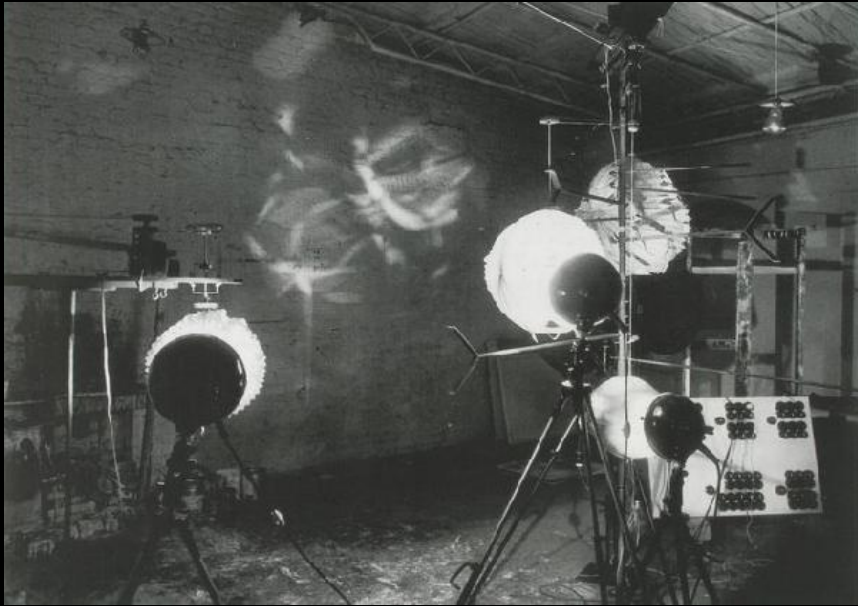
Alberto Biasi, Light Prisms (tuffo nell'arcobaleno), 1969

<https://www.youtube.com/watch?v=AQUThy4lBww>

Zero Group



Otto Piene, Light Ballet, Galerie Schmela, Düsseldorf, 1959-61



Otto Piene, Light Ballet, Galerie Schmela, Düsseldorf, 1959-61

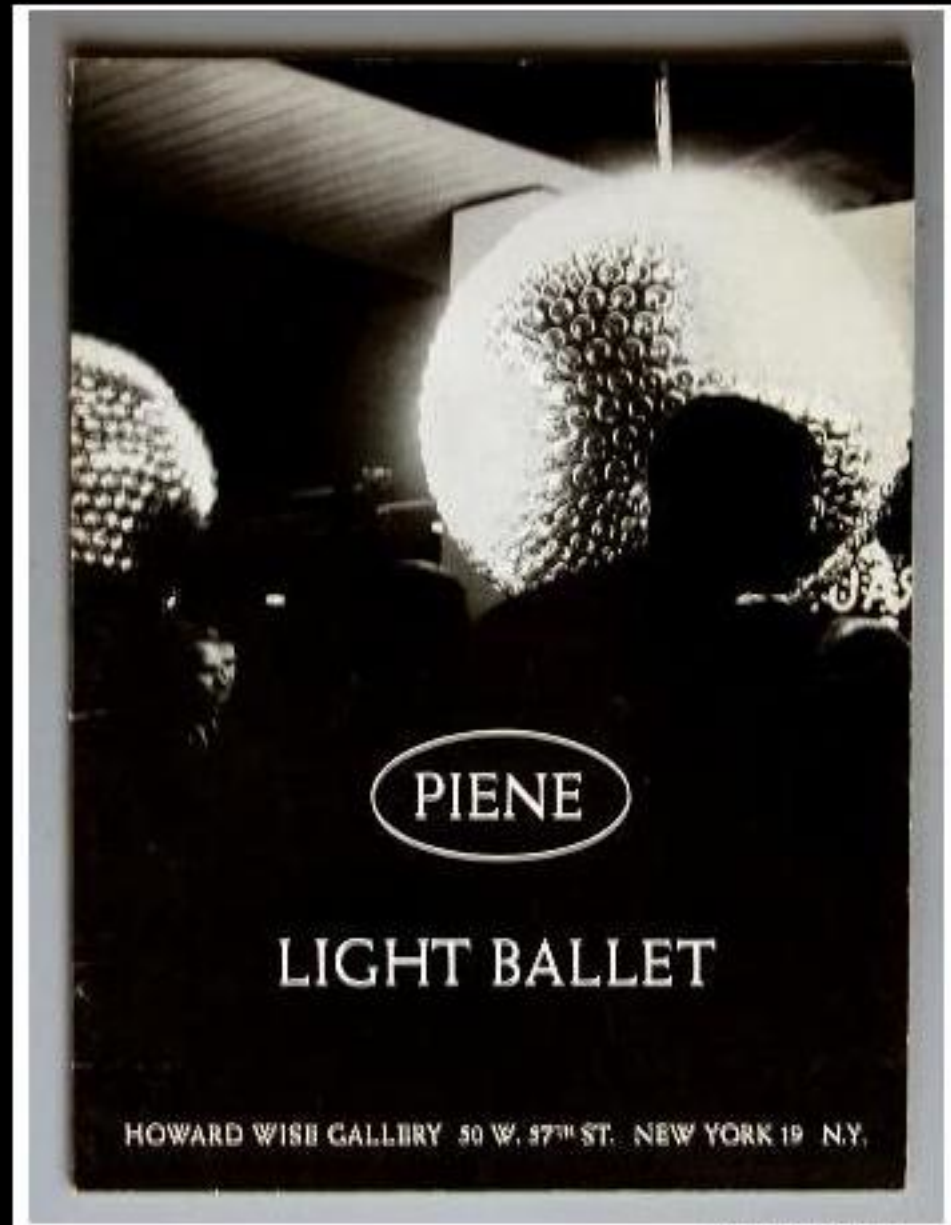
The Zero movement was initiated in the late 1950s by two Düsseldorf-based artists, Heinz Mack and Otto Piene. The term “Zero,” which the artists coined to describe their concept, later came to define an international movement taken up by artists across Europe. Instead of “Classical Compositions,” they presented the viewer with totally new and provocative aspects: Light, movement, space, time, dynamics, vibration and serial structures come to the fore.

Reacting to the personally-charged expressionism of the Post-War period, Zero artists aimed to banish any trace of a personal style and instead bring elements of the non-art world into their work. Informed by new materials and technologies, and incorporating elements of light, fire, and water, Zero was characterized by an idealistic spirit of collaboration in pursuit of new concepts of light, movement, and energy. Working in an environment without galleries and contemporary art spaces, these artists came together to exhibit their work in a series of one-day-only evening exhibitions, often staged in their studios. Manifestos were often published in association with the shows, such as “Zero 1” (1958), “Zero 2” (1958), and “Zero 3” (1961).

These included texts in multiple languages written by artists and curators active in the Zero circle who sought to define what they termed “The New Artistic Conception.”



