Title
Emergence and Structure

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The mind is a pattern machine. We see structure everywhere—in the constellations of stars, the spots on dice, and the silhouettes of clouds—shaped by a multitude of forces we can only vaguely comprehend. Although the universe is a noisy place, overflowing with randomness and contingency, we rage against what we can’t understand, attempting to impose order onto the mess of reality.

This epistemic tension—the desire to see the world as it is, but also to make sense of what we see—begins to explain the necessity of art. For it is within the framework of art that we are able to affirm simultaneously the mystery, even as we seek to unravel it. Paint is dripped haphazardly onto a canvas; intricate lines intersect and then come apart; colors combine in unnatural ways. The picture insists on not being understood.

But here is the paradox: Even when staring at these deliberate abstractions, we still see the familiar stuff of life, those forms we never seem to leave behind. They emerge, like ghosts, from the brushstrokes and charcoal marks, from the acrylic on wood and the shellac on paper. Such simple materials give rise to such complex thoughts that the artist provokes us to see patterns while forcing us to recognize where these patterns emanate from. In this sense, the work of art is a mirror, a distillation of the mind in two dimensions. It captures the entangled nature of imagination and perception, the way we constantly exceed the literal and expand upon the actual.

In 1928, Jackson Pollock’s father wrote his son a letter. Most of the sentences are about God and weather. But he also managed to dispense a touch of artistic advice: “The secret of success,” he wrote, “is concentrating interest in life... interest in the small things of nature, insects, birds, flowers, leaves, etc. In other words to be fully awake to everything about you.” Clearly, this artist was in that state as he created paintings.

That remains the secret to success. The remarkable artworks in this exhibition, like an epic Pollock painting, are interested in life. They document the small things of nature, forcing us to appreciate the spooky beauty of snowflakes, mushroom spores, and forms that, as yet, don’t have names. But these images do something else, too. They expose the mental process whereby those small things become big things, noise becomes signal, chance becomes meaning. We can’t say how this happens. We don’t know where the meaning comes from, or why the patterns begin, or how the structure accumulates from streaks of paint. All we know is that we open our eyes and they are there.

We are fully awake.

JONAH LEHRER

New York City

February 2012
aesthetic intuition, to create a powerful image that captivates the viewer. Because this process invites questions on how it was made, it can subsequently open the mind to larger questions. These explorations, which create a foundation and baseline of discernment for the artist to build a personal body of work, expand the possibilities for abstract painting and drawing. Perception occurs in the silence of the gaze and into consciousness in the mind of the viewer. The artist is in a unique position to create objects of meditation that uncover truths about what it is to be human and comprehend the world on multidimensional levels. The artists featured have done that in ways that are original and expansive. Their investigations into the sciences have added significantly to the theoretical foundation of their practice. This exhibition is an expression of that understanding.

The contributions herein do not claim to be making empirical discoveries or breaking new scientific ground—rather, they provide a different platform from which to view the relationship of art and science, open the mind to possibilities, and spark the imagination.

CURATORS’ STATEMENT

The seeds of this exhibition were sown several years ago in a series of conversations about the relationship between art and science and its impact upon our own studio practice of abstract painting and drawing. Interwoven in that ongoing conversation were recommendations of exhibitions to look at and books to read. Slowly, it became apparent that something was going on that was broad and nuanced. The something, which is materializing in a great many art studios, is the subject of Emergence & Structure.

This continuing dialogue includes a wide range of concepts from the sciences. Whether it is the Higgs boson particle and the origin of mass/structure (the so-called “God particle”); Heisenberg’s uncertainty principle; entanglement’s “spooky action at a distance”; or the experience of perception and the origin of consciousness, these ideas prove not only irresistible but absurdly profound and potentially paradigm-shifting possibilities in the quest to comprehend our world. Art and science are both born from a sense of wonder and curiosity and a desire to understand. At first, we had no idea how many artists might fit into such a show. It soon became apparent, though, that an overarching science/art exhibition was too immense an undertaking, so we decided to limit our research to abstract painting and drawing because we feel most confident in our ability to see into those areas with greater understanding. Within this parameter, we took a broad approach in the hope that it would be conducive to a lively discussion of emergent visual languages.

Science has had an enormous impact on the way artists think and go about making their work. As provocative as any scientific idea may be, rarely does empirical data translate directly to a compelling visual experience. More is needed to make a visually sustainable painting or drawing. Choosing the art, then, was an exercise in balancing work that intuitively leads the viewer toward the kind of ideas we have been talking about, and yet is also visually compelling enough to pull in and engage the viewer. Intuition and insight guide the artist/curator to achieve an expanded notion of what it is to see and understand one’s own work as well as work that influences it.

The influence of science and mathematics is present to varying degrees in the work selected. In some cases, there are direct references to mathematical structures and quantum-mechanical modeling; in other cases, the work is more closely aligned to the phenomenology of perception; in still others, recent insights into neuroscience have offered concrete evidence of the artist’s intuitive understanding of how the mind forms visual perceptions of concrete artistic processes. In nature, one can see how complexity emerges from a simple algorithm; some of the artists also utilize an algorithm, but one tempered with
Emergence & Structure is an exhibition that represents a turning point in the process of education and public awareness of interrelated elements of science and art. Artists have long utilized content from myriad sources to interpret ideas through visual imagery. Science has been prevalent in art practice for a long time, and the art world has embraced similarities such as the notion that both disciplines are centered upon the study of that which does not yet exist. Imagination, creativity and the desire to break into new territory are integral to both art and science. What is new is audience demand for evidence of this relationship.

