

UNITED STATES EMBASSY BERN  
ART IN EMBASSIES EXHIBITION

JAQ CHARTIER *11 Stains w/14 Whites*, undated  
Acrylic, stains and spray paint on wood panel, 24 x 30 in. (61 x 76.2 cm).  
Courtesy of the artist, Seattle, Washington

United States Embassy Bern

THE ART OF SCIENCE,  
TECHNOLOGY, AND  
THE ENVIRONMENT

Art in Embassies Exhibition

# ART IN EMBASSIES



Established in 1963, the U.S. Department of State's office of Art in Embassies (AIE) plays a vital role in our nation's public diplomacy through a culturally expansive mission, creating temporary and permanent exhibitions, artist programming, and publications. The Museum of Modern Art first envisioned this global visual arts program a decade earlier. In the early 1960s, President John F. Kennedy formalized it, naming the program's first director. Now with over 200 venues, AIE curates temporary and permanent exhibitions for the representational spaces of all U.S. chanceries, consulates, and embassy residences worldwide, selecting and commissioning contemporary art from the U.S. and the host countries. These exhibitions provide international audiences with a sense of the quality, scope, and diversity of both countries' art and culture, establishing AIE's presence in more countries than any other U.S. foundation or arts organization.

AIE's exhibitions allow foreign citizens, many of whom might never travel to the United States, to personally experience the depth and breadth of our artistic heritage and values, making what has been called a footprint that can be left where people have no opportunity to see American art.

*For fifty years, Art in Embassies has played an active diplomatic role by creating meaningful cultural exchange through the visual arts. The exhibitions, permanent collections and artist exchanges connect people from the farthest corners of an international community. Extending our reach, amplifying our voice, and demonstrating our inclusiveness are strategic imperatives for America. Art in Embassies cultivates relationships that transcend boundaries, building trust, mutual respect and understanding among peoples. It is a fulcrum of America's global leadership as we continue to work for freedom, human rights and peace around the world.*

— John Forbes Kerry  
U.S. Secretary of State

# INTRODUCTION

## **The Art of Science, Technology, and the Environment**

For more than twenty-five years, the Art in Embassies program has given U.S. Ambassadors around the world the opportunity to build an exhibition of art to display in their host countries. For the exhibition in my residence, I have chosen works that reflect science, technology, and the environment.

The works on display celebrate a spirit of creativity, innovation, and dialogue. The qualities that make a brilliant artist are the same that are required for a brilliant scientist: the ability to see things in a new light; the desire to reinterpret the world around us; the skill to create new ways to understand our environment; and the will to communicate this new understanding across different and often seemingly disparate fields. Both Switzerland and the United States value these qualities highly. To me this exhibition reflects the significance that both our countries place on innovative approaches and creative interactions. We place that emphasis individually as nations but also in the ways that we collaborate as partners.

It is the focus on these values that helps us gain a better understanding of each other and deepens our cultural ties even further. Together, both our countries and cultures can achieve progress through creative and innovative dialogue and collaboration. Together, we can find new perspectives and solutions that connect people and insights from different fields and different backgrounds. Together, we can help make the world a better place – especially through collaborations in science, technology, and the environment.

**Suzan G. LeVine**  
**U.S. Ambassador to Switzerland and Liechtenstein**

*Bern*  
*March 2015*

# JAMES BALOG

For more than thirty years, James Balog has broken new conceptual and artistic ground on one of the most important issues of our era: human modification of our planet's natural systems. An avid mountaineer with a graduate degree in geography and geomorphology, Balog is equally at home on a Himalayan peak or a whitewater river, the African savannah or polar icecaps.

To reveal the impact of climate change, Balog founded the Extreme Ice Survey (EIS), the most wide-ranging, ground-based, photographic study of glaciers ever conducted. The project is featured in the highly acclaimed documentary, *Chasing Ice*, which won the award for Excellence in Cinematography at the 2012 Sundance Film Festival.

Balog has been honored with many awards, including, in recent years, an Honorary Doctor of Science degree from the University of Alberta, the American Geophysical Union Presidential Citation for Science and Society, the Duke University LEAF Award, the Sam and Julie Walters Prize for Environmental Activism, the International League of Conservation Photographers League Award, the Royal Photographic Society's Hood Medal, and the Heinz Award.

Balog lives with his wife and two daughters in the Rocky Mountains, near Boulder, Colorado.