Otto Piene, Electric Rose, 1965



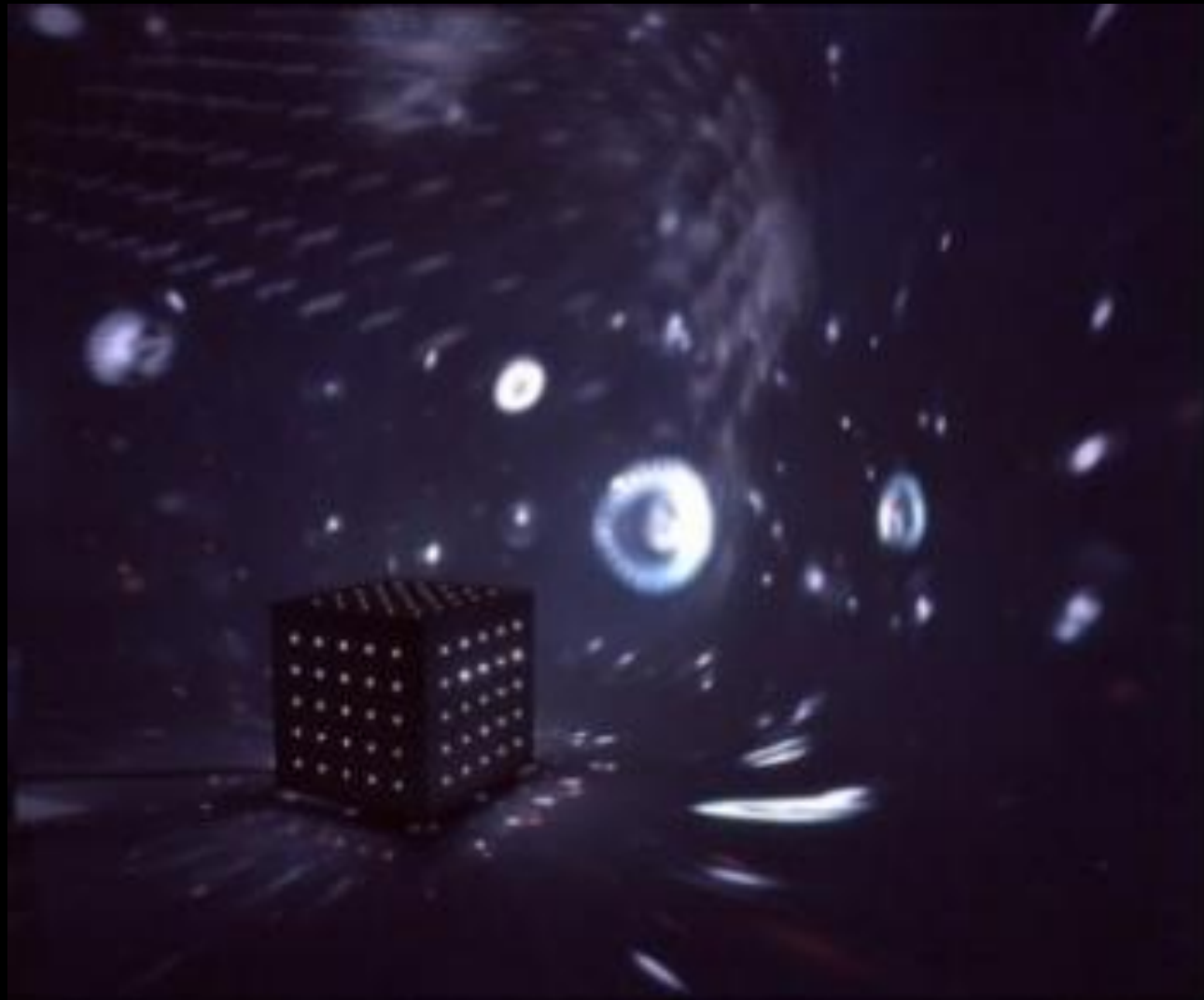
PIENE

LIGHT BALLETT

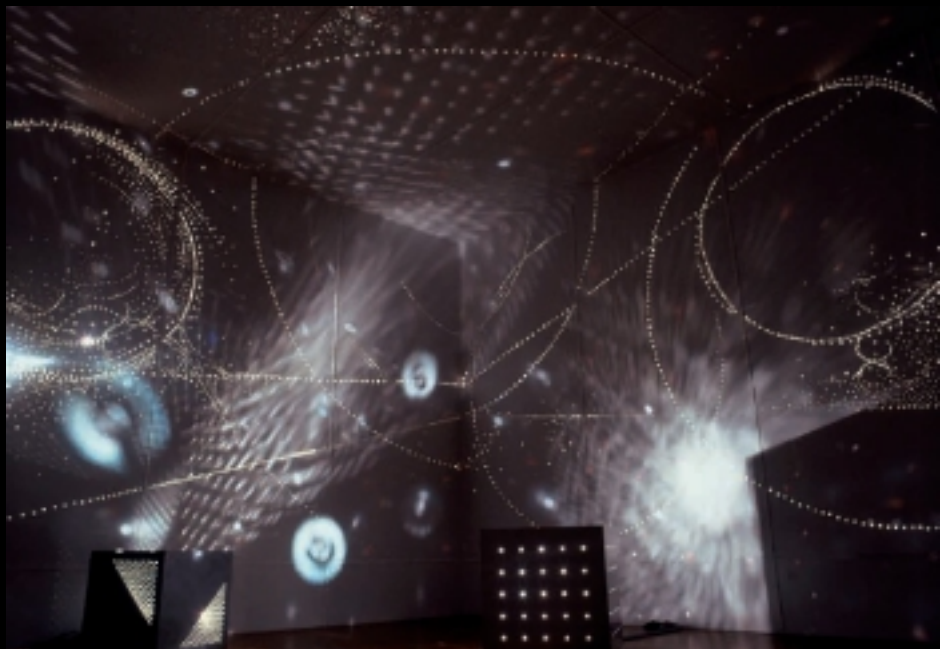
HOWARD WISE GALLERY 50 W. 57TH ST. NEW YORK 19 N.Y.

With its serial presentation, vibrant light structures and strong theoretical component, Zero was a progressive art movement that revolutionized Post-War art and led to the formation of the Post-War Avant-Garde. In describing the meaning and significance of the name “Zero,” Otto Piene wrote:

“From the beginning we looked upon the term [Zero] not as an expression of nihilism – or as a dada-like gag, but as a word indicating a zone of silence and of pure possibilities for a new beginning as the count-down when rockets take off – ZERO is the incommensurable zone in which the old state turns into the new.”



