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The designer of the exhibit, whose advice contributed greatly to its effectiveness, was Lucius E. Lomax.

To my colleagues who so kindly discussed this book in the course of its preparation I am deeply grateful. I hope they will regard it as the report of a brief voyage of discovery and offer suggestions for further exploration.

Philip C. Ritterbush  
Washington, D. C.  
February 1968

The Art of

Organic Forms

*Philip C. Ritterbusch*

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Organic Forms*

PHILIP C. RITTERBUSH



SMITHSONIAN INSTITUTION PRESS

City of Washington

## *Preface*

I have long desired to present an exhibit that would express the creative, imaginative character of science by demonstrating its affinities with the arts. This book is an attempt to justify and account for such an exhibit, held in the Museum of Natural History in Washington from June 14 to July 31, 1968. It owes its origin to the calmly revolutionary suggestion of André Schiffrin, a valued adviser of the Smithsonian, that we at the Institution come to regard exhibits as the iconography for books that should be written. Partly because exhibits can be attempts at direct persuasion on controversial subjects I accepted this as a welcome opportunity to prepare a book-length study in a way that would take advantage of the existence of the exhibit. This book is the report of a rather hasty exploratory reconnaissance, a brief adventure of ideas. It is an historical sketch of a fruitful and protean concept, which I have called the idea of organic form, the notion that organized beings display principles of emergent order of greater complexity than nonliving entities, whereby organic form is seen to be a property of the whole organism, in distinction to the forms of its parts or subordinate elements.

The main body of the exhibit consists of works of art—painting, graphics, and sculpture—and a few texts that may help the viewer to grasp the character of the forms presented, which suggest the visual content of the science of biology and more particularly resemble those of cells and protozoa that lie beyond the

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range of unaided vision. What do organic motifs in abstract art have to tell us about science and imagination? If that seems a legitimate question to ask, linger amidst an expressive profusion of forms in this unusual collection of works of art and experience them directly. The plates at the back of the book and the catalogue of the exhibit with such suggestive titles as *Cellular Construction*, *Proteus Changing*, *Lemur*, and *Prenez garde au microbe de l'amour* can be no substitute for experiencing the works themselves.

In ancillary exhibit halls there are displays along two themes, which each visitor is asked to acknowledge. The first is that the progress of biology depends upon the biologist's faculty for the invention of form in accord with certain pre-suppositions about what will prove to be of scientific value. The second is that beauty in nature is more than skin deep, that symmetry principles and rhythmic harmonies find objective existence in organisms. These are two corollaries of the idea of organic form and if the viewer has understood them he is well prepared to view the exhibit. These propositions are set forth at greater length in chapters three and four of this book, the general purpose of which is to establish their esthetic and scientific relevance. If you believe, however, that science is no more than the accumulation of facts, a social process susceptible of computerization, whose future will unfold unerringly without imaginativeness and a capacity to dream, an ant-hill kind of enterprise that can be bureaucratized, then turn away. The viewer of this exhibit should also be willing to seek beauty in unexpected, unconventional places such as under a microscope, in an aquarium, or in a museum of natural history.

It has been my privilege for four years to serve as a staff assistant to S. Dillon Ripley, eighth Secretary of the Smithsonian Institution, who believes that the museum should be the home of conjecture and the resort of the imagination. Unless these qualities are given wide scope, knowledge will accumulate in museums like fossilizing sediments on the sea floor, a stygian process of concern to only a few misshapen bottom-dwellers sifting through it for their private amusement. Rather it is the role of the museum to exploit the wide social relevance of knowledge, above all its beauty and boundless fascination, and to safeguard it for our future. For the support Mr. Ripley has provided to this undertaking and the leave of absence granted to give me an opportunity to explore the subjects discussed in this book I am most grateful. I hope this exhibit conforms to his challenging concept of the museum.

