



# RESEARCHERS WOMEN ARTISTS INSPIRED BY SCIENCE

By the age of thirteen, Maria Sybilla Merian (1647-1717) was raising silkworms. Studying illustration, she became one of the first European scientists to directly observe and record the life cycle of insects, during a time when many still believed bugs were by-products of dirt and mud or were creatures associated with spiritual evil. In 1699, with her daughter by her side, Merian became the first European woman to undertake an independent, scientific journey to South America. For two years, she recorded the plants, animals, and particularly the insects of Suriname. She criticized the Dutch West India Company for destroying nature and the Indigenous peoples of that country to plant sugar. She retained the names and Indigenous uses of the nature she studied. Her works were so accurate that they influenced the field of entomology for centuries, and several insect and plant species carry her name in their scientific designation. Her daughter, Dorothea Maria, followed in her footsteps as a scientist and artist, and became the first woman employed by the Russian Academy of Sciences. Despite all of this, Merian was listed as a pauper in the official documentation of her death.

The version of Merian's work in this exhibition was not created by her hand, but was instead made by a master copyist of her illustrations for editions of her scientific texts released after her death, as was common in the time before mass printing was available. This is the oldest work connected to a woman artist in the Art Center's collection. In some ways, the work is an apt metaphor for women in both the arts and sciences, as in both arenas women's original efforts are often unheralded or only recognized after it is too late for them to personally or professionally benefit. Women working in the sciences often face the added prejudice that these fields are not socially acceptable for women, or that female brains are inherently less adept at math, engineering, architecture, chemistry, etc. This type of thinking also leads to a false binary of perception that suggests women's creative efforts, from the visual arts to writing, music, and filmmaking, purvey only emotional and romantic content rather than focusing on "serious" technical, historical, research-based subjects.

*“I think that science is the most significant aspect of our time, and far more so than art. Art, if it will endure on some level – does inspire wonder. The scientific discoveries with which we are bombard surely do that too, and I think that art in some way has to acknowledge this ”*

- Nancy Graves, 1979

From Maria Sybilla Merian forward, the women artists featured here collapse such distinctions, presenting scientific research and content blended with personal style and imagination, adding richness to the work that defies easy categorization. Each art work in this exhibition can be described in terms of its aesthetics or in terms of its scientific inspiration, but the most holistic approach is in examining the space where these elements come together. Machines and math transform into elegant constructions of line and shading. Buildings twist and shrink into small sculpture and collage. Color and shape are laid out specifically to please or confound the physical structures within the human eye. Maps of the land and sky vacillate between realism and abstraction. The most recent work in the show, Mary Mattingly's *Over and Over* (2018), is a photo collage illustrating the various raw materials that go into the phones and other electronics essential to everyday life. Mattingly researches where these metals and minerals come from, how they are extracted, and how they travel through the manufacturing process. Her poetic, elegant still life-inspired photos are deeply connected to her environmental activism, and she works to find creative solutions to stop humanity's drain on natural resources. She, and the other artists grouped together in this exhibition, are the heirs to Maria Sybilla Merian's practice, as women intensively studying their world in pursuit of both empirical knowledge and inspiring visual expression.



Fig. #3

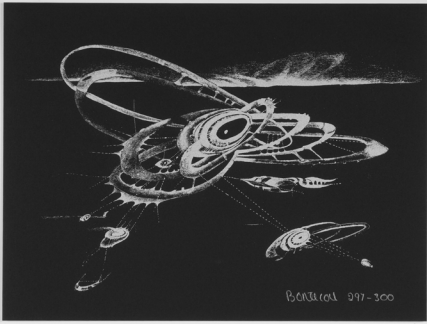


Fig. #4



Fig. #5

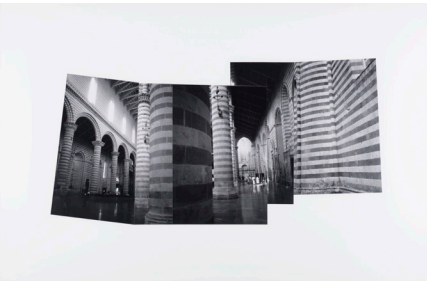


Fig. #6



Fig. #7

**Fig #8. Alice Aycock** (American, born 1946)  
*From The Series Entitled "The Miraculating Machine: Mock Suns and Halos 'Round the Moon"* (1981), 1992  
 Screenprint on paper  
 39 3/8 × 27 1/2 inches  
 Des Moines Art Center Permanent Collections; Gift of the Des Moines Art Center's Print Club, 2016.22