Otto Piene, Light Space, 1960



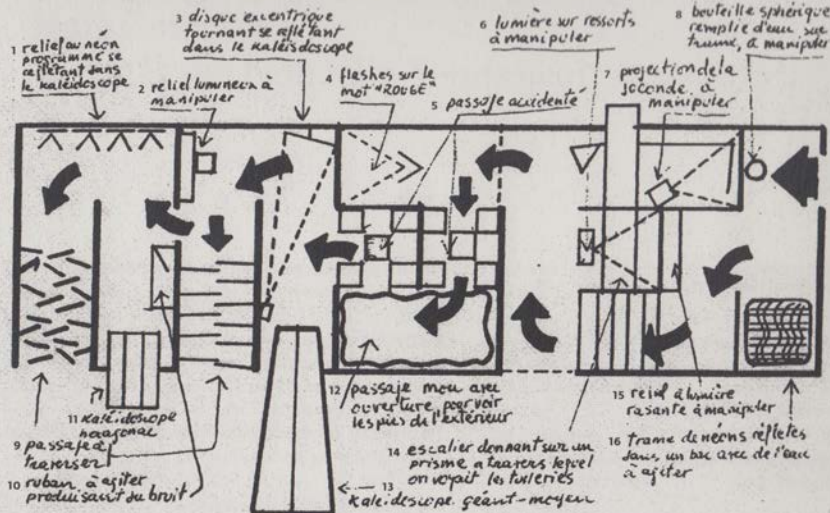
Groupe de Recherche d'Art Visuel [GRAV]
Assez des Mystification
(Enough Mystification), 1963

If there is a social preoccupation in today's art, then it must take into account this very social reality: the viewer.

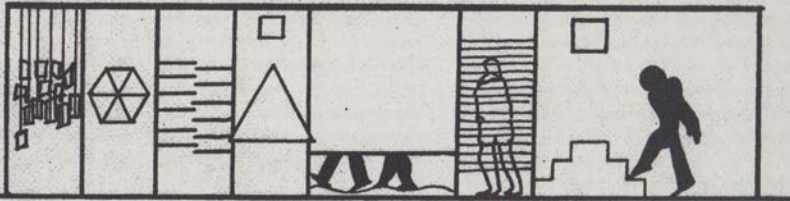
To the best of our abilities we want to free the viewers from this apathetic dependence that makes him passively accept, not only what one imposes on him as art, but a whole system of life... We want to make him participate. We want to place him in a situation that he triggers and transforms. We want him to be conscious of his participation...

A viewer conscious of his power of action, and tired of so many abuses and mystifications, will be able to make his own 'revolution in art'.

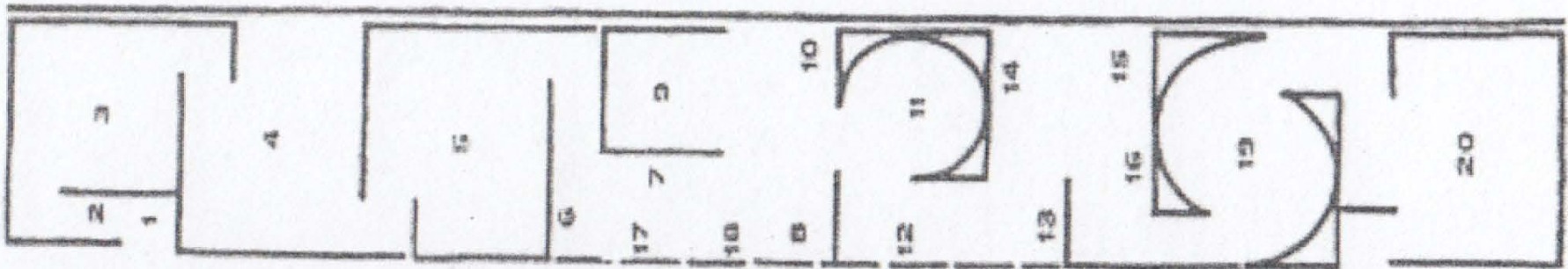
Plan du labyrinthe réalisé par Le Parc, Morellet et Stein dans L'exposition "Nouvelle Tendance" au Musée d'Art Décoratif, Palais du Louvre 1964.



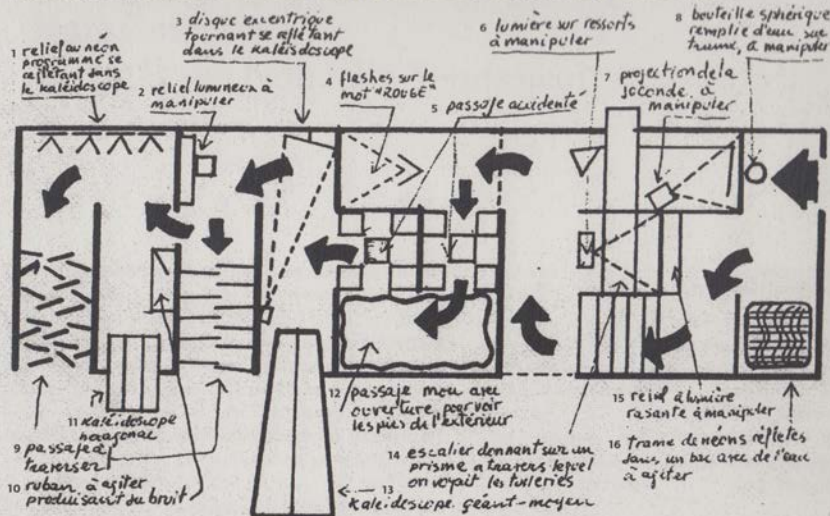
COUPE



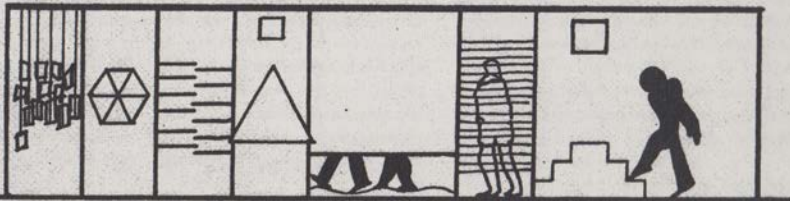
Plan and diagram of Julio Le Parc with members of GRAV, "Labyrinthe," 1964-65. Left, plan at the Musée d'Art Modern de la Ville de Paris in the context of the 1963 Biennale de Paris, 1963. Below, diagram for New Tendency exhibition at the Musée d'Art Décoratif, Palais du Louvre, 1964



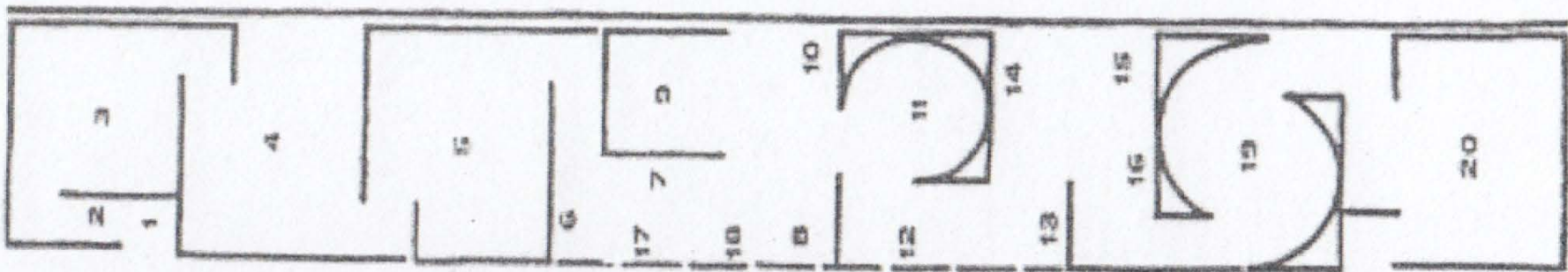
Plan du labyrinthe réalisé par Le Parc, Morellet et Stein dans L'exposition "Nouvelle Tendance" au Musée d'Art Décoratif, Palais du Louvre 1964.