Mounting an exhibit is a complex enterprise that everyone should experience at least once, in order to appreciate the effort that lies behind the simplest case containing objects. To the lenders of works of art listed in the catalogue I am deeply grateful. I also thank the staff of the Smithsonian Institution: the Office of Exhibits under the direction of John Anglim; the U.S. National Museum under the direction of Frank A. Taylor; the staff of the Museum of Natural

History and its able director Richard S. Cowan; the Libraries, especially Jack Marquardt for his unfailing helpfulness; the Joseph H. Hirshhorn Museum and Sculpture Garden whose Director, Abram Lerner, offered frequent advice; the Photographic Services Division and the Smithsonian Institution Press. All have been unstinting in their help, and if I may single out a few by name I wish to record my particular gratitude to Abigail Booth, Lloyd Hermann, Lee Hogenson, Harry Lowe, Charles Lundquist, Robert Mason, Walter Shropshire, and Kenneth Towe for helping in especially important ways. Diana Hamilton, without whose command of its most subtle aspects the exhibit would have been impossible, has served with distinction as research assistant responsible for implementing the exhibit program through selection of the works of art and managing the delicate process of borrowing and returning them. She is author of the catalogue of the exhibit. Cecelia Howe gave most welcome clerical assistance in preparing the manuscript, and I am delighted to acknowledge the artistic skill with which Michael Clark addressed himself to preparing the line drawings in the text. Those marked as "after" a given work, in distinction to photographs "from" it, are by his hand.

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# VI

*The Art of*  
*Organic Forms*

## A CATALOGUE OF THE EXHIBIT

Prepared by Diana Hamilton

*(Dimensions are in inches; height precedes width)*

Alo Altripp

*born 1906, near Ludwigshafen, Germany*  
*lives in Wiesbaden, Germany*

"Chopin"

1938

Oil on canvas

13½ x 19¼

Walter Inge Farmer, Cincinnati, Ohio

"Abstract Forms"

1957

Drawing, pencil

19 x 13½

Walter Inge Farmer, Cincinnati, Ohio

Jean (Hans) Arp

*born 1887, Strasbourg, France*  
*lives in Meudon, France*



"Evocation humaine, lunaire spectrale"

1960

Bronze, one of an edition of three

18 height, including base

Dunkelman Gallery, Toronto, Ontario, Canada

"Nid-Enchanteur"

1965

Marble

25 height

Sidney Janis Gallery, New York City

Mary Bauermeister

*born 1934, Frankfurt, Germany*

*lives in Madison, Connecticut*

"Square Tree Commentaries"

1966

Lens box construction

30¼ x 30¼

Joseph H. Hirshhorn Collection, New York City

Willi Baumeister

*born 1889, Stuttgart, Germany*

*died 1955, Stuttgart, Germany*

"Growing"

Circa 1955

Oil and sand on canvas

40 x 30

Mrs. Charlotte Weidler, New York City

Herbert Bayer

*born 1900, Haag, Austria*

*lives in Aspen, Colorado*

"blue evolution" (Plate 15)

1955

Oil on canvas

32 x 40

Artist's collection, Aspen, Colorado

William Baziotes

*born 1912, Pittsburgh, Pennsylvania*

*died 1963, New York City*

"Moon Fantasy" (Plate 13)

1953

Oil on canvas

48 x 36

Mrs. Bernard F. Gimbel, Greenwich, Connecticut

"Pompeii"

1955

Oil on canvas

60 x 48

Museum of Modern Art, New York City

Mrs. Bertram Smith Fund

Leon Berkowitz

*born 1919, Philadelphia, Pennsylvania*

*lives in Washington, D.C.*

"Scent of Gorse Sunset"

1963/64

Oil on canvas

60 x 76

Henri Gallery, Washington, D.C.

Patricia Berlin

*born 1919, Chicago, Illinois*

*lives in Glen Rock, New Jersey*

"Nerve Cells"

1965

Oil on canvas

47 x 49

Artist's collection, Rockefeller University, New York City

Benjamin Blake

*born 1928, Columbia, South Carolina*

*lives in San Francisco, California*

Untitled

1965

Oil on canvas

47½ x 33½

Dr. John C. Harbert, Washington, D.C.

Lee Bontecou

*born 1931, Providence, Rhode Island*

*lives in New York City and Paris, France*

"Untitled"

1962

Construction in wire and canvas

31 x 34¼ x 13¾

Washington Gallery of Modern Art, Washington, D.C.

Gift of Mrs. Clive DuVal II

Richard Boyce

*born 1920, New York City*

*lives in New York City*

"Proteus Changing I"

1965

Unique bronze

14 height

Felix Landau Gallery, Los Angeles, California, and Landau-Alan Gallery,  
New York City

Sung Woo Chun

*born 1935, Seoul, Korea*

*lives in Seoul, Korea*

"Mandala Tradition #2" (Plate 18)

1964

Oil on canvas

50 x 44

John Bolles Gallery, San Francisco, California

Michael Clark

*born 1946, Denver, Colorado*

*lives in Washington, D.C.*

"Black Orchid"

1966

Acrylic on canvas

36 x 42

Evelyn Thurau, Washington, D.C.