An exhibition such as this one is well suited for college venues. Campuses across America are revolutionizing curriculum to accommodate more interdisciplinary learning. A tremendous amount of research and attention is pointing toward the critical need for more integrative approaches to subject matter and learning. The timeliness of Emergence & Structure is a source of pride to our three institutions that have the fortune to host this important exhibition. We are grateful to the artists, writers and curators who worked diligently to organize this exhibition, and to the sponsors, designers and staff that have pulled it all together.

JEREMY MIKOLAJCZAK
MICHIKO OKAYA
AMY VIGILANTE
NEGENTROPY III
2007
Acrylic and resin on plexiglas
18 x 24 inches

AKASHA
2011
Acrylic and resin on plexiglas
18 x 24 inches
FATHOM
Oil and alkyd on wood
10 x 10 x 4 inches

QUERY
Oil and alkyd on canvas on wood
63 x 52 inches
SNOWFLAKE 2
1996
Cyanotype on paper
derived from algorithm by Janko Gravner, mathematician
96 x 96 inches

SNOWFLAKE 3
1996
Cyanotype on paper
derived from algorithm by Janko Gravner, mathematician
96 x 96 inches
IN THE SCALE OF THINGS #10

Mixed media, laboratory drawings of amygdala on mylar on paper
16 in. diameter

MENERBE, #91409

Mixed media, laboratory drawings of amygdala on mylar on paper
16 in. diameter
TESSELLATION 2
Oil on linen
20 x 10 inches

TESSELLATION 1
Oil on linen
20 x 10 inches

JOHN ASLANIDIS
ANGIE DRAKOPOULOS
MARY HAMBLETON
DANIEL HILL
ROBIN HILL
NENE HUMPHREY
MARY JUDGE
ED KERNS
DAVID MANN
KATE NICHOLS
DAVID ROW OWEN
SCHUH
BARBARA TAKENAGA
JIM TOIA
ROBERT Y ASUDA
RON JANOWICH
SPIRAL FORM SERIES

CONCENTRIC SHAPE SERIES 10:7

Powdered pigment on 100% rag paper

40 x 50 inches
DR. HO
2010
Acrylic on canvas
41 x 27 inches

CLIFF DIVER
2010
Acrylic on canvas
41 x 27 inches
NENZ
Charcoal on vellum
24.5 x 37.5 inches

WAVE
Charcoal on vellum
24.5 x 37.5 inches
VERMILLION
Acrylic on wood panel
24 x 20 inches

SPARK
Acrylic on wood panel
42 x 36 inches
WARM BLOOD COLD WATERS
Mushroom spore drawing on Art Spectrum paper
38 x 26 inches

FASHIONABLE KING
Mushroom spore (multiple species) on Art Spectrum Colourfix black paper
38 x 26 inches

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RON JANOWICH
MARY JUDGE
ED KERNS
DAVID MANN
KATE NICHOLS
DAVID ROW
BARBARA TAKENAGA
JIM TOIA
ROBERT ASUDA
OWEN SCHUH
Acrylic on fabric on wood

TRIBUTE

Acrylic on fabric on wood

VEIL

Acrylic on fabric on wood

Acknowledgments:

JOHN ASLANIDIS
ANGELA DRAKOPOULOS
MARY HAMBLETON
DANIEL HILL
RON HUMPHREY
RON JANOWICH
MARY JUDGE
ED KERNS
DAVID MANN
KATE NICHOLS
DAVID ROW
OWEN STRUTT
BARBARA TAKENAGA
JOHN TOM
ROBERT YASUDA
We extend a special thanks to Ed Kerns, Eugene and Mildred Clapp ’36 Professor of Art, Lafayette College. As an artist, Kerns has collaborated with neuroscientists, computational experts, and technologists for the past decade nurturing an arena where ideas were exchanged and developed. At one of our many roundtable discussions, the idea for Emergence & Structure was born. As this exhibition took form over the next year and a half, Kerns served as a dedicated mentor, advising and facilitating interactions between the artists and curators.

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DANIEL HILL
RON JANOWICH

Daniel Hill is a painter/musician, and graduate of the School of Visual Arts in New York City. He has exhibited internationally and has been included in numerous exhibitions that explore the relationship between visual art, sound, and science.

Ron Janowich is a painter, digital artist and Associate Professor at the University of Florida. He has exhibited extensively, and lives and works in New York City and Gainesville. His work explores the role of particle physics in affecting spatial conventions.
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www.tedfellows.posterous.com/this-weeks-ted-fellows-talk-kate-nichols

DANIEL ROW  McClain Gallery (www.mcclainart.com/featured/Ros.html)
Von Bartha Gallery (www.vonbartha.com/artists/david-row/)

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ROBERT YASUDA  www.robertyasuda.com
Sundaram Tagore Gallery (www.sundaramtagore.com)
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p. 30–31: David Mann, Courtesy McKenzie Fine Art, NY;
p. 38–39: Barbara Takenaga, Courtesy DC Moore Gallery, NY; Photo: James Dee, NY