COUPE



Groupe de Recherche d'Art Visuel (GRAV) (Research Art Group) was a collaborative artists group in Paris. For GRAV, the idea of the sole artist was outdated. They instead appealed to the direct participation of the public with an influence on its behavior, notably through the use of interactive labyrinth. Their main aim was to merge the individual identities of the members into a collective and individually anonymous activity linked to the scientific and technological disciplines based around collective events called Labyrinths. Thereafter they discovered that their effort to engage the human eye had shifted their concerns towards those of spectator participation – a foreshadow of interactive art. GRAV argued that viewers' reactions had social implications and the group defined different types of audience interaction with their art, such as: "perception as it is today", "contemplation", "visual activation", "active involuntary participation", "voluntary participation" and "active spectatorship".



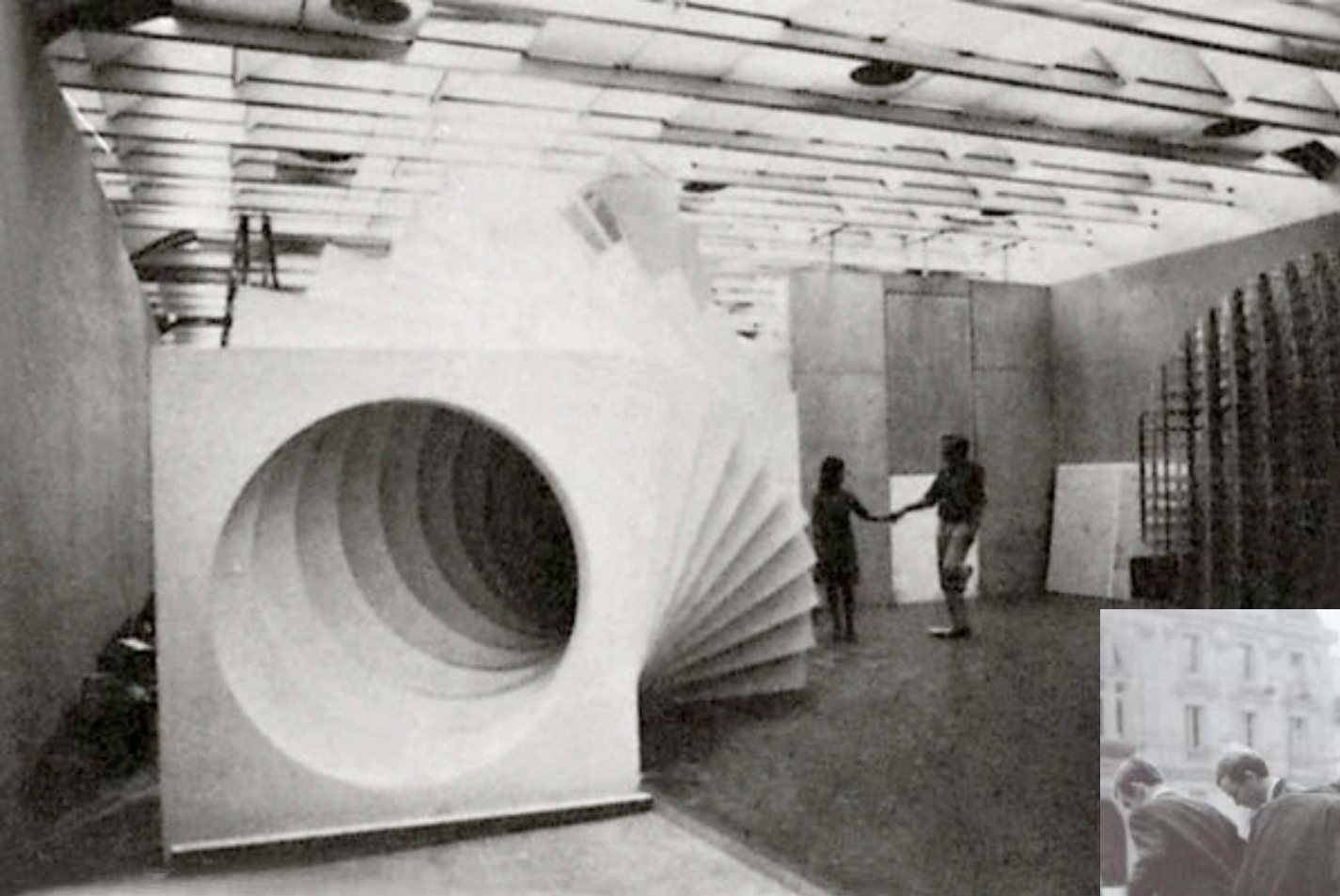
Umberto Eco: Open Work

Open-ended art works: open for multiple interpretation and perception.

Art work as a communication system.

Artwork as a communication system which oscillates between a **formal structure** and the **multiple meaning** produced by a 'wonderment' of the spectator (Eco, 1989).

The authorship of meaning moved from the artists to the audience.



Above: GRAV, Paris Biennale, 1963 <https://www.youtube.com/watch?v=C3PH-u9Zsgo>

Right: GRAV, Day in the Street, 1966 On April 19, 1966

The Day in the Street itinerary unfolded in Paris where GRAV invited the passing public to involve themselves in various kinetic activities. The itinerary started 8 o'clock in the morning with the GRAV artists handing out small gifts to passengers at the entrance of the Châtelet Metro. At 10 am the public was invited to assemble and disassemble changeable structures on the Champs-Élysées. At midday habitable kinetic objects could be manipulated, and at 2pm a giant kaleidoscope was made available to passers by while balloons floated in the fountain. 6 pm passers by where invited to walk on moveable paving slabs at Montparnasse.