Modest Cuixart

*born 1925, Barcelona, Spain*

*lives in Barcelona, Spain*

"Argument" (Plate 20)

1964

Oil on canvas

21½ x 15½

Mr. and Mrs. Maurice Swergold, New York City

Arthur G. Dove

*born 1880, Canandaigua, New York*

*died 1946, Centerport, New York*

"Life Goes On"

1934

Oil on canvas

18 x 24

The Phillips Collection, Washington, D.C.

Max Ernst

*born 1891, Bruhl, Germany*

*became French citizen 1958*

*lives in Paris, France*

## "Composition"

1924

Oil on canvas

10½ x 9

Mrs. Barnett Malbin, Birmingham, Michigan

The Lydia and Harry Lewis Winston Collection

## "Histoire Naturelle"

1926

A portfolio of 34 colotypes after collages, published in Paris 1926

16⅞ x 10¾ (composition variable)

Museum of Modern Art, New York City

Gift of Abby Aldrich Rockefeller

## "Prenez garde au microbe de l'amour"

1949

Collage: colored crayon and two "microbe" oils

10½ x 8½

Muriel Bultman Francis, New Orleans, Louisiana

## Lee Gatch

*born 1902, Baltimore, Maryland**lives in Lambertville, New Jersey*

## "Flyway"

1954

Oil on canvas

42 x 30

The Phillips Collection, Washington, D.C.

## Herbert George

*born 1940, Seattle, Washington**lives in New York City*

## "Dance like a Comma"

1966

Canvas and wood

34 x 68 x 52

Stable Gallery, New York City

## Arshile Gorky

*born 1904, Khorkom Vari Haiyotz Dzor, Armenia**died 1948, Sherman, Connecticut*

## "Garden in Sochi" (Plate 5)

1938/42

Oil on canvas

31½ x 38¼

Estate of Arshile Gorky

Courtesy of M. Knoedler and Company, Incorporated, New York City

Drawing, study for "Summation" (Plate 9)  
Pencil and crayon on paper  
18½ x 24½ (sight)  
Whitney Museum of American Art, New York City  
Gift of Mr. and Mrs. Wolfgang S. Schwabacher

Drawing, study II for "Agony"  
1946/47  
Pencil and wax crayon on paper  
19 x 25  
Estate of Arshile Gorky  
Courtesy of M. Knoedler and Company, Incorporated, New York City

Beatrice B. Grover  
*born New York City*  
*lives in New York City*

"Vulcan"  
1965  
Oil on canvas  
48 x 48  
Artist's collection, New York City

Catharine Homan  
*born 1944, Washington, D.C.*  
*lives in Essex Falls, New Jersey*

"Porcelain Object"  
1968  
Porcelain and wood  
5 x 14 x 14  
Artist's collection, Essex Falls, New Jersey

Philippe Hosiasson  
*born 1898, Odessa, U.S.S.R.*  
*lives in Paris, France*

Untitled  
1968  
Oil on canvas  
46 x 35  
Philippe Hosiasson, Paris, France

Hu Chi-chung  
*born 1927, Chekiang, China*  
*lives in Taiwan, China*

"#6636"  
1966  
Oil on canvas  
39 x 28  
Lee Nordness Galleries, Incorporated, New York City

Fritz Hundertwasser  
*born 1928, Wien, Germany*  
*lives in Paris, France*

"Trampolin ins gelbe" (Plate 17)

1958

Mixed technique

36 x 33½

Julian J. Aberbach and Joachim Jean Aberbach, New York City

"La tour de Babel perce le soleil"

1959/60

Oil on paper mounted on burlap

51 x 63½

H. Marc Moyens, Alexandria, Virginia

Paul Jenkins

*born 1923, Kansas City, Missouri*

*lives in New York City*

"Lemur" (Plate 16)

1957

Oil on canvas

51¼ x 35

University of Kansas Museum of Art, Lawrence, Kansas

Walter Kamys

*born 1917, Chicago, Illinois*

*lives in Montague, Massachusetts*

"Seaquake" (Plate 10)