**Fig #14. Ella Bergmann-Michel** (German, 1896 – 1972)  
*OB 193, c. 1924*  
 Pencil and ink drawing on paper  
 16 1/2 × 8 inches  
 Des Moines Art Center's Louise Noun Collection of Art by Women through Bequest, 2003.305

*Spiralismen-Bild, 1927*  
 Pencil, ink, gouache on paper on laminated board  
 17 × 13 3/8 in  
 Des Moines Art Center's Louise Noun Collection of Art by Women through Bequest, 2003.306

**Fig #4. Lee Bontecou** (American, born 1931)  
*Untitled, from the portfolio, "The New York Collection for Stockholm,"* 1973  
 Screenprint on paper  
 8 15/16 × 11 15/16 inches  
 Des Moines Art Center Permanent Collections; Gift of Robert Rauschenberg, New York, 1976.100.1

**Fig #7. Sonia Delaunay** (Russian, active France, 1885 - 1979)  
*Contrastes Simultané (Simultaneous Contrasts), 1912-1913*  
 Watercolor and Chinese ink on paper  
 10 5/8 × 8 1/4 inches  
 Des Moines Art Center's Louise Noun Collection of Art by Women, 1998.18

**Agnes Denes** (American, born Hungary, born 1938)  
*Colorburst - The Black Rose, 1990*  
 Ink and gouache on vellum  
 14 1/2 × 12 5/8 inches  
 Des Moines Art Center's Louise Noun Collection of Art by Women through Bequest, 2003.314

**Jackie Ferrara** (American, born 1929)  
*Model for Castle Clinton: Tower and Bridge, 1979*  
 Pine sculpture and two colored ink and pencil drawings on paper  
 Sculpture: 48 × 84 × 54 inches  
 Drawings: 28 3/8 × 42 3/4 × 1 1/4 inches  
 Des Moines Art Center Permanent Collections; Purchased with funds from Anna K. Meredith, 1980.6.a.-d

**Fig #9. Anna Gaskell** (American, born 1969)  
*Untitled #74 (resemblance), 2001*  
 C-Print  
 39 1/2 × 49 1/4 inches  
 Des Moines Art Center; Paul and Anastasia Polydorou Collection, 2007.15

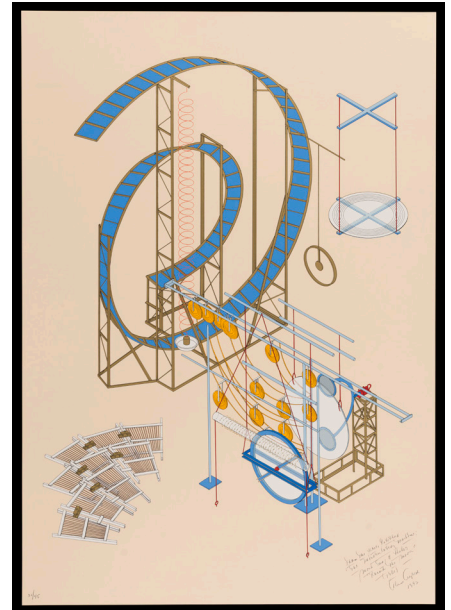


Fig. #8



Fig. #9



Fig. #10



Fig. #11



Fig. #12



Fig. #13



Fig. #14

**Fig #5. Nancy Graves** (American, 1940 - 1995)  
*Archaeoninus*, 1980-1981  
Acrylic, pastel and graphite on paper  
30 x 22 5/16 inches  
Des Moines Art Center Permanent  
Collections; Purchased with funds from the  
John Brady Foundation, 1981.42

*Pendula*, 1983  
Mixed media on paper  
34 1/4 x 22 inches  
Des Moines Art Center; Paul and Anastasia  
Polydorán Collection, 2019.22

**Fig #13. Candida Höfer** (German, born 1944)  
*Naturhistorisches Museum Wien III (Natural  
History Museum,  
Vienna III)*, 1995  
Color photograph  
16 3/8 x 23 3/8 inches  
Des Moines Art Center Permanent  
Collections; Gift of Hudson, New York 2004.11

**Jeannette Klute** (American, 1918-2009)  
*Fringed Polygala*, 1950s  
Vintage dye transfer print  
12 5/8 x 9 1/2 inches  
Des Moines Art Center Permanent  
Collections; Gift of Jeff Perry in honor of  
Myron and Jacqueline Blank, 2006.87

*May Apple*, 1950s  
Vintage dye transfer print  
15 3/8 x 12 inches  
Des Moines Art Center Permanent  
Collections; Gift of Jeff Perry in honor of  
Myron and Jacqueline Blank, 2006.91