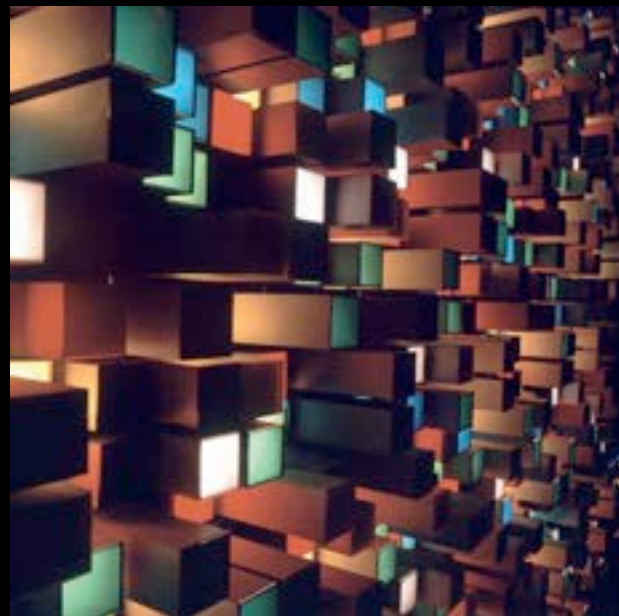


A NEW SYMBIOSIS WITH MACHINES, 1965-1969

The crisis culminated in 1965. In August, after the opening of *Nova tendencija 3* in Zagreb, the participants met at Brezovica Castle near Zagreb to discuss the state of New Tendencies. They debated whether the concept of “art as research” as a way to overcome traditional modes of artistic creation was actually viable and whether new modes of production and distribution could resist the demands of the art market for unique originals and promotable stars. One of the speakers at the meeting was Abraham A. Moles, professor at Strasbourg University, who had in 1958 published his *Théorie de l'information et perception esthétique* (Information theory and aesthetic perception), an early work on information aesthetics. Though a discussion of the computer did not enter the minutes of the meeting,¹⁰ it was presumably Moles who inspired the integration of the computer into the project of “visual research” in 1968. In his article “Cybernétique et œuvre d'art” (Cybernetics and the work of art), published in the *Nova tendencija 3* catalogue, Moles emphasized that society had to take the technological transformation of the human condition by information-processing machines seriously: they “are discretely conquering our world, that is to say, the world of our thoughts.”¹¹

How is the computer a mode of
political and economic resistance for
the New Tendencies artists?

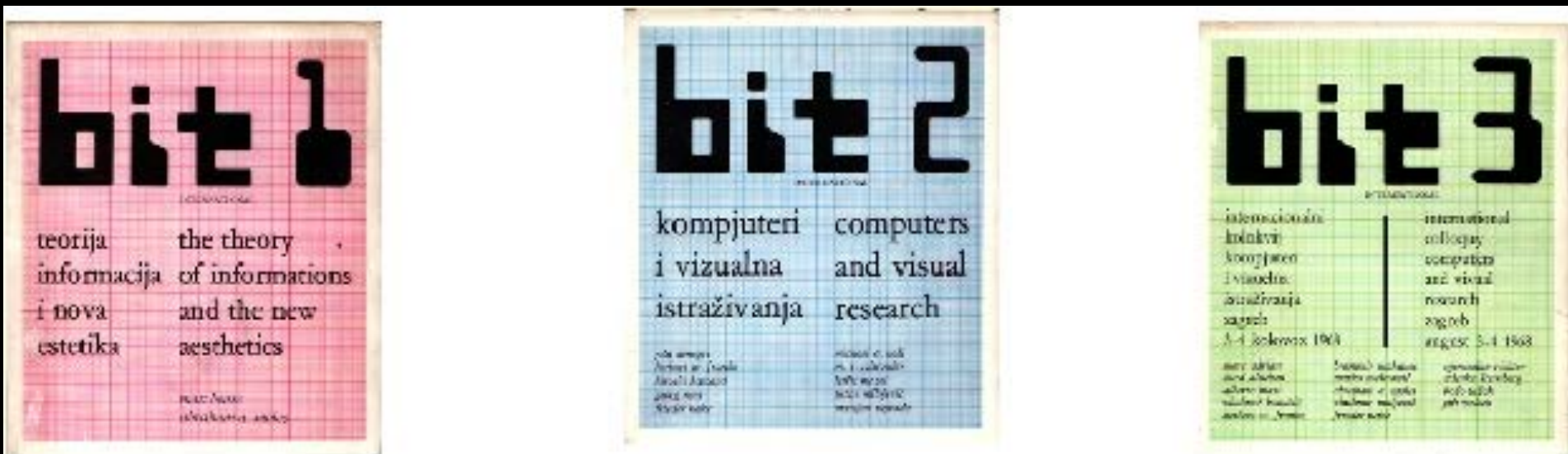
In summary, the optimistic embrace of computing technology in 1967 by the Croatian organizers of *Tendencije 4* must be seen as a reaction to the crisis within the movement that culminated in 1965. Some of the central aims of the movement seemed to remain unattainable: to demystify the concept of art and artistic creation by a substantially rational approach that denied romanticism and subjectivism; to overcome individualism by collective work; to make art accessible to all social classes by applying industrial principles of reproduction; and to unmask the dominating influence of the art market. The strong forces of art commerce in Western Europe, in particular, appeared to undermine any radical change.¹⁵ For these artists and theorists, the computer appeared as a manifestation of hope descending from the purified world of distant laboratories, untainted by art commerce and fashion. The computer was seen as a means to push artistic research beyond insidious aesthetic traditions and to resist the art market's rules.



Vladimir Bonacic, GFE (16, 4), 1969-71

Bonacic worked in the Croatian National Research Institute Ruder Boskovic in Zagreb from 1964, where he headed the Laboratory of Cybernetics from 1969 to 1973.

<https://www.youtube.com/watch?v=Qw764twB0CM>



New Tendencies published nine issues of a multilingual magazine called *Bit International*

In 1968 the Zagreb-based NT decided to incorporate into its program the computer as a medium of artistic work so as to thereby assert its avant-garde claim and to contribute to the definition of a technology which, as one quite rightly presumed, would define the future of civilization. NT initially sought to consciously accompany and form the historical transition in which the computer was perceived as medium of artistic creation. They set computer generated works in relation to Constructive and Kinetic Art (1968/69) and to Concept Art (1973). The arts of the electronic media were not considered as an isolated phenomenon but rather incorporated into the history and discourse of fine-and performing arts.

From 1968 to 1972, the Galerije grada Zagreba [Galleries of the City of Zagreb] published nine issues of the magazine (bit international 5/6 and 8/9 were double issues).