1948

Oil on canvas

36 x 40⅞

Yale University Art Gallery, New Haven, Connecticut

Gift of the artist for the Collection Société Anonyme

Vasily Kandinsky

*born 1866, Moscow, U.S.S.R.*

*became French citizen 1939*

*died 1944, Neuilly-sur-Seine, France*

"Capricious Forms No. 643" (Plate 4)

1937

Oil on canvas

35 x 45⅞

The Solomon R. Guggenheim Museum, New York City

Takeshi Kawashima

*born Takamatsu, Japan*

*lives in New York City*

"New Symbolism" (Plate 22)

1966

Liquitex on canvas

68 x 68

Aldrich Museum of Contemporary Art, Ridgefield, Connecticut

Leon Kelly

*born 1901, Perpignan, France*

*lives in Harvey Cedars, New Jersey*

"Departure through the Umbrellas" (Plate 7)

1944

Oil on canvas

22½ x 28

Whitney Museum of American Art, New York City

Gift of Briggs Buchanan

Gyorgy Kepes

*born 1906, Selyp, Hungary*

*lives in Cambridge, Massachusetts*

"Transformation"

1967

Oil and sand on canvas

Artist's collection, Cambridge, Massachusetts

Paul Klee

*born 1879, Munchenbucksee, Switzerland*

*died 1940, Muralto-Locarno, Switzerland*

"Weibliche und mannliche Pflanze" (Plate 2)

1921

Watercolor

8⅞ x 7 (not including paper margins)

Saidenberg Gallery, New York City

"The Familiars" (Family Matters among Fruit) (Plate 3)

1927

Drawing, pen

11¾ x 17¾

Jane Wade Lombard, New York City

Lawrence Kupferman

*born 1909, Boston, Massachusetts*

*lives in Newton Centre, Massachusetts*

"Tidal Maze"

1948

Watercolor

27 x 21

Artist's collection, Newton Center, Massachusetts

## "Evolving Organic Forms"

1961

Oil on canvas

19 x 26

Artist's collection, Newton Center, Massachusetts

## William Lumpkins

*born 1935, Santa Fe, New Mexico**lives in Amherst, Massachusetts*

Untitled

1967

Pencil and turpentine on paper

18 x 24

Artist's collection, Amherst, Massachusetts

## Matta

*born 1911, Santiago, Chile**lives in Paris, France*

"Fabulous Racetrack of Death (Instrument Very Dangerous to the Eye)" (Plate 1)

No date

Oil on canvas

27½ x 35½

Yale University Art Gallery, New Haven, Connecticut

Collection of the Société Anonyme

Bequest of Katherine S. Dreier

"Composition Drawing (Personage Transparence)" (Plate 6)

Circa 1939

Oil pencil

19¼ x 25¼

Wadsworth Atheneum, Hartford, Connecticut

"La lumière complete"

1955

Oil on canvas

45¼ x 57¼

Joseph H. Hirshhorn Collection, New York City

## John Miró

*born 1893, Barcelona, Spain**lives in Majorca, Balearic Islands, Spain*

"Figures and Bird in Front of the Sun"

1930

Oil on unsized canvas

7⅝ x 10⅝<sub>16</sub>

Mrs. Barnett Malbin, Birmingham, Michigan

The Lydia and Harry Lewis Winston Collection



Untitled  
1934  
Ink and pastel on paper  
17 $\frac{7}{8}$  x 24 $\frac{1}{8}$   
Leon Berkowitz, Washington, D.C.

Untitled  
1949  
Mixed technique: oil, gouache, crayon  
8 $\frac{1}{4}$  x 15  
Mr. and Mrs. Alexander L. Berliner, New York City

Nuala [Elsa deBrun]  
*born 1896, Stockholm, Sweden*  
*lives in New York City*

"Either/Or #II" (Plate 21)  
1964  
Mixed media: pastel  
17 $\frac{1}{2}$  x 24  
Artist's collection, New York City

"Either/Or #I" (Plate 23)  
1967  
Pastel and mixed media  
21 x 28  
Artist's collection, New York City

Guillermo Nuñez  
*born 1930, Santiago, Chile*  
*lives in Santiago, Chile*

"Break the Great Secret"  
1964  
Oil on canvas  
49 $\frac{1}{2}$  x 60  
Mr. and Mrs. Samuel M. Greenbaum, Washington, D.C.