**<http://jamesbalog.com>**



*Ilulissat Isfjord, Greenland, 24 August 2007, from ICE: Portraits of Vanishing Glaciers, 2007*  
Photograph, 10  $\frac{3}{4}$  x 7  $\frac{1}{2}$  in. (27.3 x 19.5 cm)  
Courtesy of a private collection

# JAQ CHARTIER

"I call my primary body of work *Testing*, because each painting begins as an actual test. Inspired by scientific images like gel electrophoresis, they feature intimate views of materials reacting to each other, to light, and the passage of time. Instead of paint, I use my own complex formulas of deeply saturated inks, stains, and dyes. Such colors can do things paint can't do – change, shift, and migrate through other layers of paint, or separate into component parts with differing properties.

Whereas traditional artist paints are formulated to be stable and controllable, stains are capricious and easily affected by lots of factors like humidity, gravity, time, UV light – even the structure of molecules in the other elements they touch. After years of study I'm still intrigued by the hidden chemistries of these materials. I write notations directly on the paintings to help me track what's happening in each test. These notes are one of the physical forms I use to display parallels between scientific and artistic exploration.

Like most painters I was educated to use archival materials and 'proper' painting techniques. This practice was the original motivation behind a group of work I call *SunTests*. They started as a way of sorting out fugitive materials from those that are stable and lightfast. But instead of discarding such materials, I've found myself attracted to them, drawn by the additional layer of complexity that such changes suggest, and by the very notion of impermanence.

Time is not a dimension people usually think of for paintings. Even after you know about the testing process underpinning my work, it's tempting to view the paintings as static, frozen moments or phenomena captured in the acrylic film like bugs in amber. But they're actually slow-motion performances changing imperceptibly over time as the materials continue to interact. I design some colors to shift in hue or gradually disappear, while others remain permanent.

Whether the painting is large or small, you're meant to get up close. The lush matte surface and blurry, out-of-focus quality brings further attention to the effort of looking. Repetition is employed to compare and contrast, and to provide situations where unexpected mutations might occur."

Jaq Chartier studied at Syracuse University, New York, from 1980 to 1981. She earned a Bachelor of Fine Arts degree in 1984 from the University of Massachusetts, Amherst, and a Master of Fine Arts degree in 1994 from the University of Washington, Seattle. Her works are in the collections of Amgen, Seattle; City of Seattle, Portable Works Collection; Microsoft, Seattle; Schwartz Art Collection, Harvard Business School, Cambridge, Massachusetts; and the Tacoma Art Museum, Washington, among others. She lives and works in Seattle.

[www.jaqbox.com](http://www.jaqbox.com)





**11 Stains w/14 Whites**, undated  
Acrylic, stains and spray paint on wood panel, 24 x 30 in. (61 x 76.2 cm)  
Courtesy of the artist, Seattle, Washington

# DALE CHIHULY

"I love to go to the ocean and walk along the beach. If you work with hot glass and its natural properties it begins to look like something that came from the sea."

— Dale Chihuly

Born in 1941 in Tacoma, Washington, Dale Chihuly was introduced to glass while studying interior design at the University of Washington. After graduating in 1965, Chihuly enrolled in the first glass program in the country, at the University of Wisconsin. He continued his studies at the Rhode Island School of Design (RISD) in Providence, where he later established the glass program and taught for more than a decade.

In 1968, after receiving a Fulbright Fellowship, Chihuly went to work at the Venini glass factory in Venice. There he observed the team approach to blowing glass, which is critical to the way he works today. In 1971 Chihuly co-founded Pilchuck Glass School in Washington State. With this international glass center, Chihuly has led the avant-garde in the development of glass as a fine art.

His work is included in more than 200 museum collections worldwide. He has been the recipient of many awards, including twelve honorary doctorates and two fellowships from the National Endowment for the Arts.

[www.chihuly.com](http://www.chihuly.com)

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***Nymph Pink Seaform Set with Foam White Lip Wrap***, 2000

Blown glass, 8 x 16 x 11 in. (20.3 x 40.6 x 27.9 cm)

Courtesy of the artist, Seattle, Washington



# ZARIA FORMAN

“The inspiration for my drawings began in early childhood when I traveled with my family throughout several of the world’s most remote landscapes, which were the subject of my mother’s fine art photography. After my formal training at Skidmore College I now exhibit extensively in galleries and venues throughout the United States and overseas.