Op Art



MoMA, William C. Seitz

February 1965

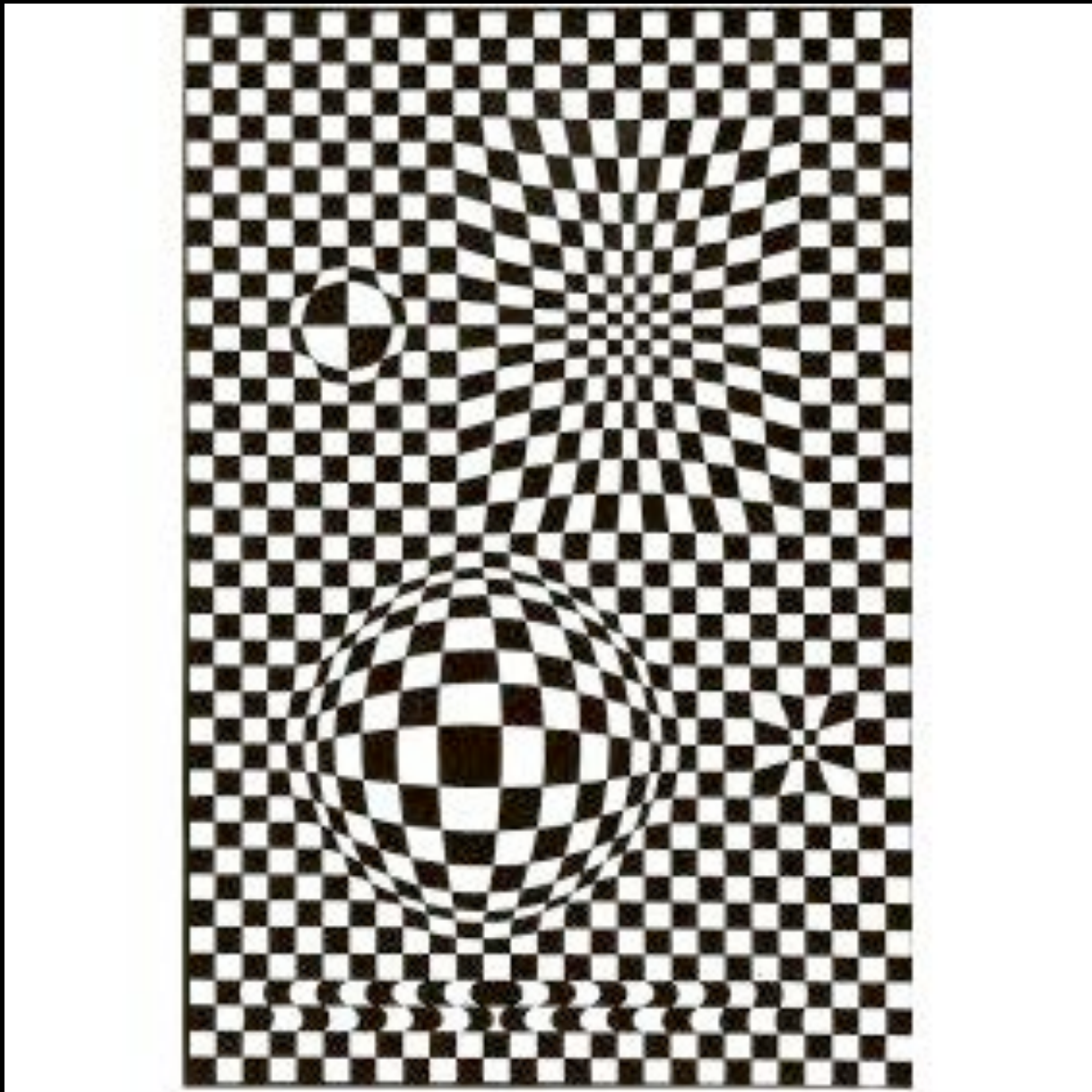
Director of Documentary:
Brian De Palma

<http://www.youtube.com/watch?v=GxgqN2Gf-Do>

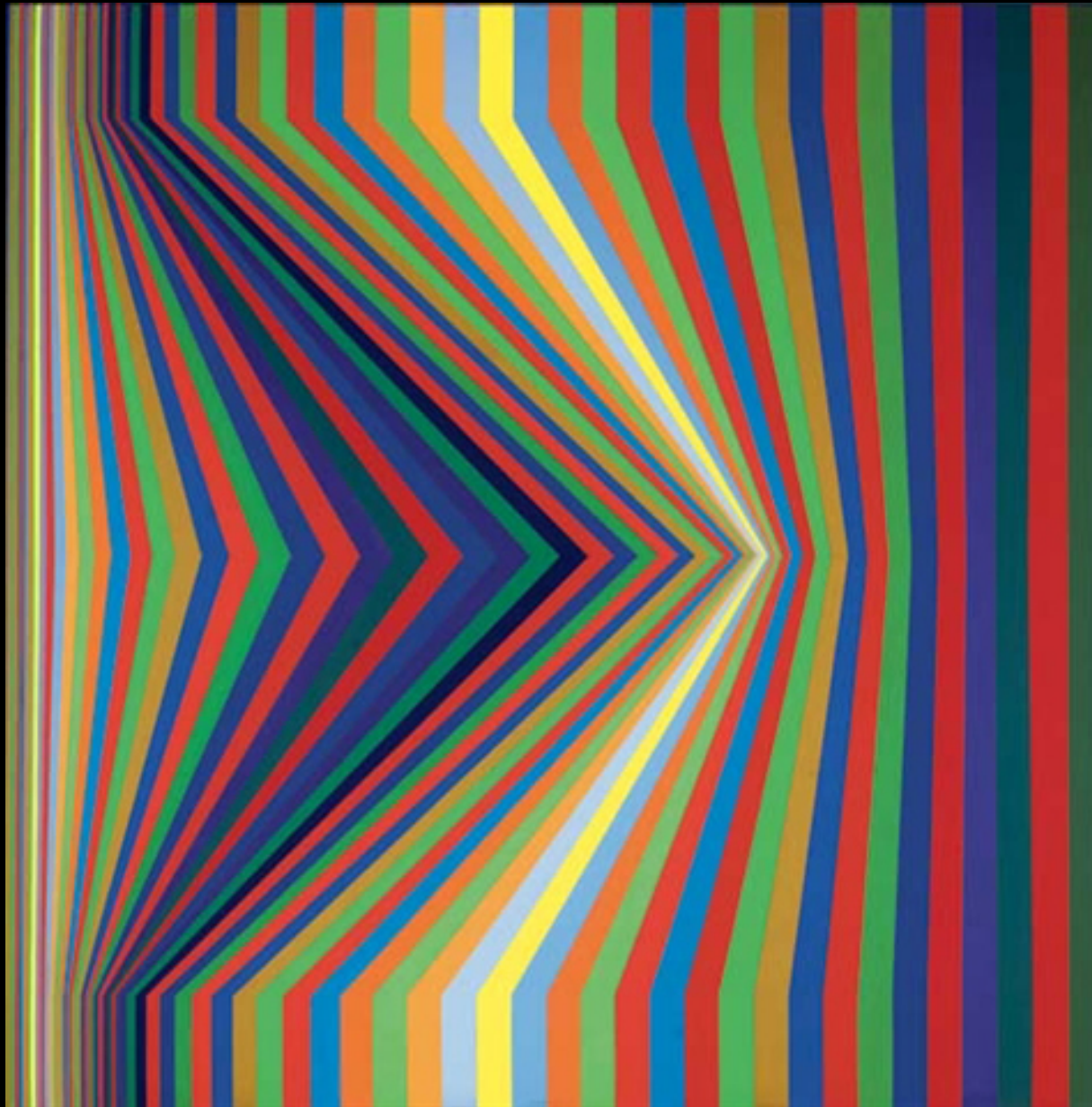
<http://www.youtube.com/watch?v=vaUme6DY8Lk>