Georgia O'Keeffe  
*born 1887, Sun Prairie, Wisconsin*  
*lives in Abiquiu, New Mexico*

"From the Lake No. III"  
1924  
Oil on canvas  
36 x 30  
Artist's collection, Abiquiu, New Mexico

Jorge Piñeros  
*born 1929, Bogotá, Colombia*  
*lives in Madrid, Spain*

Theodoros Stamos

*born 1922, New York City*

*lives in New York City*

"The Thaw"

Circa 1946/47

Oil on masonite

24 x 30

Mr. Don Abarbanel, New York City

"The Wedding" (Plate 12)

1948

Oil on masonite

36 x 48

Theodoros Stamos, New York City

Graham Sutherland

*born 1903, London, England*

*lives in Menton, France*

"Thorn Head" (Plate 8)

1945

Chalk, ink, gouache

22 x 21

James Thrall Soby, New Canaan, Connecticut

"Turning Form Number One"

1948

Chalk and gouache

8¾ x 11

Mr. and Mrs. John Henry Macdonell, Sarasota, Florida

Yves Tanguy

*born 1900, Paris, France*

*became U. S. citizen 1948*

*died 1955, Woodbury, Connecticut*

"The Storm" (L'Orage) (Black Landscape)

1926

Oil on canvas

32 x 25¼

Philadelphia Museum of Art, Philadelphia, Pennsylvania

Louise and Walter Arensberg Collection

"Titre inconnu"

1927

Oil on canvas

21½ x 15

Mr. and Mrs. Edward Bennett Williams, Washington, D.C.

"Le regard de soie"

1940  
Oil on canvas  
18 x 15  
Mr. and Mrs. David Lloyd Kreeger, Washington, D.C.

Pavel Tchelitchew  
*born 1898, District of Kalug near Moscow, U.S.S.R.*  
*became U.S. citizen 1952*  
*died 1957, Grotta Ferrata, Italy*

"Itinerary of Light" (Plate 14)  
1955  
Oil on canvas  
17½ x 18¾  
Ruth Ford, New York City

Mark Tobey  
*born 1890, Centerville, Wisconsin*  
*lives in Basle, Switzerland*

"Geography of Phantasy" (Plate 11)  
1948  
Tempera  
20 x 26  
Mr. and Mrs. Olin J. Stephens II, Scarsdale, New York

Raoul Valdevieso  
*born 1931, Santiago, Chile*  
*lives in Madrid, Spain*

"Supplication"  
1963  
Bronze  
21 x 17 x 4½  
Mr. and Mrs. Samuel M. Greenbaum, Washington, D.C.

"Awakening of Earth"  
1965  
Bronze  
28 x 18 x 8  
Mr. and Mrs. Samuel M. Greenbaum, Washington, D.C.

Cyril Wilson  
*born 1911, High Wycombe, England*  
*lives in Ibiza, Balearic Islands, Spain, and Dumfriesshire, Scotland*

"Seedhead Metamorphosis"  
1967  
Oil on canvas  
30 x 40  
Aitken Dott and Son, Edinburgh, Scotland

## "Cellular Construction"

1967

Oil on canvas

31½ x 50½

Jorge Piñeros, Madrid, Spain

Courtesy the Pan American Union, Washington, D.C.

## Odilon Redon

*born 1840, Bordeaux, France**died 1916, Paris, France*

## "Au fond de la Mer"

Circa 1905

23⅞ x 19⅝

Mr. and Mrs. David Lloyd Kreeger, Washington, D.C.

## Deborah Remington

*born 1930, Haddonfield, New Jersey**lives in Paris, France, and New York City*

## "Haddonfield"

1965

Oil on canvas

74 x 69

Whitney Museum of American Art, New York City

Gift of the Friends of the Whitney Museum of American Art

## Charles Seliger

*born 1926, New York City**lives in Mount Vernon, New York*

## "Cerebral Landscape"

1944

Oil on canvas

24¾ x 18¾

Wadsworth Atheneum, Hartford, Connecticut

## "Quanta" (Plate 19)

1964

Oil on canvas

30 x 40

Dr. and Mrs. H. G. Weitzen, New York City

## Kurt Seligman

*born 1900, Basle, Switzerland**lives in Sugar Loaf, New York*

## "Carnivorous Butterfly"

No date

Drawing

21 x 39

Mrs. Bernard J. Reis, New York City