In August 2012 I led *Chasing the Light*, an expedition sailing up the northwest coast of Greenland, retracing the 1869 journey of American painter William Bradford and documenting the rapidly changing arctic landscape. Continuing to address climate change in my work, I spent September 2013 in the Maldives, the lowest-lying country in the world, and arguably the most vulnerable to rising sea levels.”

— Zaria Forman

Known for her impeccably naturalistic pastel drawings, Zaria Forman finds inspiration in remote landscapes and environmentally sensitive locations. Her drawings include carefully rendered images of glistening icebergs, turbulent arctic waters, and crashing tropical waves. Forman’s work is exhibited widely across the United States and is held in the collections of the Arkansas Art Museum and the Frances Young Tang Teaching Museum. Her drawings have been featured by press organizations the world over and appear in the Netflix series *House of Cards*.

**<http://seattle.winstonwachter.com>**



***Greenland #66***, 2014

Soft pastel on paper, 44 x 60 in. (111.8 x 152.4 cm)

From the collection of Nicholas J. Clough; Courtesy of Winston Wächter Fine Art, Seattle, Washington

# TODD JOHNSON

This acrylic slab contains patterns known as Lichtenberg Figures, which are the result of an electrical discharge of several million volts. They are produced by exposing the acrylic to an electron beam from a particle accelerator. The electrons penetrate the plastic and come to rest at a depth determined by their energy, which can be chosen to be as high as five million electron volts. When the acrylic emerges from the accelerator it contains a layer of trapped electrons held under enormous electrical stress. Carefully striking the piece with a sharp insulated tool triggers the release of the trapped electrons, and they escape the acrylic with a bright flash and a loud pop. As the electrons rush toward the discharge site, the current reaches hundreds of amperes in less than a millionth of a second, vaporizing the acrylic and creating a permanent record of the intricate fractal tracks. This is not without an element of danger, as the artist may become part of the electrical path if sufficient precautions are not taken.

The vaporized patterns in *Willow* were formed into specific shapes by interposing a metal mask in the electron beam which only allowed certain regions of the acrylic to be charged. The result is a piece which reveals both the intent of the artist, as well as the dictates of the laws of nature, producing details extending to the microscopic level. Although the overall shape of the patterns can be controlled, the structure of the discharge is unique and each piece is one of a kind.

Todd Johnson earned his Bachelor of Science degree in Electrical Engineering from Michigan Technological University in 1982. He works as a special projects specialist at Fermilab, America's particle physics and accelerator laboratory in Batavia, Illinois.

"I have been experimenting with the connections between art and science since the 1990s, when my work focused on white light holography. In 2007 I began working with acrylic Lichtenberg figures, and during the seven years since then, I have attempted to push the process into increasingly complex forms. I enjoy the challenge of taming fundamental physical processes containing such large amounts of energy and have found that my design sense is maturing as my technical understanding of the possibilities and limitations of the process improves.

Art and science have always formed bridges between nations and cultures, as my career at a high energy physics laboratory has taught me. Both are universal languages we can all appreciate as we attempt to make sense of the world in which we find ourselves living."

**<http://shockfossils.deviantart.com>**



***Shockfossils: Willow***, 2014. Acrylic panel, wood base, 25 x 8 x ½ in. (63.5 x 20.3 x 1.3 cm). Courtesy of the artist, Batavia, Illinois

# LYNDA LOWE

Science is one of our most precise and powerful tools for understanding the world. Art contributes its many offerings. They often seek the same frontier's edge where the finite meets the infinite. What can be measured and known lies alongside inscrutable mystery. I don't pretend to understand the depth of this scientific research, nor am I trying to illustrate it, but here I honor these scientists' investigations and share in the general meanderings of a fellow explorer's soul.

## **Leonhard Euler Panel**

Born in Switzerland in 1707, Euler is considered one of the world's greatest mathematicians. The equation named for him contains nine basic concepts of mathematics – once and only once – in a single expression. These are:  $e$  (the base of natural logarithms); the exponent operation;  $p$ ; plus (or minus, depending on how you write it); multiplication; imaginary numbers; equals; one; and zero. Noted for his amazing memory, Euler did some of his most significant work after the age of fifty when he was entirely blind. In this painting I've included relevant mathematical diagrams, Euler's handwritten notes, also his statement in Latin: *Quamquam nobis in intima naturae mysteria penetrare, indeque veras causas Phaenomenorum agnoscere ne-tiquam est concessum: tamen evenire potest, ut hypo-thesis quaedam ficta pluribus phaenomenis explicandis aequae satisficiat, ac si vera causa nobis esset perspecta.* Translation: *Although to penetrate into the intimate mysteries of nature and thence to learn the true causes of phenomena is not allowed to us, nevertheless it can happen that a certain fictive hypothesis may suffice for explaining many phenomena.*