**Fig #10. Two White Waterlilies**, 1950s  
Vintage dye transfer print  
15 x 18 3/4 inches  
Des Moines Art Center Permanent  
Collections; Gift of Jeff Perry in honor of  
Myron and Jacqueline Blank, 2006.89

*Woodland Portraits Plate 15*, 1950s  
Vintage dye transfer print  
13 1/8 x 10 1/4 inches  
Des Moines Art Center Permanent  
Collections; Gift of Jeff Perry in honor of  
Myron and Jacqueline Blank, 2006.88

*Woodland Portraits Plate 21*, 1950s  
Vintage dye transfer print  
12 x 9 1/2 inches  
Des Moines Art Center Permanent  
Collections; Gift of Jeff Perry in honor of  
Myron and Jacqueline Blank, 2006.86

*Woodland Portraits Plate 24*, 1950s  
Vintage dye transfer print  
12 3/4 x 10 inches  
Des Moines Art Center Permanent  
Collections; Gift of Jeff Perry in honor of  
Myron and Jacqueline Blank, 2006.90

*Woodlands Portrait Plate 30*, 1950s  
Vintage dye transfer print  
9 1/4 x 12 3/4 inches  
Des Moines Art Center Permanent  
Collections; Gift of Jeff Perry in honor of  
Myron and Jacqueline Blank, 2006.85

**Maya Lin** (American, born 1959)  
*Honey Moon*, 1997  
Beeswax  
9 3/4 x 9 3/4 x 3 inches  
Des Moines Art Center Permanent  
Collections; Gift of Maureen Mondora in honor  
of Colleen Vojvodich, 2017.160

**Fig #11. Sylvia Plimack Mangold** (American,  
born 1938)  
*Two 36-inch Rules*, 1976  
Acrylic on canvas  
30 x 36 inches  
Des Moines Art Center; Paul and Anastasia  
Polydorán Collection, 1998.54

**Fig #2. Mary Mattingly** (American, born 1978)  
*Over and Over and*, 2018  
Chromogenic dye coupler print  
30 x 30 1/8 inches  
Des Moines Art Center Permanent  
Collections; Gift of Mary Mattingly, 2018.14

**Rita McBride** (American, born 1960)  
*Parking Garage*, 1992  
Sand-cast bronze  
6 3/4 x 11 3/4 x 16 5/8 inches  
Des Moines Art Center Permanent  
Collections; Bequest of Robert H. Helmick,  
2004.19.a-c

**Fig #12. Julie Mehretu** (American, born Ethiopia,  
born 1970)  
*Entropia (review)*, 2004  
Color lithograph and screenprint (32 colors)  
on paper  
29 x 40 inches  
Des Moines Art Center Permanent  
Collections; Gift of the Des Moines Art Center  
Print Club in memory of John Holms and  
Suellen Chance Tone, 2005.7

**Fig #1. After Maria Sybilla Merian** (German,  
1647 - 1717) **Joseph Mulder** (Dutch, 1658 - 1742)  
*Caligo Butterfly, Wasp & Acenthacae*,  
plate 60 from "Metamorphosis insectorum  
Surinamensium" (Metamorphosis of the  
Insects of Surinam), published in 1726  
Engraving with hand-coloring  
12 7/8 x 9 1/2 inches  
Des Moines Art Center's Louise Noun  
Collection of Art by Women through Bequest,  
2003.335

**Fig #6. Mary Miss** (American, born 1944)  
*Untitled No. 15*, 1989-1990  
Photocollage  
40 x 61 3/16 x 1 1/2 inches  
Purchased with funds from Edmundson  
Art Foundation; Des Moines Art Center  
Permanent Collections, 1997.4

*Untitled*, 1996  
Digital Iris on paper  
7 1/8 x 8 1/2 inches  
Des Moines Art Center Permanent  
Collections; Gift of the Des Moines Art Center  
Print Club, 1998.51

**Bridget Riley** (English, born 1931)  
*Study for "Shift,"* 1963  
Ink and pencil on paper  
16 x 15 9/16 inches  
Des Moines Art Center Permanent  
Collections; Gift of John and Mary Pappajohn,  
1977.29

**Fig #3. Kiki Smith** (American, born 1954)  
*Tidal*, 1998  
Photogravure, photolithography and  
silkscreen  
19 1/4 x 125 13/16 inches  
Des Moines Art Center Permanent  
Collections; Purchased with funds from the  
Edmundson Art Foundation, Inc., 1999.3

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