Victor Vasarely



Victor Vasarely, Vega, 1957



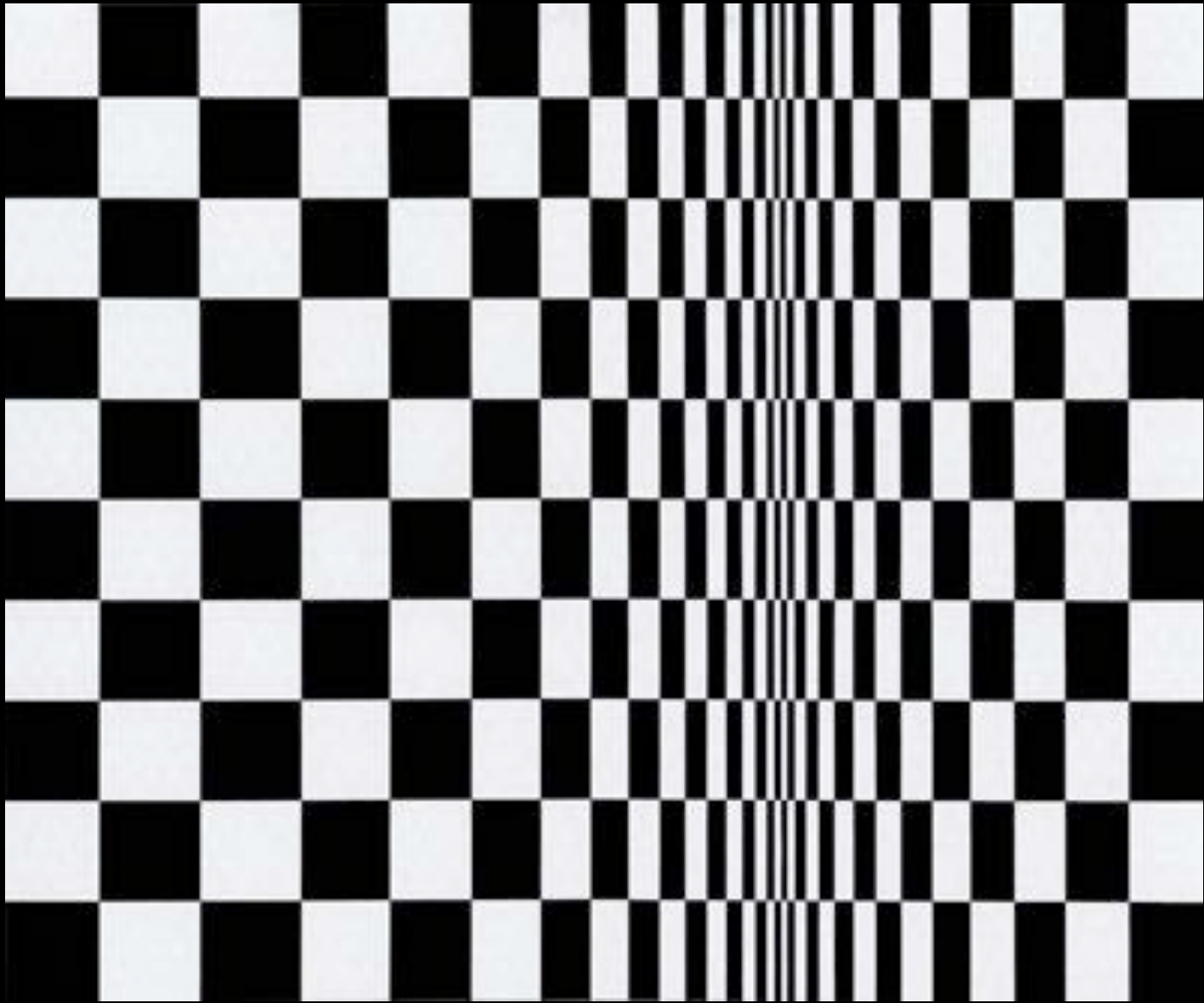
Victor Vasarely, *Berc*, 1967



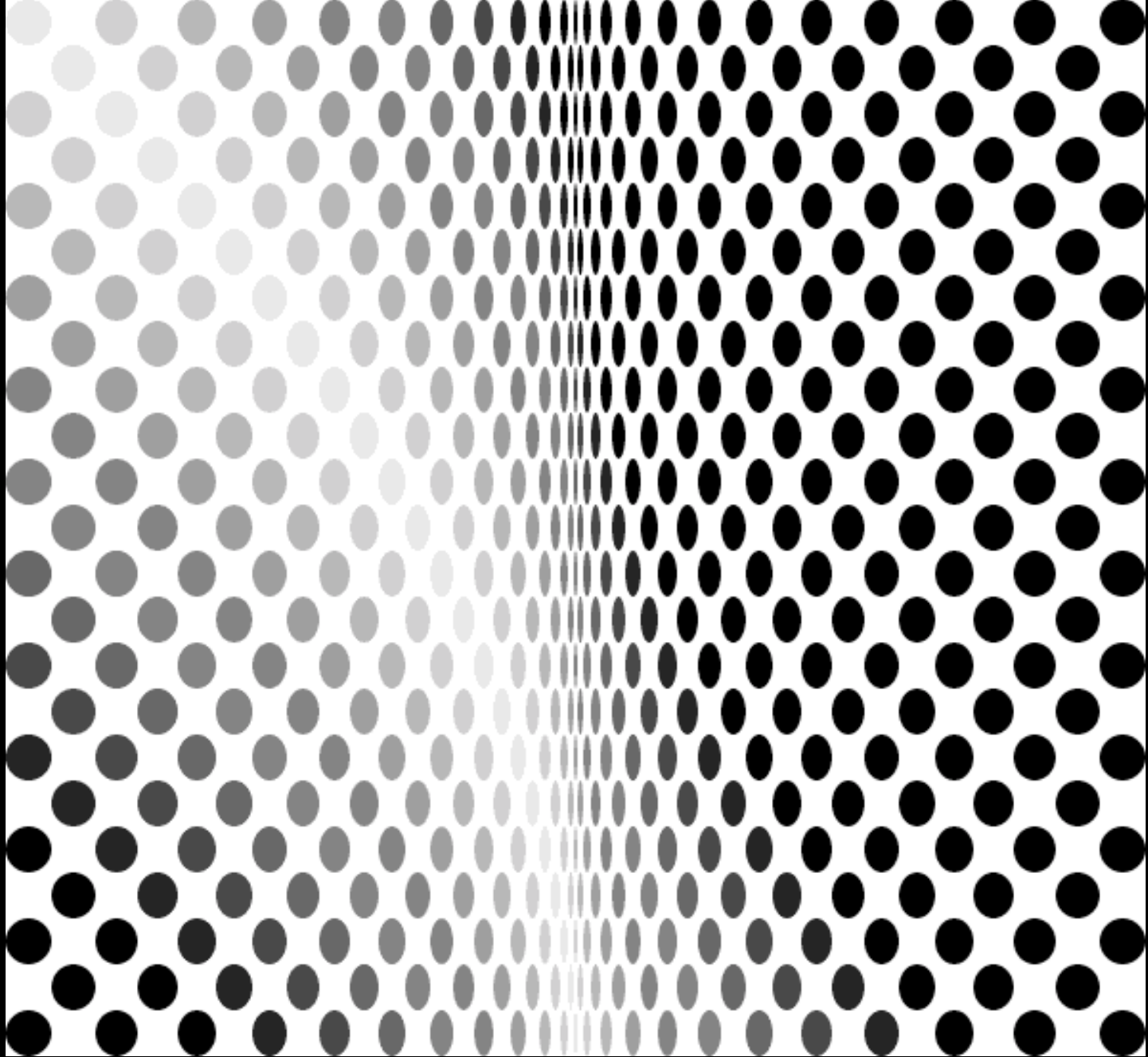
Vasarely, Kroa A, 1968



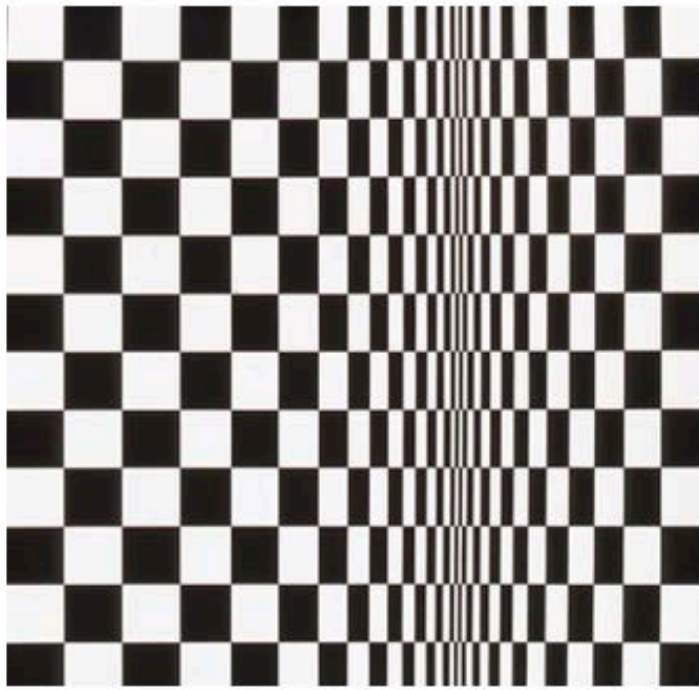
Bridget Riley (b. 1931-)