## **Albert Einstein Panel**

Little explanation is required as to Swiss citizen Albert Einstein's enormous contributions to science. Nearly synonymous with his name, the equation  $e=mc^2$  expresses the fact that mass and energy are the same physical entity and can be changed into each other. This painting includes Einstein's handwritten notes and equations, an image referring to the effect of mass and gravity, and references to Einstein's famous thought experiment where visualizing clocks on a moving train assisted in formulating the theory of relativity.

## **Pendulus Panel**

This center painting is a mnemonic prompt to remember balance, stillness, and presence amidst the stunning bombardment of information, endless tasks, and omnipresent tug of gravity.

## **Carl Jung Panel**

Through dream analysis and an understanding of deeply embedded archetypes, Swiss born Carl Jung created some of the best known concepts in the science of psychology. He posited that the meaningful interpretation of the images is usually the beginning of psychological healing and individuation. Another central step in this development of the psyche is an ability to integrate opposites while still maintaining their autonomy. This painting includes a labyrinth, which Jung thought to be a powerful archetype of the psyche, and a handprint, an image that connects us to our earliest recorded history and refers to Jung's concept of the collective unconscious. Jung's notes are also evident.



# LYNDA LOWE

Influential to this imagery are these quotes from Carl Jung:

*There is a thinking in primordial images, in symbols which are older than the historical man, which are inborn in him from the earliest times, eternally living, outlasting all generations, still make up the groundwork of the human psyche. It is only possible to live the fullest life when we are in harmony with these symbols; wisdom is a return to them.*

*As far as we can discern, the sole purpose of human existence is to kindle a light in the darkness of mere being.*

## **Didier Queloz Panel**

Queloz, a Geneva-based astronomer, sees beyond our solar system. He is a living, modern-day planet seeker. Using radial velocity measurements (something like the Doppler effect), he co-discovered the first exo-planet: 51 Pegasi b, found in the constellation of Pegasus. It belongs to a class of planets called Hot Jupiters, and marked a breakthrough in astronomical research. An exo-planet is one tidally locked to its star and always presents the same face to it. When looking to the sky and the infinite enormity of space, Didier explores planetary formations far beyond our view of the treetops.

— Lynda Lowe, August 2014

Lynda Lowe studied art history, painting, and drawing at the Academia della Bella Arte, Perugia, Italy. She earned a Bachelor of Fine Arts degree at Alma Collect, Michigan, and a Master of Fine Arts degree from Indiana University, Bloomington. Her work is in numerous public and corporate collections, including those of Bain Capital, Boston, Massachusetts; Seattle University, Washington; Illinois State Museum, Springfield; Elmhurst Memorial Hospital, Illinois; and Graham Center Museum, Wheaton, Illinois. (Notes extrapolated from various sources.)

[www.lyndalowe.com](http://www.lyndalowe.com)

# LYNDA LOWE



***Finis et Infinitus*, 2014**

Oil paint, watercolor, and wax on panel, each of five panels: 28 x 12 in. (71.1 x 30.5 cm)  
Courtesy of the artist, Seattle, Washington

These paintings reference four of the many Swiss scientists who've contributed greatly to our understanding of the world: Leonhard Euler, Albert Einstein, Carl Jung, and Didier Queloz. The graphs, diagrams, handwritten notes, symbols, and marks are vestiges of each scientist's inquiry.

# LYNDA LOWE



***Book of Commons: Observations***, 2002  
Mixed media on panel, 24 x 17 ½ in. (61 x 44.4 cm)  
Courtesy of a private collection

# BARBARA ROBERTSON

"My work explores ideas related to space, mapping, motion, and light, inspired by current scientific inquiry in the fields of physics, astronomy, and biology.

I am passionate about digital media as a tool for visual artists. The dialog between my drawing, painting, print work, and digital media has been a rich source of inspiration. The moving images give me new ideas for the static ones, simultaneously recharging my imagination to develop the static images. I am committed to continuing the current conversation between traditional and digital media and eager to discover how animation will continue to influence my vision. My long-term goal is to work with an architect and a dancer to produce an interactive performance piece in an alternative venue."

**[www.barbararobertsonart.com](http://www.barbararobertsonart.com)**

Barbara Robertson is a pillar of the Seattle art scene and at the forefront of creative and innovative print-making techniques. She is a recipient of the Neddy Artist Fellowship Award, and received a Fellowship in Digital and Traditional Print at the Kala Art Institute in Berkeley, California. Her work is found in numerous public collections, including the Tacoma Art Museum, Washington.

**[www.davidsongalleries.com/  
artists/robertson/robertson.php](http://www.davidsongalleries.com/artists/robertson/robertson.php)**



**Refraction**, 2012. Mixed media on paper, 23 x 30 in. (58.4 x 76.2 cm). Courtesy of the artist, Seattle, Washington

# CRAIG SCHAFFER

[*Expanding Galaxy* is part of] "a series based on fractal forms – the shapes created by the ongoing processes of Life, such as the branching of plants to catch the sunlight, the convoluted unfurling of clouds, the formation and fracturing of mountains from the forces within the earth, the jaggedness of the coastline as it interacts with the sea . . . Because of the non-linear, reflexive nature of real life, these processes tend to follow spiral paths. My sculptures all contain spirals that, instead of illustrating any specific phenomenon, grow in the same reflexive manner as real complex systems."

Craig Schaffer was born in 1949. He earned a Bachelor of Arts degree from the University of California, Santa Cruz, and a Master of Fine Arts degree from the University of Pennsylvania. He currently maintains studios in Washington, D.C., and Pietrasanta, Italy. He has shown his work in juried shows around the United States and abroad. Public commissions include work for the Institute for Advanced Study, Princeton, New Jersey; the Mathematical Association of America, Washington, D.C.; Brown Tower Mathematics Building at The Ohio State University, Columbus; Baptist Memorial Hospital-Desoto in Memphis, Tennessee; the Hualien Cultural Center in Taiwan; the Leo Yassenoff Jewish Community Center of Greater Columbus, Ohio; and The Robins Center for Philanthropy, also in Columbus.

[www.craigschaffer.com](http://www.craigschaffer.com)

Next page:

***Expanding Galaxy***, undated

Steel, 31 x 24 x 17 in. (78.7 x 61 x 43.2 cm)

Courtesy of the artist and Artist's Proof Gallery, Washington, D.C.





# MICHAEL SCHULTHEIS

“As humans, we have a fascinating capacity to visualize mathematics. Our analytical concepts can be visualized, written down in notation, and then shared as a logical and visual language for others. These creative issues from our minds are analytical expressions, and the visual process of rendering them is analytical expressionism. This is the world I explore while painting.”

— Michael Schultheis

Seattle-based artist Michael Schultheis finds inspiration and elegance in the world of analytics. Schultheis has a background in mathematics and economics, giving his wildly colored abstract paintings the appearance of chalkboards filled progressively with notations and illustrations. His expressive images mirror the abstract world of numbers and boldly invite viewers to consider the relationship between math and the human experience.

**<http://seattle.winstonwachter.com>**





***Seas of Archimedes 04*, 2012**

Acrylic on canvas, 72 x 72 in. (182.9 x 182.9 cm)

Courtesy of the artist and Winston Wächter Fine Art, Seattle, Washington

# TIMOTHY TOMPKINS

*Super Colliders* is a series of paintings by Timothy Tompkins. The glossy enamel paintings on aluminum depict abstracted images of the internal components of the Large Hadron Collider, which lies in a tunnel seventeen miles in circumference deep beneath the Franco-Swiss border near Geneva, Switzerland. Tompkins's otherworldly paintings reference the line and symmetry of Gothic rose windows of European cathedrals. Rose windows functioned as microcosmic depictions of universal order, where the uniform geometry of the subdivided circle denoted sacred unity. Similarly, the inherent harmony of structure of the Large Hadron Collider inspires modern curiosity and ruminations on the universal makeup of things, connecting perceived relationships between contemporary theories of physics with timeless concepts of the human condition and spirituality.

The inspirations for Tompkins's paintings stem from his engagement with the tropes and language of the medium's history. His interest in both the language of painting and contemporary theories of visual culture attract him to what he interprets in the images as a loose visual connection to painting's history and the medium's influence as a visual communicator. The paintings play upon the idea of revealing the unseen and invoke the notion of a disjunctive relationship between observation, representation, and interpretation.