Bridget Riley, Movement in Squares, 1961



Bridget Riley, Loss, 1964



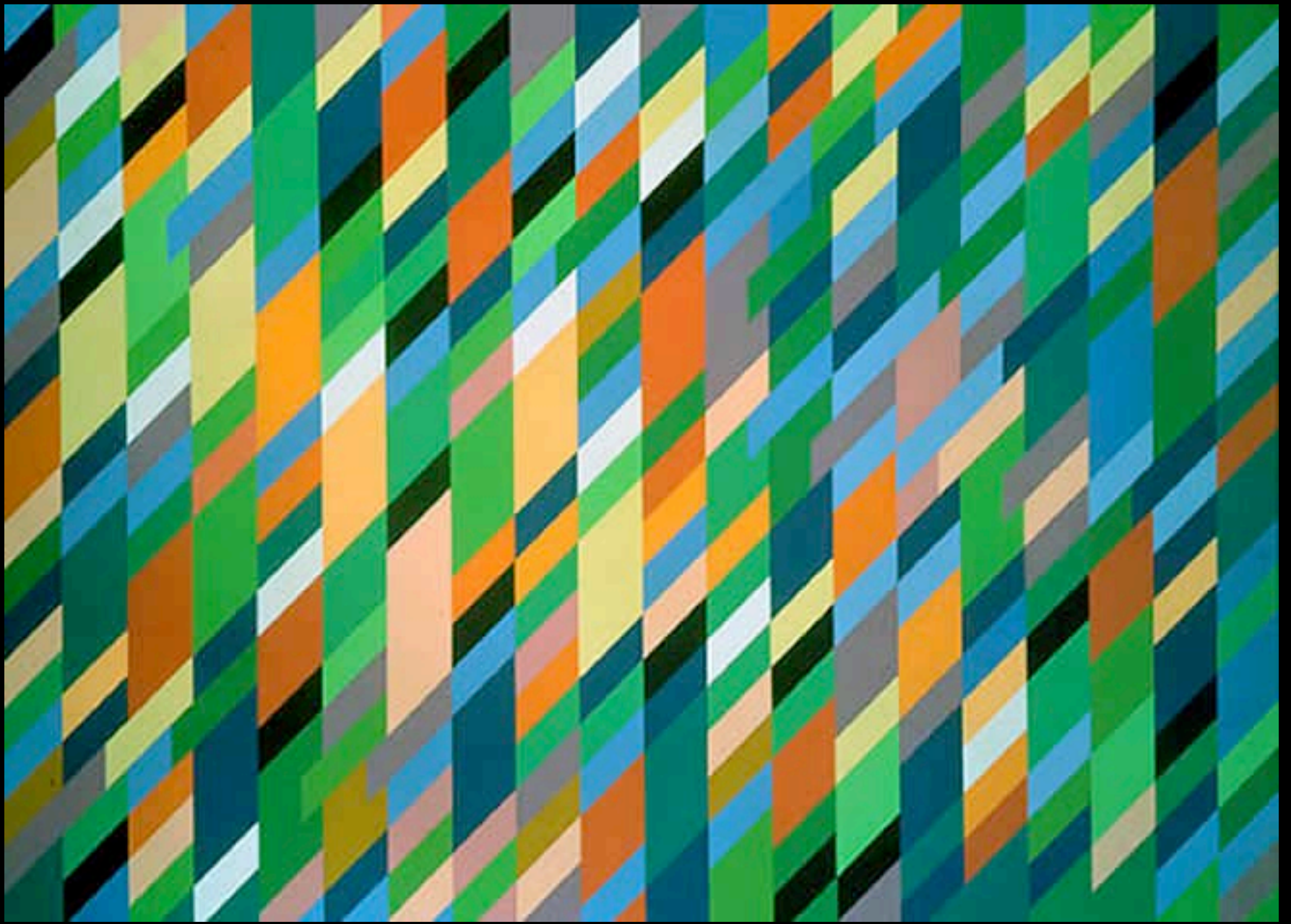
Left: Bridget Riley,
Movement in Squares,
1961 and André
Courrèges dress, 1965

Right: Pierre Cardin
collection, 1969





Bridget Riley, Aurulum,
1978



Bridget Riley, *High Sky 2*, 1992