Timothy Tompkins lives and works in Los Alamitos, California. He received his Bachelor of Fine Arts degree from the Otis College of Art and Design, Los Angeles, California, in 2003. His work is included in the collections of the Fondazione Benetton, Treviso, Italy; Frederick R. Weisman Art Foundation, Los Angeles, California; West Collection, Oaks, Pennsylvania; and Harvard Business School, Cambridge, Massachusetts.

**[www.timothytompkins.com](http://www.timothytompkins.com)**  
**[www.dcktcontemporary.com](http://www.dcktcontemporary.com)**



***Super Collider v.13***, 2014

Commercial enamel on aluminum, 45 x 60 in. (114.3 x 152.4 cm)  
Courtesy of the artist and DCKT Contemporary, New York, New York

# UNKNOWN ARTIST

This is the frontispiece created by de Launay for Genevan philosopher, writer, and composer Jean-Jacques Rousseau's 1782 edition of *Emile*. The original caption read: « L'éducation de l'homme commence à sa naissance » (Man's education begins at birth).

*Emile* or *On Education* is a treatise on the nature of education and on the nature of man written by Jean-Jacques Rousseau, who considered it to be the "best and most important of all my writings." Due to a section of the book entitled "Profession of Faith of the Savoyard Vicar," *Emile* was banned in Paris and Geneva, and was publicly burned in 1762, the year

of its first publication. During the French Revolution, *Emile* served as the inspiration for what became a new national system of education in France.

With the publication of this work, educators and the public were presented for the first time with the theory that we are born learning – a concept that now forms the basis of early learning efforts across the world.

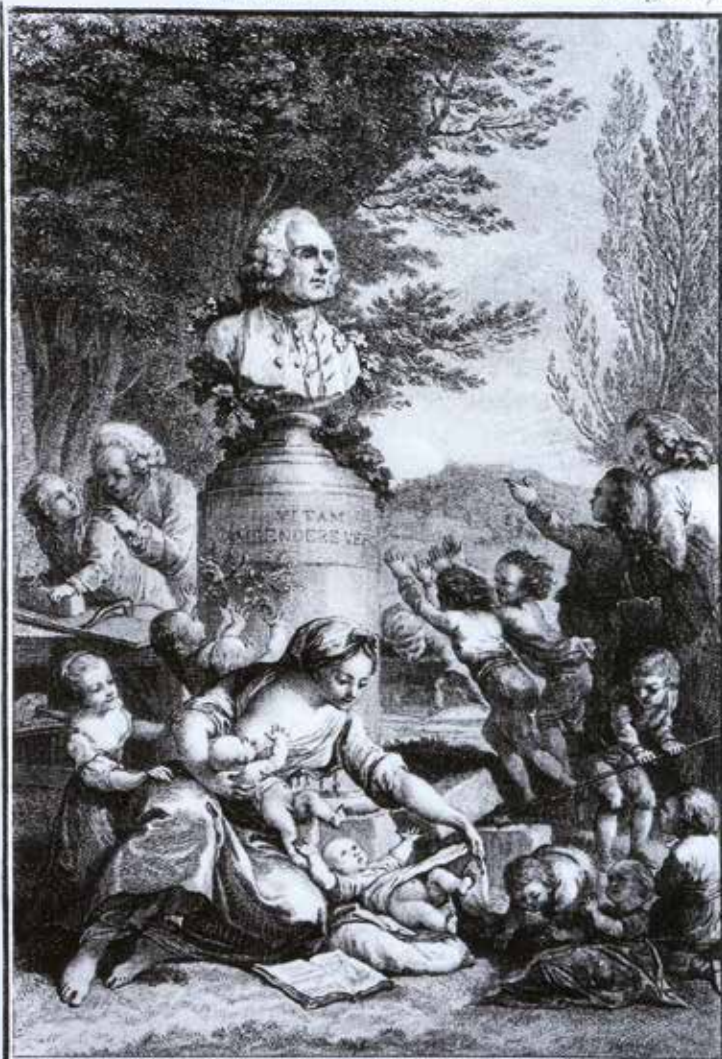
**[http://en.wikipedia.org/wiki/Emile,\\_or\\_On\\_Education](http://en.wikipedia.org/wiki/Emile,_or_On_Education)**

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***Frontispiece of Jean-Jacques Rousseau's Emile by de Launay***

Print, 13 ½ x 20 ½ in. (34.2 x 52 cm). Courtesy of a private collection





l'Education de l'Homme commence à sa naissance.

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